Enterprise, Environment and Scrutiny Committee - May 1 2012

Street Lighting Private Finance Initiative (PFI) Contract Review

Recommendations of the Cabinet Member for Highways and Transport

1. That the new street lighting PFI service delivery contract be considered and commented on.
2. That the introduction of a county wide street lighting dimming strategy be considered and commented on.
3. That the introduction of switching off street lights between midnight and 6am, when requested by local communities, be considered and commented on.

Report of Deputy Chief Executive and Director for Place

Reasons for Recommendations

4. This report details the results of a review of the council’s 25 year street lighting contract. It summarises the results of an operational and technical assessment given the advancements in street lighting technology since the start of the Private Finance Initiative (PFI) contract in May 2003.

5. HM Treasury has also called for councils to renegotiate PFI contracts to achieve better value for money for taxpayers. It has produced a guide for councils to identify and implement savings that will reduce costs while maintaining front line services.

6. Once the measures have been fully implemented council savings of £8.3m should be achieved over the remaining term of the contract.

7. In 1990 the county council set a target of reducing its CO₂ emissions by 80 per cent from 173,605 tonnes to 34,700 tonnes by 2050. The recommendations in this report will help the council to achieve this objective by reducing CO₂ emissions from street lighting by 3,000 tonnes over the next 16 years – the equivalent of removing 13,000 street lights. By reducing the council’s CO₂ emissions, savings would also be achieved against the Government’s CRCEES scheme (Carbon Reduction Commitment Energy Efficiency Scheme); however, it should be noted that this scheme is under review.
Background

The Street Lighting PFI Objective

8. Before the street lighting PFI contract started in May 2003 Staffordshire County Council was responsible for around 99,000 street lights. With the average life of a street light being 25 - 30 years and with 24 per cent of the lighting units beyond repair, there was a risk that many of the street lights could fail. The annual investment budget of £650,000 was not sufficient to cover the cost or repairs so a longer term solution was developed.

9. Under the proposed terms of the agreement, the street lights will be modernised to make them more economical and more environmentally friendly.

10. The cost of delivering the PFI during 2010/11 was £9.23m, of which £2.63m was for electricity. The Government provides £1.54m per year to support the contract.

PFI Project Achievements

11. The PFI contract is primarily a maintenance agreement that includes a requirement to replace street lights as they reach the end of their serviceable life. As of February 2012 the contract had achieved the following:

   • The installation of over 30,000 new street lights
   • More than 98 per cent of street lights continuously lit
   • Fault rates reduced by almost 50 pre cent

Contract Review

12. The contract has been in place for almost nine years and needed to be reviewed in line with recent advancements in street lighting technologies and advice from HM Treasury which actively promotes re-negotiating with contractors to secure better long term deals.

13. As a result, the council and its street lighting partner have looked again at the requirements of the PFI contract. The review focused upon the following criteria to achieve increased value for money for taxpayers:

   • PFI delivery requirements and objectives;
   • HM Treasury guidance;
• Street lighting innovations;
• Energy conservation

14. Applying the above assessment criteria and after a lengthy and in depth evaluation of the primary objectives of the PFI contract, the following proposals have been agreed:

