



VALUE FOR MONEY TOOLKIT for LOCAL HIGHWAYS SERVICES

**Promoting Improvement and Efficiency in Local
Highways services**

Developed by the Highways Efficiency Liaison Group (HELG)

October 2009



Highways Efficiency Liaison Group (HELG)

Representing government, local government, private and professional interests in highways.

HELG is a unique industry wide body which aims to support the whole highways industry in identifying and delivering improved and increasingly efficient highways services.

HELG Aim

To support the whole highways industry in identifying and delivering improved and increasingly efficiency highway services.

HELG Membership

*Association for Consultancy and Engineering
Civil Engineering Contractors Association
Constructing Excellence
County Surveyors Society
Department for Transport
Highways Agency
Highways Term Maintenance Association
Institution of Highways and Transportation
Public Private Partnerships (4Ps)
Regional Improvement and Efficiency Partnerships
Technical Advisors Group
Transport for London*

HELG has a Board and two Groups, the Best Practice Group and the Visibility Group. The Toolkit has been developed by the Best Practice Group.



For enquiries or suggestions for improvement on this Toolkit please contact: info@helg.org

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Local Authority Efficiency Experiences: *See separate menu tab on www.helg.org*

Case Studies: *See separate menu tab on www.helg.org*

1. Introduction

In an increasingly tough financial environment, highways expenditure is under pressure. The highways industry as a whole, ie public and private sectors, need to do everything possible to continue to deliver and to improve services to the public in innovative and more efficient ways. With national value for money targets in place, but no individual authority or service targets, the responsibility to deliver improvements to services and to achieve value for money cashable efficiencies lies with Councils and highway authorities.

Construction is one of the major areas of expenditure in CSR07 and highways is a significant area within construction. It is acknowledged in the industry that there are efficiency gains which can be achieved through changes in culture, procurement and processes.

This Toolkit, and associated pages on the HELG website, www.helg.org, are designed to help local authorities identify, measure, and justify service improvements and value for money efficiency gains in highways services. The advice draws on local authorities' experiences, provides case studies and measurement techniques that authorities may wish to draw on or use, and includes advice on:

- Cash-releasing value for money gains
- Quality checks to demonstrate that service quality is at least as good
- Measuring service improvement
- Examples, experiences and case studies

There is a national overall local authority indicator for value for money gains, but the need to achieve increasing value for money and the accountability for doing so is mainly a local requirement. The national measurement regime for highways is now through a limited number of national indicators and it is therefore important that highways services can demonstrate how they contribute to Local Area Agreement targets and to corporate and wider transport objectives.

The measurement matrices in this Toolkit offer a way to relate highways services to outcomes as experienced by the whole population as users of the highway network.

Asset management is an important element of highways service and CIPFA in *Local Authority Transport Infrastructure Assets, June 2008*, considers that improved long term value for money from proper asset management could be equivalent to at least 5% of the capital and revenue maintenance spend.

This Toolkit builds on detailed general advice and examples in *Measuring and Reporting Value for Money Gains, A guide to compiling the data for national indicator 179*, and on the 2008 Highways Efficiency Toolkit.

A number of suggested areas and methods for achieving improvements and efficiencies are indicated which authorities may find useful. Local authorities may of course find improvements and efficiencies in other aspects of their Highways services, and use other methods of measurement.

Further advice, examples and case studies can be found at: www.helg.org

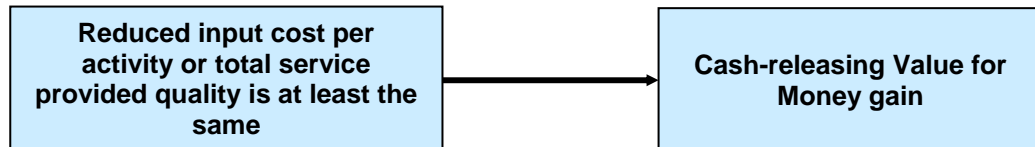
2. Value for Money Gains and Measurement

Value for money (VfM) gains, i.e. cash-releasing efficiencies, result if services are provided to at least the same level of quality for reduced cost.

