## STREET LIGHTING – LED REPLACEMENT AND TERM MAINTENANCE CONTRACT

<table>
<thead>
<tr>
<th>Cabinet Date</th>
<th>23 July 2014</th>
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<tbody>
<tr>
<td>Cabinet Member</td>
<td>Councillor Vernon Smith</td>
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<td>for Highways and</td>
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<td>Flood</td>
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<td>Key Decision</td>
<td>Yes</td>
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<td>Background</td>
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<td>Documents</td>
<td>• Gloucestershire County Council Carbon Management Programme 2011/12 – 2020/21</td>
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<td>• Gloucestershire County Council Medium Term Financial Strategy 2014/15 to 2016/17, Budget 2014/15</td>
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<td>• Environment and Communities Scrutiny Committee:</td>
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<td>- 23rd July 2013, Commissioning Director’s Report</td>
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<td>- 17th September 2013, Commissioning Director’s Report</td>
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<td>- 13th November 2013, Commissioning Director’s Report</td>
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<td>- 15th January 2014, Commissioning Director’s Report</td>
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<td>- 5th March 2014, Commissioning Director’s Report</td>
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<td>- 7th May 2014, Commissioning Director’s Report</td>
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<td></td>
<td>- 8th July 2014, Commissioning Director’s Report (link to be added later)</td>
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<tr>
<td>Location/Contact</td>
<td>All the above documents are available on the council’s web site using the web links provided.</td>
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<td>for inspection of</td>
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<td>Documents</td>
<td>• South West Highways Alliance and neighbouring authorities</td>
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<td>• An industry event was held on 12th April 2013, attended by over 40 street lighting providers, suppliers and manufacturers</td>
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<td>- Highways Advisory Group.</td>
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<td>Planned Dates</td>
<td>• Procurement process start – w/c 28th July 2014</td>
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<td>• Potential award date – w/c 27th April 2015</td>
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<td>• Contract start and finish – w/c 27th April 2015; finish March 2027 (12 years)</td>
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<td>Divisional</td>
<td>All</td>
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<tr>
<td>Councillor</td>
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Officer | Nigel Riglar, Commissioning Director for Communities and Infrastructure. Tel: 01452 328470; email: nigel.riglar@gloucestershire.gov.uk
---|---
Purpose of Report | To seek Cabinet approval for the conduct of a compliant competitive tender process for the award of a contract for the term maintenance of the Council’s street lighting, signs and bollards and investment in LED lighting. The contract will be for 12 years with an estimated value of £35m.

Recommendations | *That the Cabinet authorises the Commissioning Director: Communities and Infrastructure to:*

1) **Conduct a compliant competitive tender process for the award to a single supplier of a contract for the term maintenance of the council’s street lighting, signs and bollards and investment in LED lighting. The contract will be for a maximum of 12 years (a 6 year initial term with two options to extend each of 3 years) with an estimated full life value of £35m.**

2) **Upon conclusion of the competitive tender process in consultation with Cabinet Member for Highways and Flood to enter into a contract with the preferred provider evaluated as offering the Council best value for money for delivery of the services. In the event that the preferred provider for the contract is either unable or unwilling to enter into that contract with the Council then the officer is authorised to enter into such contract with the next willing highest placed suitably qualified provider.**

3) **Regularly report to the Cabinet Member for Highways and Flood regarding the progress of the procurement and keep him informed of any significant new risks that emerge in the course of the procurement exercise.**

Reasons for recommendations | To provide efficient street lighting services that deliver financial and carbon savings in line with the Council's Medium Term Financial Strategy, Carbon Management Plan and Transport Asset Management Plan.

To comply with the duty under the Highways Act for street lighting maintenance.

Without investment in LED street lighting, the service is financially unsustainable, with ongoing exposure to rising energy costs requiring budget increases and reductions or removal of street lighting.

Resource Implications | Investment in LED Street Lighting was approved as part of the Council Budget 2014/15 - 2016/17 by County Council on 26th February 2014.

To replace the entire street lighting stock within Gloucestershire with LED lighting will cost c.£19.7m. Allowing for the option of dimming using a Central Management System (CMS, see paragraph 6) would increase this to c£21m.