<table>
<thead>
<tr>
<th>Item</th>
<th>Proposal</th>
<th>Benefit (£000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>In accordance with HM Treasury Guidance</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>Modernise the service specification whilst maintaining front line services requirements.</td>
<td>3,780</td>
</tr>
<tr>
<td>1.2</td>
<td>Insurance – annual release of insurance gain share benefits.</td>
<td>573</td>
</tr>
<tr>
<td>2.0</td>
<td>Street Light Renewal Programme</td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Permit PFI partner to manage street light renewal programme on a risk managed basis.</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>Energy Conservation Measures</td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>SCC and PFI partner to share inherent energy savings following street lighting renewal.</td>
<td>1,032</td>
</tr>
<tr>
<td>3.2</td>
<td>PFI partner to introduce dimming facilities for street lights included in the forward renewal plan (circa 26,000 units)</td>
<td>395</td>
</tr>
<tr>
<td>3.3</td>
<td>PFI partner to retrofit dimming facilities at previously renewed street lights (circa 15,000 units)</td>
<td>2,244</td>
</tr>
<tr>
<td>3.4</td>
<td>Those local communities which support the introduction of part night street lights, PFI partner offer to introduce the facility when included within the street light renewal programme (circa 3,200 units).</td>
<td>*200</td>
</tr>
<tr>
<td>3.5</td>
<td>Those local communities which support the introduction of part night street lights where street lighting renewal has already occurred, PFI partner offer to retrofit the facility (circa 3,200 units).</td>
<td>*200</td>
</tr>
<tr>
<td>4.0</td>
<td>Miscellaneous Items</td>
<td></td>
</tr>
<tr>
<td>4.1</td>
<td>PFI partner to paint all columns to be renewed within conservation areas.</td>
<td>176</td>
</tr>
<tr>
<td>4.2</td>
<td>Inventory Management System – system managed by PFI partner and procured by the council. Procurement fee refund.</td>
<td>96</td>
</tr>
<tr>
<td></td>
<td><strong>Total Benefit Over Contract Term</strong></td>
<td>*8,296</td>
</tr>
</tbody>
</table>

Table 1.0 Agreed PFI Delivery Proposals

* Items 3.4 and 3.5 will be subject to a formal request on behalf of local communities and will not be imposed by the county council. The take up for part night switching may therefore be lower than the figures quoted and have therefore not been included in the ‘Total Benefit Over Contract Term’.

Benefits to the county council

15. The benefits to the council are significant with direct savings estimated at £7.95 million plus additional benefits to contract in the region of £0.74 million over the remainder of the period (May 2012 to May 2028).
16. In relation to the Medium Term Financial Strategy (MTFS) it is anticipated that the projected savings, detailed in Table 2.0, can be achieved from April 2012 to March 2017 and will be in the region of £2.5 million. It should be noted that the figures for the financial years 2013 to 2017 incorporate indexation as applied to the PFI contract i.e. 75 per cent of RPIX and has been estimated at four per cent per annum over this period. These projected savings have therefore been incorporated into the current MTFS and will be used to support the increased levels of investment in highway maintenance.

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>Estimated Saving</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 to 2013</td>
<td>£449,407</td>
</tr>
<tr>
<td>2013 to 2014</td>
<td>£450,921</td>
</tr>
<tr>
<td>2014 to 2015</td>
<td>£496,636</td>
</tr>
<tr>
<td>2015 to 2016</td>
<td>£516,999</td>
</tr>
<tr>
<td>2016 to 2017</td>
<td>£552,015</td>
</tr>
<tr>
<td><strong>Total MTFS Savings</strong></td>
<td><strong>£2,465,978</strong></td>
</tr>
</tbody>
</table>

Table 2.0 Projected MTFS Savings

17. Additional benefits will be gained from the introduction of the proposed energy conservation measures detailed in Table 1.0. The current estimate for the volume of carbon emissions as a consequence of the county’s street lighting is 18,121 tonnes CO₂ and accounts for 17 per cent of the county council’s total volume of reportable emissions. It has been estimated that once the proposals have been fully implemented the energy conservation measures will reduce emissions specific to street lighting by 3,000 tonnes CO₂. The council’s required reduction by 2016/17 (to stay on the 2050 curve) is 22,517 tonnes from 10/11; therefore these measures would contribute 7.5 per cent of this reduction.

18. By reducing the councils CO₂ emissions savings could also be achieved against the Government’s CRCEES (Carbon Reduction Commitment Energy Efficiency Scheme). The energy from street lighting is currently exempt from the requirements of the scheme; however, it is under review and if the council’s street lighting is subsequently incorporated then any reduction in CO₂ emissions will be of financial benefit to Staffordshire.

