

HAMPSHIRE COUNTY COUNCIL

Decision Report

Decision Maker:	Executive Member - Environment
Date of Decision:	12 January 2010
Decision Title:	Authority to Tender for Term Contract for the Installation and Maintenance of Traffic Signal and Associated Equipment 2011-2016
Decision Reference:	873
Report From:	Director of Environment

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1. Executive Summary

- 1.1. This paper seeks approval to tender the term contract for the installation and maintenance of traffic signal and associated equipment for an initial period of three years from July 2011. It sets out the background to the current contract and the alternative options for procuring and maintaining traffic signals and associated equipment.

2. Contextual information

- 2.1. The County Council has a statutory duty to maintain all highway infrastructure in a safe and effective manner. All traffic lights, signalled pedestrian crossings and other associated equipment are maintained through a contract to ensure that they operate effectively and safely for all users of these facilities, with the repair of faults and replacement of life-expired equipment. The replacement of the present contract at the end of its term will ensure that the current high standards for the safe operation and maintenance of traffic control equipment in Hampshire are maintained.
- 2.2. The current contract was awarded in July 2003 following a competitive tender. The contract was for an initial period of five years to July 2008, with provision to extend the contract annually up to a maximum of three years to July 2011. A one-year extension to July 2009 was agreed by the Executive Member for Environment in February 2007, and authority was delegated to the Director of Environment to approve subsequent extensions, subject to satisfactory performance. Two further extensions were approved by the Director of Environment and this contract will now

run until the end of June 2011. A new contract and specification will be required from this date, and a decision is needed now to approve the tender procedure for a replacement contract from July 2011.

- 2.3. The current term contract brought together the earlier maintenance contract and the then separate installation contracts that were used to procure individual traffic signals, including pedestrian crossings. The aim of bringing together the maintenance and installation contracts was to increase the attractiveness of the resulting contract to potential bidders, and to save staff time in preparing up to 20 individual tenders each year. The contract term was increased from five years to eight years, which also increased the attractiveness of the contract since potential bidders could anticipate a longer tenure to offset their initial set-up costs.
- 2.4. The Procurement Innovation Group considered the scope for combining this contract with the new Term Highways Contract, but recommended that it should remain separate due to its specialist nature.
- 2.5. An 80:20 price to quality split was used in the initial tender assessment for the previous contract. Contract performance has been continuously monitored against a number of key performance indicators (KPIs) linked to the initial quality assessment, designed to evaluate performance in a more balanced way than would otherwise have been possible through a simple monitoring of the contract terms. Performance has formed the basis of subsequent contract extensions.
- 2.6. It is proposed that this price:quality split should be altered to 70:30 in the new tender to strengthen the value of the quality of service. This would be reinforced by a more evidence-based assessment mechanism. The contract itself will have KPIs to monitor on-going performance and potential penalties for non-compliance.
- 2.7. During the period leading up to the existing contract being let in 2003, opportunities were investigated to assess the scope to integrate the maintenance service with neighbouring authorities. At the time it was not possible to develop such a joint arrangement. The likely costs appeared greater than could be achieved through a straightforward single authority contract. This was partly due to the additional overhead costs associated with a wider area service, and partly due to the larger geographical area of Hampshire compared with the urban networks of Southampton and Portsmouth, which increases travel costs/response times. The scope to involve the private sector to a greater degree in the design services was also assessed at this time, but ultimately not pursued. This was primarily because the term professional services contract already provided a means of filling any resource shortfall.
- 2.8. Neighbouring authorities have been asked informally about their contract provisions and their likely interest in a new joint County Council arrangement. There appears little scope for a multi-authority contract at this time. Again, the potential for cost savings above and beyond the

economies of scale already available to these authorities on their own is not assured, with additional overhead costs likely to be incurred by a contractor meeting current response time over a wider area, ie needing multiple depots, with limited staff savings to compensate. There is also a national framework contract provided by the Office of Government Commerce (OGC), open to public and private sector organisations spending public money, which provides an existing procurement arrangement for authorities wishing to avoid establishing their own contracts. The OGC arrangement was considered for the Hampshire contract and is discussed elsewhere in this report.