The savings generated through reduced energy and maintenance costs are forecast to achieve a positive Net Present Value (NPV) of £18.3m over the expected 25 year life of the asset. During the period 2015/16-17/18, the overall cost avoidance savings are estimated to be £2.3m, of which approximately £0.1m can be recovered from the street lighting budget.
Any delays to the implementation of the LED streetlights will place additional growth pressures on the street lighting energy budget. It is estimated that a 3 month delay to the implementation time scales will result in the loss of £225k savings over the period 2015/16-17/18. Conversely accelerating the LED implementation will bring forward savings. It is proposed to include alternative implementation timescales as a procurement option to mitigate the impact of the potential for rising energy costs. Any budgetary impacts of alternative implementation timescales will need to be considered as part of the budget approval for 2015/16.

Salix Finance Ltd has earmarked in principle c40% government funding towards this project, subject to business case; an interest free loan that will be retrospectively reimbursed to the Council 9-12 months later. The other 60% will be funded from the Council’s reserves and this was approved in February 2014 and confirmed for FY15/16 and FY16/17 budgets. The precise amount will depend on the specification (cost & energy efficiency) of the procured LED solution.

The Dept of Energy and Climate Change (DECC) has confirmed ongoing financial support to Salix Finance Ltd, which reduces the risk of funding not being available.
MAIN REPORT CONTENTS

Background

1. The Council has a street lighting asset of circa 60,000 street lights consuming 20.5 GWh of electricity annually at a cost of £2m, making up 53% of the GCC estate CO\textsubscript{2} footprint (excluding schools).

2. Electricity costs are rising sharply, making up 57% of service spend and requiring annual growth bids to fund this (e.g., £307k for energy 2013/14). A number of energy efficiency projects (dimming on all main roads, rural part-night in 70% of parishes, small-scale LED) have been funded using the Council's Salix Fund. Further energy reduction requires significant investment.

3. The Council has adopted a Carbon Reduction Target, 60% by 2020/21 against 2006/07, which under the delivery plan cannot be achieved without significant reductions from street lighting.

4. Investment in LED Street Lighting was approved as part of the Council Budget 2014/15 - 2017/18 by County Council on 26\textsuperscript{th} February 2014.

5. LED street lighting technology is now a mainstream solution, in which manufacturers have invested heavily. It is considered the next step in street lighting technology by highway authorities up and down the country, with several large schemes underway. Benefits include:
   - Up to 50% reduction in energy usage, and can be dimmed to any level of light output with a corresponding decrease in energy use. In contrast, the dimming of conventional street lighting to 50% on traffic routes has only reduced energy use by 35%;
   - Low maintenance – 70% reduction in street light lamp maintenance costs;
   - Better quality of light (more like daylight);
   - Fewer faults; and
   - Less light pollution (focused lighting).

6. LED street lighting can be dimmed in 2 ways: by pre-programmed dimming, which can only be changed by revisiting the street light; or through a Central Management System (CMS), already used in some areas of Gloucester and Cheltenham, giving:
   - Central control via a website – the entire estate can be managed through a laptop;
   - Remote multi-stage dimming or switch-off;
   - Informed faults – replaces inspections and reliance on public reporting failures; and
   - Consumption monitoring and potential for metering – less risk and better energy rates.

7. The specification within the Manual for Gloucestershire Streets requires all new developments to incorporate LED street lighting, and is also applied as standard advice to districts for developments of up to 5 properties. CMS is also required for new developments in Gloucester and Cheltenham unless otherwise detailed, such as for outlying areas of Gloucester and Cheltenham where our current base station infrastructure does not provide coverage.

8. What is being procured:
   - The replacement of LED lighting is being procured along with the Term Maintenance contract for street lighting, signs and bollards.
   - The value of the Term Maintenance contract is very low compared to the LED investment (see contract value), but the liabilities around warranty for the LED are best dealt with by the organisation that provided and installed the LEDs during the warranty period. It should be noted that the maintenance element also includes for signs, bollards
and street light columns, not just the street lamps, and includes electrical testing, column structural testing, electrical connection, lighting design, infrastructure improvements, replacing knocked down columns, etc.