Consultation

19. Consultation was undertaken in respect of the proposal to dim street lights. To validate the proposal in March 2010 some of Staffordshire’s street lights were dimmed from 8pm to 6am to 65 per cent of full brightness. The trial coincided with PFI planned renewal works and involved the installation of dimming equipment within 59 street lights.
20. Using specialist street lighting technologies the county was able to meet the legally required lighting levels during peak traffic times and then dimming the lights when the roads were quieter, after 6.30pm.

21. With regard to the county wide implementation of a street light dimming strategy the following stakeholders were consulted:

- Head of Road Safety and Sustainable Travel;
- Commissioner for Community Safety;
- Police - Local Policing Commander.

22. The council’s Head of Road Safety and Sustainable Travel raised no concerns or objections to the recommendations contained in this report. The Commissioner for Community Safety supported the content and made reference to evidence from other local authorities within the UK where there has been no recorded increase in crime as a result of this type of initiative. The Local Policing Commander did not wish to raise any objections to the dimming proposal.

23. Public consultation has been undertaken using the council’s ‘People’s Panel’. When asked how far they agreed or disagreed that Staffordshire County Council should do the following the results were:

- Aim to reduce its energy bill – 98 per cent either, agree strongly / agree / neither agree nor disagree
- Find ways to reduce carbon emissions – 94 per cent either, agree strongly / agree / neither agree nor disagree
- Dim street lighting from late evening to early morning - 82.3 per cent either, strongly agree / agree / neither agree nor disagree

24. The decision to progress the introduction of a county wide street lighting dimming strategy has been guided by best practice and the real world experiences of authorities that have already implemented either part night switching and/or dimming strategies. The general consensus from these authorities is that dimming is the most sensible way forward.

25. With regard to the introduction of part night switching, this option will be led by the wishes of local communities via the localism agenda and will not be imposed by the council. Parish council’s will be notified of the facility to permit the introduction of part night street lights with each request assessed on an individual basis.
Appendix 1

Equalities implications: There are no equalities implications arising from this report.

Legal implications: There are no legal implications arising from this report.

Resource and value for money implications: The resource and value for money implications are contained in the main body of the report.

Risk implications: There is an increased maintenance liability risk associated with the introduction of additional equipment to the street lighting inventory; however, these risks will be mitigated through the existing PFI risk transfer mechanism inherent within the PFI contract. The reduction to service standards is appropriate given the percentage of equipment renewed to date (35%) and the nil adjustment to PFI service delivery targets.

Climate change implications: The energy consumption associated with Street lighting is a major contributor (17 per cent) of the county council’s estimated carbon dioxide emissions, by volume. This proposal will reduce the current CO$_2$ levels from 18,121 tonnes CO$_2$ to 15,121 tonnes CO$_2$ over the remaining years of the PFI contract. In addition to the CO$_2$ benefits achieved through reduced energy consumption, the street lighting partner’s appointed service provider will reduce its CO$_2$ emissions from vehicles through revised maintenance operations, the details of which will be reported in a PFI annual report.

Health Impact Assessment screening: There are no health impact assessment implications arising from this report.

Report author:

Author’s Name: Steve Bradbury
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Room No: 3rd Floor, Staffordshire Place No.1

List of Background Papers

1) HM Treasury – Making Savings in Operational PFI Contracts (July 2011).
4) UK Lighting Board – Well-lit Highways (November 2004).
## Appendix 2 Impact Assessment