- 2.9. The contract presently operates a 'pay-as-you-go' system, whereby the contractor is paid for attending each fault as reported, and for any equipment replaced when repairing a fault. The contractor is also paid for routine maintenance and inspections. This type of contract removes significant risk from the contractor, and is believed to reduce the costs compared with other contract models. To ensure performance, repeat faults are analysed to ensure the contractor is not paid for unnecessary multiple visits. It is proposed to continue with this pay-as-you-go system in the new contract.
- 2.10. The current contract expires at the end of June 2011, and with a six month mobilisation period for any new contractor, the new contract should be awarded in December 2010. A three month tender assessment period could be required, preceded by a three month tender period. With these timescales, a tender should be advertised no later than June 2010. To give some flexibility and to allow for contingencies, the required notice in the Official Journal of the European Union (OJEU) is provisionally scheduled for February 2010. An OJEU notice is required because the value of the work is expected to exceed £3.4 million. A 37 day advertisement period is required under the Restricted Procedure normally followed by the County Council for such contracts. During this period interested organisations would complete Pre-Qualification Questionnaires (PQQs). After evaluation, potential contractors would be shortlisted and invited to tender. A 40 day tender period is envisaged, with a latest start date of June 2010 as indicated above.

3. Finance

- 3.1. The current budget for maintaining traffic signal controlled junctions, crossings and associated equipment is approximately £1 million per annum, of which some £900,000 is expenditure under the existing term contract.
- 3.2. The existing term contract includes an annual price review based on the Retail Price Index, excluding mortgage interest, as published by the Office for National Statistics Monthly Digest of Statistics. The contract inflation increases over the term of the contract are listed in figure 1 below.

Year	Percentage increase in contract rates
2004	2.4%
2005	2.1%
2006	2.3%
2007	3.5%
2008	3.4%
2009	2.4%

Figure 1. Contract schedule of rates annual price review

- 3.3. As well as this contract inflation, maintenance costs increase as new installations are added to the inventory. The annual growth in maintained equipment over the term of the contract are listed in figure 2 below.

Year	Number of installations
2003/2004	24
2004/2005	11
2005/2006	17
2006/2007	6
2007/2008	13
2008/2009	8
2009/2010	4

Figure 2. Annual growth in equipment maintained under the contract

- 3.4. Traffic signal equipment is increasingly complex, and correspondingly more expensive to repair than earlier equipment. In addition, improved remote monitoring has increased the number of faults identified and repaired, further increasing pressure on this budget. Improvements in reliability, contract monitoring and performance have offset some of these additional pressures, but costs are expected to continue to rise as new installations are commissioned, and as life-expired installations are replaced with more modern equipment. The annual budget for maintaining traffic signal controlled junctions, crossings and associated equipment has increased each year above the contract inflation figure to reflect the increased

inventory and the additional equipment costs. The annual growth in the budget is listed in figure 3 below.

Year	Budget £'000s	Annual percentage growth
2003	728	
2004	804	10.4%
2005	906	12.7%
2006	969	7.0%
2007	1,024	5.7%
2008	1,050	2.5%
2009	1,065	1.4%

Figure 3. Annual growth in the budget

- 3.5. With the low annual price adjustments applied over the previous eight years, which ignore the escalating cost of steel that is a major component of traffic signal installations, it is possible that the tendered prices will increase significantly compared with the current charges.
- 3.6. The proposed 'pay-as-you-go' system of procuring maintenance, whereby the contractor is paid for attending each fault as reported, and for any equipment replaced when repairing a fault, provides greater flexibility in managing maintenance works and more control of costs.
- 3.7. Measures are also in place to minimise avoidable costs incurred through spurious faults by utilising remote monitoring systems. This, along with contractual and performance monitoring, will ensure that the present, efficient and cost-effective maintenance will continue.
- 3.8. It is proposed to include an annual price review based on the Retail Price Index, excluding mortgage interest, as published by the Office for National Statistics Monthly Digest of Statistics. This increase is considered advantageous compared with construction-related price indices.