9. Contract value
   - LED replacement £21m, including the option for dimming using CMS (investment during the first 3 to 5 years);
   - Term Maintenance for 11 years (starting in year 2) for £11m;
   - The value of the contract exceeds the European Union (EU) threshold.

Background Research

10. A technical options appraisal was undertaken, to research best practice and model the implications of using LED with CMS, considering 5 options:
   - Business as usual (do nothing)
   - Main urban centres (Gloucester and Cheltenham), over 6 years
   - Main urban centres plus market towns, over 6 years
   - Gloucestershire-wide, over 6 years
   - Decommissioning, to maintain the revenue budget as at 2013/14

11. In summary:
   - Business as usual was unaffordable.
   - Decommissioning was the most expensive option, £22.6m to disconnect and remove 42,044 columns (89%) by 2015/16.
   - The Gloucestershire-wide approach maximised cashable savings once investment has been repaid. It was approved to go to Full Business Case, with implementation over 4 years to maximise project savings. Industry feedback is that this is realistically achievable, having been delivered to a similar scale elsewhere.
   - With regard to the LED Street Lighting supply sector best practice was researched to understand what had already been achieved successfully. Birmingham City Council; Plymouth City Council; Sheffield City Council and Swansea City Council were all researched to gain a better understanding of process, benefits and lessons learnt. Gloucestershire would not be pioneering the use of LED street lights.
   - A highways authorities meeting was held with the South West Highways Alliance and neighbouring authorities, to understand what others are doing and their interest in working together to maximise benefits.

12. An industry engagement session was held as well as specific one to one sessions with the key suppliers in the market to discuss the Council’s opportunity and how best this could be achieved and how realistic the proposed implementation plan was. Over 40 companies from across the UK and Europe were represented at the engagement session showing a healthy interest in the opportunity and also highlighting a competitive and well developed supply market.

13. Early work is underway in Gloucester and Cheltenham to determine optimum dimming in residential areas, to maximise savings. Learning from this early work will inform the wider roll out across the county.

Options

14. Various procurement options have been considered:
• **Extend the current arrangement** – the current Term Maintenance contract cannot be extended any further and must be retendered.

• **Retender on the same terms** – this would be uneconomic; it would not achieve the required energy cost and carbon saving, and would require maintaining an ageing asset.

• **Retender the LED replacement and Term Maintenance together (single service provider)** – one of the aims of the procurement is to have a single supplier for delivery of the LEDs and their warranties for the Council, this provides the Council with surety of the cost and price with the payback of the investment. It also provides the opportunity to take advantage of the latest technology, maximise savings and other associated benefits. It also avoids the project management and co-ordination costs associated with using multiple providers (e.g., resolving disputes). **This is the preferred and proposed approach.**

• **PFI** – the government’s Comprehensive Spending Review withdrew the option of PFI, so this is not an option.

• **In-house service provision** – the Council has a track record of achieving performance improvement through a contractual obligation and wanted to continue on this path in order to drive innovation, ruling this out.

• **Framework (multiple service provider)** – this would increase the project management and co-ordination costs (e.g., resolving disputes), reduce volume discounts and require increasing the role of the Council in delivering the service (e.g. Customer Interface, Technical Queries, Project Management & Construction Supervision, Management of Database Inventory). In addition, the Framework approach means that the term of a call off contract can only deliver up to 8 years, which would rule out delivery of the LEDs and their warranties within the same contract. The length of call off contracts must accord with the Council’s usual purchasing patterns in this area and the Framework must not be used in such a way as to distort or prevent competition.

• **The need to keep organisational and financial arrangements simple, clear and transparent, ruled out a joint venture.**

• **Energy Performance Contracting (EPC)** – this is where a company provides the required investment in return for a share of the financial savings, which can be guaranteed. This was ruled out as it would be more expensive to finance (being at commercial rates) and would reduce the savings to the council.

15. In conclusion, it is proposed to retender the LED replacement and Term Maintenance together (single service provider).

**The Proposed Tender**

16. A tender is proposed for the street lighting LED replacement and the maintenance of street lighting, and illuminated signs and bollards.

17. **Contract term** – 12 years; installation of LED during the first 3-5 years, depending on resources, with Term Maintenance to start in year 2.