VfM gains are self-assessed by local authorities and reported nationally through national indicator NI 179 (Value for money – net value of on-going cash-releasing value for money gains since the start of 2008/09).

CLG Guidance, see www.communities.gov.uk and search for the latest version of *Measuring and Reporting Value for Money Gains, A guide to compiling data for national indicator 179*, sets out how financial baselines should be established, basic VfM measurement principles, VfM from capital expenditure, etc, and provides examples of eligible and ineligible efficiencies.

Value for money gains can result from either revenue or capital expenditure.



If the level of service is reduced through the change then a service reduction, not a VfM gain or an efficiency, has resulted.

To demonstrate that the level of service is at least the same as before, it is recommended that local quality crosschecks are used, see Section 5.

Efficiency Areas

The national delivery plan, *Delivering Value for Money in Local Government: Meeting the Challenge of CSR07, CLG 2007*, summarises tools and techniques to assist authorities achieve efficiency gains in the areas of:

- Business process improvement, including collaboration
- Smarter procurement
- Asset management.

The table below give examples of typical highways actions in the three areas.

Local authority experiences, worked examples and case studies are in Appendices and in www.helg.org.

Business process improvement, including collaboration

| Potential Efficiency Area | Potential efficiency actions |
|-------------------------------------|--|
| Restructuring | <ul style="list-style-type: none"> • Redesign service delivery • Partnership working arrangements • Value management |
| Processes | <ul style="list-style-type: none"> • Integration of services/activities • Cross sector collaboration with other services • Use of less expensive materials for equal quality • Improved working practices • Improved management of third party claims |
| Information technology | <ul style="list-style-type: none"> • Electronic reporting of faults by users • Database for logging and faults and repairs • Using the internet to provide customer services |
| Waste | <ul style="list-style-type: none"> • Reduction /minimisation • Reuse / recycling of materials into highway works. |
| Capital Schemes | <ul style="list-style-type: none"> • More efficient investment programmes • Preparation and delivery time improvements |
| Collaboration between public bodies | <ul style="list-style-type: none"> • Joint contracts • Shared framework contracts • Sharing services/activities across authorities • |

Smarter procurement

| Potential Efficiency Area | Potential efficiency actions |
|--|--|
| Procurement of highways services, eg management and maintenance of roads, footways, bridges, lighting and other services | <ul style="list-style-type: none"> • Improvements in the procurement process • New contract initiatives • Delivering more for the same cost or the same or better for reduced cost. • Larger / longer contracts with better supply chain management. |

Asset management

| Potential Efficiency Area | Potential efficiency actions |
|---------------------------|---|
| Asset management | <ul style="list-style-type: none"> • Improved data collection and management • Invest to save projects where capital expenditure results in reduced revenue costs • Whole life costing of transport assets, eg roads, bridges, lighting, etc. • Office / depot / equipment rationalisation. |

3. Inflation

It is possible to show cash-releasing value for money gains through withstanding inflation against rising costs if service levels remain the same or improve.

The deflator to be used is the ROADCON index. Other construction inflation indices may be in use by individual authorities and in contracts, but ROADCON is specified in the CLG publication *Measuring and Reporting Value for Money Gains, A guide to compiling data for national indicator 179*.

VfM efficiencies calculated through this method cannot of course also be claimed as individual efficiencies.

ROADCON

The value of ROADCON is published by the Building Cost Information Service (BCIS). Local highway authorities are sent a free quarterly newsletter, the Quarterly Road Project Survey, which contains values for ROADCON. ROADCON values may also be obtained from BIS Online Construction Price and Cost Indices, which is a subscription service.