4. Performance

- 4.1. The current contract uses a number of KPIs to monitor performance in the installation and maintenance service received from the contractor. Performance in respect of these KPIs formed part of the assessment leading to each of the three, one-year contract extensions being approved.

- 4.2. It is proposed that a performance assessment should also form an integral part of the new contract, based on a balanced scorecard, with greater significance given to more important indicators, to reduce the likelihood of less significant or easy to achieve indicators masking poor performance in more crucial areas. It is proposed that in addition to their role in the assessment of each contract extension, that performance in respect of these KPIs should determine whether the contractor is awarded further chargeable works. Figures 4 and 5 below indicate the type of performance evaluation being considered.

Performance	Response
Poor	No chargeable works
Improvement Required	Chargeable works may be awarded. Individual jobs assessed, with access to subsequent works subject to achieving threshold for satisfactory performance in respect of the activity
Satisfactory	Up to 50% of chargeable maintenance works, excluding refurbishment
Good	50% + of chargeable maintenance works, together with refurbishment work

Figure 4. A performance evaluation model for maintenance works

Performance	Response
Poor	No new installation work
Improvement Required	New installation work may be awarded. Each new installation assessed, with access to subsequent works subject to achieving threshold for satisfactory performance in respect of new installations
Satisfactory	All new installation works
Good	All new installation works and refurbishment works

Figure 5. A performance evaluation model for installation works

- 4.3. The performance levels (Poor, Improvement Required, Satisfactory, Good) will be defined in the contract specification. Quarterly performance reviews

are envisaged. Access to additional works would be based on past performance, with no reward until the following quarterly review. A process for responding to improvement or interim failure will be required, and it is intended that the 'Improvement Required' category should facilitate this.

5. Other options considered and rejected

- 5.1. A 'do minimum' option was considered where maintenance and installation work would be undertaken independently. These were the arrangements in place prior to the present contract, with a separate maintenance contract running over a period of years, extendable subject to performance, and with new installations tendered separately. This option is not recommended as it would be more complicated to administer, and would double-up on the contract management costs. It would also reduce availability of highly skilled support staff where an equipment supplier maintains equipment. A further, significant disadvantage, is the staff-time costs associated with preparing as many as 20 individual tenders every year.
- 5.2. Procuring works through the OGC frameworks was also considered. The OGC is an executive agency of HM Treasury. The OGC Buying Solutions provide a number of frameworks open to public and private sector organisations spending public money. The OGC framework provides basic contractual terms and conditions, but does not define the price, specification or required levels of service (performance criteria). These are negotiated with the framework contractors. In practice, the authority would run a limited competitive tender among framework contractors. A select list of potential suppliers is achieved through a quick capability assessment, with potential contractors invited to price the works according to the specification issued by the authority.
- 5.3. The advantage of the OGC framework is that it avoids the need for an OJEU notice, PQQs and tendering, resulting in cashable savings for the authority. However, as much of the work will require a competitive tender within the framework, the staff-time savings will in practice be less than with a standard term arrangement.
- 5.4. One major disadvantage of taking up an OGC framework at this time is the limited number of traffic signal suppliers in the framework. This is expected to change from 2011, when a specific OGC ITS framework is expected to become available, making this option more attractive for traffic signal works. Orders placed on the present framework up until the end of the framework agreement in 2011 may run up to a maximum of between five and seven years (depending on actual framework), but the term must be fixed.
- 5.5. The economies of scale and staff-time cost savings available with a single installation and maintenance term contract make this option attractive compared with a maintenance term contract with individual installation tenders. The need for maintenance arrangements to be in place from the end of June 2011, when the present term contract expires, limit the immediate

attractiveness of the OGC option with the limited number of potential contractors, and it is not recommended at this time. The cashable savings accrued through avoiding the need for OJEU notices and PQQs will not arise as these are being prepared to permit other options.

