

REPORT FOR DECISION



DECISION OF:	CABINET
DATE:	4 September 2019
SUBJECT:	STREET LIGHTING COLUMN REPLACEMENT
REPORT FROM:	COUNCILLOR A. QUINN – CABINET MEMBER FOR ENVIRONMENT
CONTACT OFFICER:	NEIL LONG, ASSISTANT DIRECTOR OF OPERATIONS AND PHILIP HEWITT, GROUP ENGINEER (STREET LIGHTING & OPERATIONS)
TYPE OF DECISION:	CABINET (KEY DECISION)
FREEDOM OF INFORMATION/STATUS:	WITHIN THE PUBLIC DOMAIN
SUMMARY:	<p>Bury has 19,188 street lighting columns of various ages, heights and materials. The purpose of this report is to give an overview of the current state of the columns and consider options for the asset management approach.</p> <p>Structural testing is carried out to ensure lighting columns are safe. A number of columns fail the structural test each year and require replacing. For 2018/19 this was 134.</p> <p>The lifespan of a street lighting column is expected to be 40 years. Bury has 3,194 columns over 35 years old. It is good asset management practice to have a 5 year forward programme of works.</p>
OPTIONS & RECOMMENDED OPTION	<p>Option 1 (Full details in Section 3.0)</p> <p>Continue with current budget allocations. At present there are insufficient funds available to replace all the columns identified by the structural inspection as requiring replacement. In order to remove the risk of a catastrophic failure some lighting columns will have to be cut down.</p>

	<p>Option 2 (Full details in Section 4.0) Allocate £2M of the £10M phase 2 highway investment commencing in 2020/21 to column replacement.</p> <p>Option 3 (Full details in Section 5.0) Approve a £5.5M five year capital programme to replace concrete and steel columns, primarily over 8m high. Column replacement would be on a whole street basis. An LED lantern would be installed at the same time as the column was replaced.</p> <p>This will replace all columns over 35 years old and over 8m high and also replace individual columns that have failed due to frost damage or accidents where costs cannot be recovered.</p> <p>Recommended Option Option 3 is recommended. Capital investment in the street lighting asset is required to ensure that lighting columns remain safe and follow good asset management practice. This will help to ensure DfT grants are maximised.</p>
IMPLICATIONS:	
Corporate Aims/Policy Framework:	Do the proposals accord with the Policy Framework? Yes
Statement by the S151 Officer: Financial Implications and Risk Considerations:	<p>Option 1 Can be contained within current budget constraints but has some financial risks associated with it (e.g. increase in claims).</p> <p>Option 2 Can be contained within the current capital programme, although it is not clear what capital works would be delayed/stopped as a result, i.e. the opportunity cost.</p> <p>Option 3 Can be contained with capital programme and borrowing headroom although, again, the opportunity costs have not been explored.</p>
Equality/Diversity implications:	Option 1 may have a negative impact on some groups as set out in 4.1.
Considered by Monitoring Officer:	<p>Yes JH</p> <p>There are no legal issues raised by this report. Capital projects/works which involve capital expenditure over £250,000 or not provided for within an approved capital programme are required to be made by</p>

	Cabinet and in accordance with Standing Order 58(d) of the Financial Procedure Rules.
Wards Affected:	All
Scrutiny Interest:	

**TRACKING/PROCESS
– David Brown**

DIRECTOR: Interim Director of Operations

Joint Executive Team/CCMT	Cabinet Member/Chair Briefed	Ward Members (if necessary)	Partners
√	√		
Scrutiny Committee	Other Committee	Council	Comms

1.0 BACKGROUND

- 1.1 The provision of street lighting is not statutory; however, it makes a significant contribution to road safety. It also helps to promote security, reduces the fear of crime, and improves the quality of life of residents.
- 1.2 While there is no statutory requirement to provide street lighting, a lighting authority should be able to demonstrate that they have systems in place to maintain any equipment in a safe condition. As a column approaches the end of design life there is potential for it to become structurally unstable, which creates risks.
- 1.3 There would be some savings from replacing old lamps when columns are replaced. However, these would be significantly lower than a LED lamp replacement programme. To date, 11,062 LED lanterns have been installed on unclassified roads and 273 LED Lanterns have been fitted on the rest of the road network (referred to as Phase 1).
- 1.4 There are 19,188 street lighting columns as described below:

Number	Road Classification
1229	Key Route Network
839	Principal Roads (A Roads)
994	Other Classified II (B Roads)
803	Other Classified III (C Roads)
15,323	Unclassified (Including Side Roads, Footpaths, etc)

- 1.5 The Council adopted a Highway Asset Management Plan (HAMP) on the 7th of September 2016. In order to achieve the full DfT capital incentive funding the Council needs to achieve Band 3 asset management status. This requires the Council to have a 5 year forward programme of schemes, including street lighting.
- 1.6 Philips Lighting have announced that they intend to phase out the production of low pressure sodium (SOX – Orange) street lighting lamps during 2020 and it is anticipated that other manufacturers will also follow. As a result of this, we will no longer be able to repair this type of lighting. Any such lamp faults will need a complete lantern change.