18. We are seeking a 12 year contract; an initial 6 year term with options for the Council (at its discretion) to extend the contract at the end of years 6 and 9 for a period of 3 years in each case. Before exercising the options to extend we will be seeking assurance that we are achieving value for money and the best outcomes for the council – financial benchmarking performance would be used as well as quality and customer service performance. If performance is good then we would expect the contract to run full term; if we have not secured
this assurance the council would not exercise the option and the contract would terminate at the end of year 6 or year 9 (as the case may be) and return to the market.

19. The benefits of a 12-year contract include:
   - A period of steady state after LED installation, providing an improved understanding of the LED replacement pattern.
   - Stability during the capital investment phase.
   - Flexibility to take advantage of a longer term contract if it proves more advantageous than the market at the time and to lock in the advantage of a 12 year term if it doesn’t.
   - Reduction in tendering activity if the option to extend is exercised.

20. Liquidated damages intend to include – based around the non-saving of electricity and maintenance savings, fiscal value of KPIs looking to achieve

21. It is proposed that the “Restricted” Procedure is used to procure the new contract as it offers certainty of timeline and keeps both the Council’s and the potential suppliers’ bid costs down. A restricted process consists of two distinct phases. These are a Prequalification Questionnaire, designed to determine the suitability of the provider looking at track record and financial viability of potential providers, and the Full Tender response, evaluating the proposed solution, which covers commercial, deployment, delivery, technical and contractual arrangements.

22. The key variable is likely to be cost, with bidders to come back with the optimum LED replacement rollout programme. Through market analysis we think this would probably be over 3-5 years, with implementation able to be accelerated if resources are available to maximise the benefits, or slowed if required, following:
   - Residential areas then traffic routes
   - Gloucester and Cheltenham, then market towns, then rural areas

23. In the absence of any breach the Council will be locked into the procured LED replacement rollout programme.

24. Contract information will be made available to the South West Highways Alliance, to assist member authorities in taking advantage of the benefits of LED technology.

25. It is proposed to seek delegated authority from Cabinet to the Commissioning Director: Communities & Infrastructure to award the contract.

26. In order to keep all members fully engaged in the decision making process it is proposed that progress is reported to the Highways Advisory Group.

Financial implications

27. In addition to the financial issues set out under Resource Implications, 4 posts (3.6 FTE) have been identified as likely to transfer to the new provider. The Actuary appointed to assess the pensions position of the staff has estimated additional employer costs of approximately £6,700 per annum with a further £5,000 per annum required for other costs e.g. bond costs, ill health retirement costs. A one-off fund transfer fee of approximately £1,000 will also be incurred. Actual figures for both the ongoing contribution rate and contractor bond will be determined by the actuary at the time of TUPE transfer.

Timeline

28. The proposed procurement timeline is, in summary:
   - Cabinet approval to begin the procurement, 23rd July 2014
• Pre Qualification Questionnaire (PQQ) – Aug to Sep 2014
• Invitation to Tender (ITT) – Sep 2014 to Feb 2015
• Contract Award – Mar to Apr 2015
• Contract Start (Mobilisation) – Apr to Jul 2015 (16 week LED manufacturing lead in time)
• Implementation – Jul 2015 onwards

**Risk Assessment**

29. Other than risks associated with non-compliance with OJEU regulations, which are being mitigated through the use of appropriate legal and procurement advice, the key risks are:
   - Failure to address staff, TUPE and Pension issues
   - Failure to guard against suppliers underbidding for the contract
   - Failure to address the concerns that have been raised in the analysis of performance
   - Failure to appoint in sufficient time to enable effective demobilisation and mobilisation, which will cost the Council money
   - Failure to procure a value for money contract that delivers the services which GCC require.

30. Effective project management and governance procedures are being adopted for the procurement. The TUPE risks will be mitigated by following Council policy and procedures, which enable statutory and good practice requirements to engage, inform and consult staff to be met. External technical advice will be used to inform the Project Team during the procurement process.

**Officer Advice**

31. It is recommended that the Cabinet approves recommendations as set out in this report.

**Equalities considerations**

32. The attached Due Regard Statement sets out how ‘due regard to’ the aims of the Public Sector Equality Duty has been made during the development of this commissioning approach, which is summarised below.