- 5.6. With the new Department Procurement Team in place, strategic sourcing reviews will be undertaken in all service categories through partnership working between the Procurement Team and service leads. Analysis will include supply market profiling, supply chain mapping, cost structure analysis, best practice research and appraisal of longer term sourcing options such as integration of requirements, disaggregation, frameworks, collaboration, outsourcing, in-sourcing, infrastructure ownership options, joint ventures. Through this work, overseen by the Department Procurement Board, the longer term procurement arrangements in the Department will be optimised.

6. Conditions of Contract

- 6.1. The present contract is based on the IEE/IMEchE Model Form of General Contract Conditions MF/1 (rev 4), and will be rewritten around the New Engineering Contract, Term Service Contract, bringing it in line with recent contracts issued by the Environment Department.
- 6.2. The contract will use a number of KPIs to monitor performance and to drive forward continuous improvements. Performance in respect of these KPIs will affect the contractor's access to new installation and other chargeable work, and will form part of the assessment process for awarding each of the two proposed annual extensions to the contract.
- 6.3. A partnering ethos will be encouraged, with a shared approach to maintaining the asset, aiming to produce efficiency savings without compromising the level of service now or in the future, and to minimise the environmental impact of maintenance and new installation works.

7. Future direction

- 7.1. To reduce officer and Member time in completing the contract approval process, it is proposed that the Director of Environment be delegated authority to award this contract following the selection process, which will involve advertising the new contract in the OJEU, pre-qualification to select suitable contractors and a tender assessment process.
- 7.2. It is also proposed that the Director of Environment be delegated authority to award subsequent extensions to this contract up to the maximum total contract period of five years, subject to a satisfactory performance.

8. Recommendations

- 8.1. That approval be given to tender the term contract for the installation and maintenance of traffic signal and associated equipment for a period of three years from July 2011, extendable annually by additional periods of one year up to a maximum total contract period of five years.
- 8.2. That the Director of Environment be authorised to award this contract and subsequent extensions to this contract up to the maximum total contract period of five years, subject to a satisfactory performance.
- 8.3. That the Director of Environment be authorised to vary the scope of the contract as necessary in line with service improvement objectives.

CORPORATE OR LEGAL INFORMATION:**Links to the Corporate Strategy**

Hampshire safer and more secure for all:	yes
Corporate Business plan link number (if appropriate):	
Maximising well-being:	yes
Corporate Business plan link number (if appropriate):	
Enhancing our quality of place:	no
Corporate Business plan link number (if appropriate):	

Other Significant Links

Links to previous Member decisions:		
<u>Title</u>	<u>Reference</u>	<u>Date</u>
Executive Member - Environment		11 March 2003
Intelligent Transport Systems Term Contract for Installation and Maintenance of Traffic Signals and Associated equipment		
Buildings, Land and Procurement Panel		23 January 2007
Extension to the Term Contract for the Installation and Maintenance of Traffic Signals and Associated Equipment (July 2008-July 2009) Report of the Director of Environment		
Executive Member - Environment		27 February 2007
Extension to the Term Contract for Installation and Maintenance of Traffic Signals and Associated equipment (July 2009-July 2010)		

Section 100 D - Local Government Act 1972 - background documents

The following documents discuss facts or matters on which this report, or an important part of it, is based and have been relied upon to a material extent in the preparation of this report. (NB: the list excludes published works and any documents which disclose exempt or confidential information as defined in the Act.)