2.0 OVERVIEW

- 2.1 The design life of a street lighting column is taken as 40 years. The street lighting database has identified 2,749 columns of 8 metres in height and over, which are over 40 years old. A further 445 will exceed 40 years during the five year programme, giving a total of 3,194 columns requiring attention.
- 2.2 The following table shows the number of columns over 8m high which have been identified during structural testing as requiring replacement, along with those that have been identified as in poor condition and placed on a 1 year re-inspection regime:

Year	Require Replacement	1 Year Re-Inspect
2014/15	68	90
2015/16	72	142
2016/17	67	86
2017/18	127	113
2018/19	134	134

- 2.3 In addition to the above, columns are discovered to be damaged/in need of replacement during the yearly cyclic maintenance programme. Concrete columns are susceptible to frost damage. A number of columns are damaged each year by vehicles. Where the vehicle owner can be traced they are recharged the cost of repairs, however this is not always possible.
- 2.4 The budget for minor street lighting schemes and street lighting improvements has been removed, resulting in no revenue funded street lighting replacement schemes being carried out for several years.

4.0 OPTION 1

- 4.1 There are insufficient funds to replace the columns already identified as in need of replacement. To manage risk these columns would need to be cut down to remove the potential danger. This course of action may result in the following:
- An increase in crime or the fear of crime;
 - An increase in road traffic accidents;
 - An increase in claims due to trips and falls;
 - Increased complaints; and
 - Reputational damage.

4.2 The process for removing any structurally unsound column would be to cut it down to the shoulder as quickly as possible, then arrange to have its electricity supply disconnected and the remaining stump removed. The cost for this would be about £78k for the 134 columns identified.

5.0 OPTION 2

5.1 A £10M capital highway investment (HIS 1) was approved in 2017-2018 over 3 years. A further £10M capital investment has been indicatively approved from 2020/21 (HIS 2) to reduce the number of potholes, claims and the long term revenue cost of maintaining the highway.

5.2 Given the issues with the street lighting, £2M of the HIS 2 money could be used for column replacements. This would be in addition to the DfT incentive funding currently allocated to street lighting.

3.0 OPTION 3

3.1 Approve a £5.5M five year capital programme to replace concrete and steel columns, primarily over 8m high. Column replacement would be on a whole street basis. An LED lantern would be installed at the same time as the column was replaced. This would replace all columns over 35 years old and over 8m high and also replace individual columns that have failed due to frost damage or accidents where costs cannot be recovered.

3.2 Using an LED lantern, incorporating a Central Management System (CMS), sourced from a single manufacturer will:

- Reduce the number of lantern types held in stock;
- Allow the lantern to report itself as faulty;
- Allow alterations to lighting levels by changing the lantern lumen output should the road use change; and
- Allow “trimming and dimming” should the Council wish to adopt this practice in future years.

3.3 A risk based approach to column replacement would be used. Only columns over 8m metres high would be considered. Columns of less than 8 metres in height have already been surveyed and checked as part of Phase 1. The replacement programme would concentrate on two aspects:

- The replacement of columns that have approached the end of their design life; and
- The replacement of columns identified as part of the ongoing structural testing programme.

3.4 The following table shows all columns of 8 metres in height and over and over 35 years old:

Age Span (Years)	Height (M)	Concrete		Steel	
35 to 40	8	-	-	215	£335,489
> 40	8	429	£669,418	865	£1,349,760
35 to 40	10	-	-	223	£397,614
> 40	10	229	£408,312	1152	£2,054,042

35 to 40	12	-	-	7	£13,277
> 40	12	-	-	74	£140,355
		658	£1,077,731	2536	£4,290,537

3.5 The remaining £1,209,463 would be used for individual one for one replacement of columns, identified during the structural testing and inspection programme. This would allow an average of 138 per year to be swapped, along with any side road columns that require replacing.

3.6 The criteria to choose roads to be included would include:

- Column age;
- Data collected during cyclic maintenance;
- The local knowledge of problematic areas;
- Road classification and importance; and
- Liaison with the Highway Capital programme to ensure joint site working.

6.0 FINANCIAL IMPLICATIONS

6.1 All energy savings from Phase 1 have been used to service the capital debt. Some savings from a reduction in lantern wattage will be achieved. The potential energy saving would be around £90k per year. However, it is important to note that:

- Lantern type, and hence energy savings, will vary greatly dependent upon road hierarchy, width, etc;
- Full energy savings will not be achieved until the works programme is completed;
- Energy costs, and pass through charges, are increasing on a yearly basis;
- It will be necessary, on some roads, to install additional columns in order to achieve the current lighting standard.

7.0 EQUALITY AND DIVERSITY

7.1 Option 1 may be a negative impact as detailed in 4.1.

8.0 CONCLUSION

8.1 In order to provide a service to the public, comply with the requirements of HAMP, and to also protect the Council from possible prosecution, should there be a column collapse, it is recommended that a column replacement programme is instigated as soon as possible.

8.2 The option recommended (Option 3) will replace many aging columns with a lantern that can offer further potential cost savings in the future (by trimming and dimming) and also offer a flexible approach to the requirement to change lighting levels should they be required.

List of Background Papers:- Highway Infrastructure Asset Management Guidance Document – UK Roads Liaison Group.

Well-Managed Highway Infrastructure: A Code of Practice – UK Roads Liaison Group

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