**Name of Policy/Project/Proposal – Street Lighting PFI Contract Review**

**Responsible officer - Stephen Bradbury**

**Commencement date & expected duration – Commencing 01/04/2012 to 18/05/2028**

<table>
<thead>
<tr>
<th>Impact Assessment</th>
<th>+ve/neutral/ -ve</th>
<th>Further information [Degree of impact and signpost to where implications reflected within the report/main Assessment]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment next to outcomes and impact areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prosperity, knowledge, skills, aspirations</td>
<td>neutral</td>
<td>No impact</td>
</tr>
<tr>
<td>Living safely</td>
<td>neutral</td>
<td>Feedback from those authorities that have employed a dimming strategy show no changeable impact upon affected communities.</td>
</tr>
<tr>
<td>Supporting vulnerable people</td>
<td>neutral</td>
<td>No impact</td>
</tr>
<tr>
<td>Supporting healthier living</td>
<td>+ve</td>
<td>Reduced impact from night time light intrusion levels in residential areas.</td>
</tr>
<tr>
<td>Highways and transport networks</td>
<td>neutral</td>
<td>Negligible impact. Continuous monitoring to be applied to ensure highway safety is maintained at the appropriate level.</td>
</tr>
<tr>
<td>Learning, education and culture</td>
<td>neutral</td>
<td>No impact</td>
</tr>
<tr>
<td>Children and young people</td>
<td>neutral</td>
<td>No impact</td>
</tr>
<tr>
<td>Citizens &amp; decision making/improved community involvement</td>
<td>+ve</td>
<td>Local communities to decide if they wish to introduce the part night switch off of street lights.</td>
</tr>
<tr>
<td>Physical environment including climate change</td>
<td>+ve</td>
<td>Implementation of dimming strategy will reduce energy consumption rates and hence the county’s CO₂ emissions (Appendix 1).</td>
</tr>
<tr>
<td>Maximisation of use of community property portfolio</td>
<td>neutral</td>
<td>No impact</td>
</tr>
</tbody>
</table>

## Equalities impact

<p>| Age | neutral | No impact |
| Disability | neutral | Dimming will only be applied to street lighting systems where the street lights have been renewed. |
| Ethnicity | neutral | No impact |
| Gender | neutral | No impact |
| Religion/Belief | neutral | No impact |</p>
<table>
<thead>
<tr>
<th>Sexuality</th>
<th>neutral</th>
<th>No impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impact/implications</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Resource and value for money</strong></td>
<td>In consultation with finance representative</td>
<td>The requested contractual changes will achieve savings against the annual cost of the street lighting PFI contract in the region of £500,000.00 per annum. There are no resource implications upon the council.</td>
</tr>
</tbody>
</table>
| **Risks identified and mitigation offered** | From corporate risk register categorisation | Risk – Service delivery requirements  
Mitigation – All risks associated with the delivery of the street lighting maintenance service reside with the street lighting partner.  
Risk - Dimmed street lights. Public placed at increased safety risk due to reduced lighting levels.  
Mitigation - The dimming of street lights will only be applied to streets that have had their street lights upgraded to current design standards. The time periods for dimming have been specifically chosen so as to maintain highway safety standards.  
Risk – Part night switched street lights. Public placed at increased safety risk due to part night switching off of street lights.  
Mitigation – The council does not seek to introduce part night street lights, however, if local communities wish to benefit from this facility then the option will be made available to those communities. Switch off time periods and a stringent exemption criteria will be applied to requests for part night switching to ensure highway safety standards are maintained. |
| **Legal imperative to change** | In consultation with legal representative | • There is no statutory duty for a highway authority to provide street lighting.  
• There is no legal imperative to change the PFI contractual requirements or the council’s street lighting operational policy. Consultation with the council’s legal representatives will however be required to document the street lighting PFI contractual changes. |

**Author:**  
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Room No: 3rd Floor, Staffordshire Place No.1

**Background Documents**  
N/A
1. What is the starting point for this proposal?

The street lighting PFI contract has been operating since May 2003 and therefore it was considered an appropriate time to review the requirements of the contract and seek opportunities to reduce the costs associated with the delivery of the service to meet the requirements of the council’s Transformation agenda. There are three principle elements to the delivery of the street lighting service:

1. Maintenance.
2. Equipment renewal.
3. Energy consumption.

Items 1 and 2 are fully incorporated into the PFI service requirements. Item 3 is incorporated but is considered a pass through cost to the Council with limited incentive on behalf of the PFI service provider to reduce energy consumption rates. This element is particularly relevant given the volatile nature of the energy markets.