<u>Document</u>	<u>Location</u>
Hampshire County Council Term Contract for the Installation and Maintenance of Traffic Signals and Associated Equipment 2003-2008 (extendable to 2011). HTMT Briefing Note 1: April 2009	Monument House
Hampshire County Council Term Contract for the Installation and Maintenance of Traffic Signals and Associated Equipment 2003-2008 (extendable to 2011). HTMT Briefing Note 1: September 2009	Monument House

IMPACT ASSESSMENTS:

1. Equalities Impact Assessment:

- 1.1. The provisions of the Race Relations (Amendment) Act have no impact on this proposal.
- 1.2. A Race and Equalities Impact Assessment (REIA) has been prepared for traffic signals and Intelligent Transport Systems installed in Hampshire. An initial assessment completed in 2005/06 identified that these systems have a high impact due to their direct use by the public. A full impact assessment, completed in 2006/07, concluded that there is no unlawful discrimination.

2. Impact on Crime and Disorder:

- 2.1. The provisions of the Crime and Disorder Act 1998 have no implications for this proposal.

3. Climate Change:

- a) How does what is being proposed impact on our carbon footprint / energy consumption?

Delay at traffic signal controlled junctions and crossings is likely to be minimal as installations are designed to respond to approaching vehicles, and avoid unnecessarily stopping traffic. An appropriate periodic maintenance regime, with a contract for repairing faults, ensures installations operate efficiently for longer, reducing vehicle carbon emissions.

Existing measures are in place to optimise the effectiveness and efficiency of existing traffic signals. Periodic maintenance, including a six-monthly bulk lamp change and annual electrical inspection of traffic signal junctions and pedestrians crossings, is undertaken throughout the year. Reactive maintenance is undertaken in response to reported faults, and further works may subsequently be carried out to prevent a recurrence of the fault.

Obsolete and life-expired equipment is replaced when it is no longer cost effective to repair, or to improve the efficiency of the system. The current system of maintenance, which has operated successfully in Hampshire since 2003, would continue under the recommended replacement contract.

- b) How does what is being proposed consider the need to adapt to climate change, and be resilient to its longer term impacts?

The opportunity exists to reduce the power consumption of traffic signals by adopting new, extra low voltage (ELV) equipment, the majority of which has a lower power rating, eg LED signal lanterns. This equipment has not been commercially available for long, and experience in the field is limited. As a result, it is difficult at this time to assess the cost implications of operating this equipment.

Extra low voltage equipment, including LED signal aspects, will be used at new and refurbished, life-expired installations, reducing power consumption. In addition, the mean time between failure with LED signal aspects is greater than with traditional incandescent signal aspects, reducing the travel related pollution and carbon emissions associated with their maintenance.

In responding to the climate change imperative, the department will need to consider a number of issues, including whether to continue to maintain ageing low voltage (LV) installations by replacing faulty equipment on a like-for-like basis, or whether to proactively swap out life-expired or near life-expired installations with new, ELV equipment in a planned carbon reduction programme. Unfortunately LV and ELV are not compatible, and whole installations would need to be upgraded. The cost of this might be partially offset by energy saving, but the maintenance costs are as yet unknown, but could be considerable as some components are significantly more expensive. Knowledge of these costs and the reliability of ELV equipment will improve as the market matures.

From a maintenance contract perspective, a planned carbon reduction programme swapping out LV for ELV equipment would likely skew any tender assessment, and it may be better to procure this separately. If the OGC facility is developed, this might provide a means of achieving this while continuing with a County Council maintenance contract.

Another new technology issue likely to emerge over the period of any new contract is the use of fuel cells. Currently fuel cells have been used successfully for low power demand ITS equipment like variable message signs and close circuit television, but at this time their application for traffic signals is limited by the variable peak load of traffic signals (junctions in particular) and the relatively immature technology itself. This is expected to change with developments in the automotive industry.

From a new maintenance contract perspective, the specialist skills required to maintain fuel cells, and the associated health and safety risks, should be evaluated in the pre-qualification process.