Example 1:

An Authority has a revenue budget of £10M for highway works in two successive years. Service Levels within the whole service have remained the same and it has absorbed inflation through a series of efficiency measures. The value of ROADCON is 5%.

$$\text{Efficiency} = \text{£}10\text{m} \times 5\% = \text{£} 500,000$$

Quality check, see section 5:

For a broadly based service efficiency gain, the Authority has determined that a range of performance indicators should remain the same or improve:

| Indicator | Previous Year | Current Year | Change |
|---|---------------|--------------|----------|
| Customer satisfaction, CS 1 | 51% | 52% | improved |
| Killed or seriously injured casualties, NI 47 | 200 | 196 | improved |
| Condition of Principal Roads, NI 168 | 7% | 7% | same |
| Condition of non p classified roads, NI 169 | 13% | 13% | same |
| Condition of footways, ex BV 187 | 15% | 15% | same |
| Safety defects repaired on time, SA2 | 99% | 99% | same |
| Street Lighting faults, ex BV 215 | 3 days | 3 days | same |

Note that in this case the authority has chosen to continue to collect certain ex Best Value Performance Indicators for local purposes.

Example 2

As example 1, but the authorities highways spend increases by 3% through a series of efficiency measures.

$$\text{Efficiency} = \text{£}10\text{m} \times (5-3)\% = \text{£} 200,000$$

Quality check: as example 1.

4. Service Improvement

4.1 Measures

Measuring service from the perspective of the user demands outcome measurement but there are few outcome measures and indicators available in highways at present. Many measures and indicators in use tend to be output based and related to contract management and operations.

Measurement of service improvement is not related to national reporting requirements but may be something authorities wish to do locally.

The Code of Practice for Highway Maintenance Management, '*Well Maintained Highways*', UKRLG 2005, defines local highways service objectives as Customer Service, Safety, Serviceability, and Sustainability. The Highways Agency aim is 'Safe Roads, Reliable Journeys, Informed Travellers'.

Common aims of all highway services can therefore be described as:

- Customer service
- Safety
- Serviceability / Reliable journeys
- Sustainability

Common activities on all highway networks can be described as:

- Operate
- Maintain
- Improve

Bringing common aims and activities together provides a basis for outcome measurement:

| | Operate | Maintain | Improve |
|--------------------------------------|---------|----------|---------|
| Customer Service | | | |
| Safety | | | |
| Serviceability/ Reliable Journeys | | | |
| Sustainability | | | |

Measures

A more detailed expansion of the service objectives is shown in Matrix A below. The detail is taken from '*Well Maintained Highways*'.

Factors which it would be useful to measure are in the boxes within the matrix.

| Highways Performance Measurement Matrix A | | | | | |
|--|--|---|---|--|--|
| | | Local Transport Plans, Highways Agency Business Plan, Transport Asset Management Plan | | | |
| | | Operate | Maintain | Improve | |
| | | Traffic Management Plan Network Management Plan / Manual Traffic Operator | Highway Maintenance Plan | Capital Improvement Programme | |
| Objectives | Customer Service | Customer satisfaction | User satisfaction | | |
| | | Overall Transport Service | Independent audit of services | | |
| | | Responding to enquiries | Effectiveness of customer response | | |
| | Safety | Ensuring Safety | Safety inspections. 3 rd Party Claims. Accidents and incidents on the network. | | |
| | Serviceability / Journey time reliability | Ensuring availability | Road user network availability Effectiveness of response to emergency incidents | | Impact of scheme on availability of road Predictability of times to deliver schemes |
| | | Achieving integration | Balance of facilities for different users | | Impact of scheme on integration of transport modes |
| | | Maintaining reliability | Journey time reliability for different users Peak period traffic flows | | |
| | | Maintaining Highway Condition | | Condition of various types of asset | |
| | Sustainability / Respecting the Environment | Minimising costs over time | | Reactive maintenance costs. Whole Life costing principles | Cost predictability for delivery of schemes. Works defects |
| | | Maximising environmental contribution | | Recycled material used for Inspection of amenities | Recycled material used in schemes. Air pollution levels |
| | | Maximising value to community | Quality of Life, e.g. social inclusion, regeneration, street scene and community safety | | |

4.2 Performance Indicators

There are a wide range of performance indicators in use in the highways industry. A selection of nationally recognised indicators which have a close relationship to service to the public and to the factors in the Matrix A have been selected and placed into the same framework, see Matrix B.