To obtain maximum benefit on behalf of the council all three elements of the service were examined during the contract review. To assist with the review of PFI contracts the HM Treasury has produced a guidance document ‘Making savings in operational PFI contracts’ – July 2011, which identifies possible measures to reduce costs whilst maintaining front line services. This document was considered throughout the review.

In addition to the above the county council has set a target of reducing its CO₂ emissions by 80% by 2050. The energy saving recommendations contained in the main report have been guided by the corporate climate agenda and will assist the council towards meeting this objective.

2. What was the insight behind the proposal?

The primary driver behind this objective is to assist with the council’s Transformation agenda by obtaining increased value from the long term street lighting PFI contract.

The requirements of the street lighting PFI contract are delivered via a series of performance standards. Each performance standard was established to deliver a high quality street lighting service which is reflected in the quality of on-street equipment and the current average time to repair a fault of 2.6 days (2010/11) against a contractual requirement of five days. The continued delivery of this gold star service in the current financial climate could no longer be considered appropriate. In addition to the PFI service delivery standards the advancements in street lighting technology now provides us with the opportunity to enhance the council’s technical specification with a particular emphasis upon energy conservation.
These advancements in technology now provide council’s with the opportunity to control light output levels on a time of day basis enabling an authority to dim street lights when full light output is not required. Many authorities throughout the UK have or are in the process of implementing a number of street lighting energy saving measures, with many authorities choosing to implement the facility known as part night switching; switching off street lights over a pre-set time period. The part night switching of street lights has generally not been accepted as good practice resulting with a significant amount of negative reaction from affected communities and the media. Conversely, those authorities who implemented a dimming strategy have reported that following initial public concerns the results have been extremely positive, with no reportable increase in crime or accident statistics.

To validate the above the council undertook its own dimming trial commencing March 2010. The scheme automatically dims street lights by over a third from 8pm in the evening until 6am the following day. The dimming criteria was established from the assessment of traffic volumes.

### 3. Finding out what people need

The key objective in this proposal is to seek the Cabinet Member’s approval for the introduction of a policy to permit the use of street lighting dimming facilities during the time periods when highway activity is low. The introduction of dimming will reduce street lighting energy costs, the council’s carbon emissions and night time artificial light pollution.

Initial consultations regarding the details of the proposal have been discussed with the Head of Road Safety, the Commissioner for Community Safety and the Local Policing Commander. During the discussions the implementation strategy was clarified and any concerns raised during the process have been resolved to the satisfaction of each representative. In principle it has been agreed that if it can be shown that as a direct consequence of the street lighting dimming strategy that a particular highway suffers an abnormal increase in criminal or road safety concerns then that particular highway may revert back to non dimmed street lighting. Therefore, upon completion of this process each stakeholder agreed to raise no objections to the proposal.

To gauge opinion from the general public regarding the dimming strategy a series of questions were raised through the ‘Peoples Panel’ facility. The questions were focused upon the dimming strategy, carbon savings, financial savings and the impact of the proposal upon local communities.

### 4. Responding to issues identified

Public consultation has been undertaken using the council’s ‘People’s Panel’. The panel is broadly representative of Staffordshire as a whole, and includes a range of people on the basis of age, gender, ethnicity, disability and locality. A series of questions were put to the People’s Panel which were focused upon energy conservation and the introduction of dimming to street lights. The response from the panel was encouraging and clearly shows that the people of Staffordshire support council initiatives to reduce energy consumption with 98 per cent of respondents supporting measures to reduce the council’s annual energy bill and 94 per cent of respondents supporting measures to reduce the council’s carbon emission...
levels. With regard to the introduction of a county wide street lighting dimming strategy again the feedback from respondents was extremely positive with 82.3 per cent of respondents supporting the introduction of dimming.