33. Three protected characteristics were identified that, while not intrinsically detrimental, could potentially be affected by the proposed approach – Age, Disability, Sex.

34. To address this, when drafting the detailed specification, due regard will be given to the service standards associated with this activity to ensure that impact on the elderly, members of the public with a disability, and women is monitored and mitigated. The major issue here relates to ensuring sufficient street light to deter crime and mitigate the fear of crime that can lead to increased isolation and anxiety.

35. To ensure any significant impacts are identified and mitigated, it is proposed to continue to:
   - Review during procurement and implementation stages;
   - Monitor road safety and crime figures to see if any negative change could be linked to street lighting; and
   - Monitor feedback/ complaints, in particular those by protected groups.

36. The importance of the Public Sector Equality Duty and the protected characteristics will be highlighted with potential providers at the industry event on 28th July 2014, as well as encouraging consideration of wider ‘Social Value’ issues.
37. Cabinet Members should read and consider the Due Regard Statement in order to satisfy themselves as decision makers that due regard has been given.

Consultation feedback

38. A highways authorities meeting was held with the South West Highways Alliance and neighbouring authorities, to understand what others are doing and their interest in working together to maximise benefits.

39. An industry engagement session was held as well as specific one to one sessions with the key suppliers in the market to discuss the council’s opportunity and how best this could be achieved and how realistic the proposed implementation plan was. Details of the feedback and listed under ‘Background Research’.

40. Staff meeting held 16th June 2014 – staff asked clarification questions about the process and timeline.

41. Unions advised 23rd June 2014.

42. Early work is underway in Gloucester and Cheltenham; the c. 800 units installed so far in Qudgeley has resulted in 4 complaints, 3 of which have been resolved with minor adjustments to the local lighting. Learning from this early work will inform the wider roll out across the county.

Performance Management/Follow-up

43. To proceed in accordance with the timeline set out in this report, in accordance with the council’s performance management framework.

44. The initial steps will be:
   - Industry day to engage for a final time with potential suppliers;
   - Preparation and publication of a procurement notice and pre-qualification questionnaire;
   - Receipt of PQQ submissions from suppliers; and,
   - Assessment of submissions and reduction to a manageable number of potential suppliers for the Full Tender stage.

45. In order to keep all members fully engaged in the decision making process it is proposed that progress is reported to the Highways Advisory Group.
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<th>Report Title</th>
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| Statutory Authority | • Highways Act 1980  
• Traffic Management Act 2004 |
| Relevant County Council policy | • Strategic Transport Asset Management Plan  
• Rights of Way and Countryside Access Improvement Plan  
• Local Transport Plan 3 |
| Resource Implications | Costs for Procurement will be met through existing resources. Service costs estimated to be a value of £Xm over 12 years. |
| Sustainability checklist: | |
| Partnerships | None to be serviced beyond the supplier/client relationship |
| Decision Making and Involvement | Commercial Service; Commissioning; Communications & Consultation; Democratic Services; HR; ICT; Information Management; Legal Services; Risk Management; Strategy and Challenge; Strategic Finance; Safety, Health & Environment. |
| Economy and Employment | N/A |
| Caring for people | N/A |
| Built Environment | N/A |
| Natural Environment' including Ecology (Biodiversity) | Bats – positive. LED street lighting does not emit the UV light associated with conventional High Pressure Sodium street lighting, which most bats avoid but which attracts their prey, and can ‘blind’ some bat species. LED lighting is more focussed and can be directed to avoid lighting bat roosts or flight paths. ‘Dark skies’ – reduced light pollution and more focussed lighting. |
| Education and Information | N/A |
| Tackling Climate Change | Carbon Emissions Implications? Neutral  
Vulnerable to climate change? No |
| Due Regard Statement | Has a Due Regard Statement been completed? Yes/No  
Yes – considerations included in main body of report  
Alternatively a hard copy is available for inspection from Jo Moore, Democratic Services Unit, e-mail: jo.moore@gloucestershire.gov.uk.|
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<thead>
<tr>
<th>Human rights Implications</th>
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<tr>
<td><strong>Consultation Arrangements</strong></td>
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<tr>
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<td>• Industry feedback, event and individual organisation sessions</td>
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