If the proposal is approved any public and/or stakeholder concerns following implementation will be reviewed on a regular basis and when necessary incorporated into the annual review of street lighting specifications. This will then ensure that a flexible approach is provided for the implementation of dimming which continuously meets the expectations of local communities.

The feedback from key stakeholders has already been incorporated into the delivery strategy for the introduction of street light dimming facilities. With regard to the public consultation via the ‘Peoples Panel’; upon receipt of the assessed data the findings will be taken into consideration to further develop the delivery strategy to alleviate any public concerns.

As the dimming programme is implemented a continuous delivery strategy assessment will be undertaken to fine tune the implementation process. Feedback from stakeholders, members, local communities and appointed representatives will be encouraged to ensure the delivery strategy is appropriate for Staffordshire’s communities.

5. What is the final proposal and what is it to achieve

The review of the street lighting PFI contract has resulted with the following outcomes over the residual life of the contract (contract will expire May 2028):

- Modernisation of service standards to achieve estimated savings of £3.8m
- The introduction of energy reduction measures will achieve estimated savings of £4.1m
- The review will also achieve miscellaneous savings in the region of £0.8m

The primary area relative to community impact is that associated with energy savings and the introduction of street light dimming. The introduction of dimming will be subject to a stringent set of criteria to ensure that no section of the community is put at a disadvantage as a consequence of the proposal. If, however, there is a direct correlation between dimmed street lighting and a detrimental effect upon the local community and or road safety then the street lighting systems will be reverted to full time operation.

The energy saving measures will reduce the CO\textsubscript{2} emissions associated with street lighting by some 3,000 tonnes CO\textsubscript{2} reducing the overall Councils emissions by 13.3 per cent. Due to the way that street lighting energy is measured by the council, street lighting is exempt from the governments CRCEES (Carbon Reduction Commitment Energy Efficiency Scheme); however, it is highly likely that this exemption will be rescinded in 2014 and therefore these energy reducing measures will assist the council in reducing its costs against the requirements of the scheme.

We are also aware that some communities may wish to instigate measures that go further than dimming such as part night switching. This is a facility whereby the street lights are completely switched off from midnight until the early hours of the morning. The council does
not wish to impose this type of strategy as it is generally considered un-acceptable practice. However, those communities which support this agenda will be permitted to request the introduction of part night switching and the council will support such requests provided the full backing of that community is achieved along with the full support of the parish council. This approach aligns with central governments localism agenda.

6. How will we know we have been successful?

The impact of the proposals will be to reduce the PFI annual unitary charge for the delivery of the street lighting service. With regard to the energy reduction measures this will also have an impact upon a reduced unitary charge, but it should be noted that a percentage of the gains will be offset by growth in the network due to the introduction of new developments (industrial, commercial and residential) onto the network. However, the implications of this policy will ensure that the impact of new developments can be controlled with all new street lighting systems being assessed for the introduction of dimming.

The success of the project in financial terms can be measured against the original delivery projections for the PFI contract and CO₂ values can be calculated on an annual basis form actual energy consumption rates.

In terms of project adjustment, feedback from stakeholders will be collated and assessed, and the resultant recommendation can then be considered during the annual appraisal of the street lighting specifications. Furthermore, bi-monthly PFI contract review meetings will be used to raise and resolve any specific concerns raised by stakeholders, thus ensuring that any critical areas of concern can be quickly resolved negating the need to wait for the annual specification review.

Once the proposals have been approved the amendments to service delivery standards can be implemented immediately, however, there will be a short lead in time (approximately three months) for the introduction of dimming technologies due to the need to finalise the programme of installation and to prepare manufacturers.