Indicators have been sourced from statutory indicators and Codes of Practice. Highways Agency indicators are included if authorities consider them appropriate. Indicators relating to service management or to contract management have not been used.

3.3. Evaluating Service Improvement

Service elements may possibly be reflected and measured by single indicators but wider aspects of the highways service are likely to be best measured by considering a combination, or basket, of indicators. A combination of indicators acting together better reflects the user experience of highways, ie a range of aspects of the service experienced together.

The Measurement Matrices above therefore provide a basis for highway authorities to measure aspects of the highways service, or the whole service, on a consistent basis.

A high-level, whole service, approach to measurement may well involve using a wide range of indicators in one or in several baskets. A focus on aspects of the service may use a single basket or even a single indicator approach.

If baskets of indicators are used for measurement, authorities will need to determine whether it is appropriate to:

- Have all indicators improving or to use a net positive balance of improving and deteriorating indicators
- Apply weighting factors to particular indicators.

If the indicators in the matrix are not appropriate for a particular improvement or authority then other indicators may be used either in addition or as alternatives.

See also Westminster City Council case study on www.helg.org.

| Highways Performance Measurement Matrix B | | | | | |
|--|--|---|--|---|---------------------|
| | | Local Transport Plans, Highways Agency Business Plan, Transport Asset Management Plan | | | |
| | | Operate | Maintain | Improve | |
| | | Traffic Management Plan Network Management Plan / Manual Traffic Operator | Highway Maintenance Plan | Capital Improvement Programme | |
| Objectives | Customer Service | Customer satisfaction | CS 1 CS 2 HA Customer Satisfaction Measures | | |
| | | Overall Transport Service | LTP / APR Score | | |
| | | Responding to enquiries | CS 3 API 3 | | |
| | Safety | Ensuring Safety | NI 47 NI 48 SA 1 SA 2 SA 3 SA 4 HA Safety Measures API 2 API 11 | | |
| | Serviceability / Journey time reliability | Ensuring availability | BV 100 BV 178 API 1 API 13 | SE 2 API 9 B2 | API 6 |
| | | Achieving integration | NI 175 NI 198 BV 165 | | |
| | | Maintaining reliability | NI 167 NI 178 HA Congestion Measures | SE 5 SE 6 B3 | |
| | | Maintaining Highway Condition | | NI 168 NI 169 BV 187 BV 215 BV 224b SE 11 L(a) L(b) L(c) L(d) B1 B4 API 12 API 14 | |
| | Sustainability / Respecting the Environment | Minimising costs over time | | SU 1 SU 2 SU 3 | SU4 API 7 API 10 |
| | | Maximising environmental contribution | NI 186 | NI 195 SU 6 SU 7 API 4 | API 15 |
| | | Maximising value to community | | SU 5 Quality of Life Indicators | |

See Appendix A for details of performance indicators.

Note. Non highways indicators, e.g. street cleansing, can be also be used if appropriate.

5. Quality Checks

A similar process to measuring service improvement may be used for devising local quality checks to support a cash-releasing value for money gain. In this case the aim is to demonstrate that the service, or an appropriate element of it, has remained at least the same as before the efficiency.

One or more indicators may be used, as in Section 4. The wider the scope of the efficiency, the less likely that a single indicator will be adequate and authorities may consider using more than one indicator. For a major procurement, a significant service restructuring or withstanding inflation, authorities may wish to choose several indicators or several baskets of indicators.

Authorities may consider that the quality check is delivered even if one or more indicators within a basket has reduced. This will be a local decision and must be in the context that the service outcome for people is at least the same or improved, i.e. it may be delivered in a different way.

Example 1

An authority makes a cash-releasing efficiency in its customer response service. It refers to the indicators matrix.

‘Customer Service - Responding to Enquiries’ offers a choice of indicator CS3 from the Code of Practice or the Highways Agency indicator API3. The authority selects CS3 and is able to show that the value of CS3 is at least the same as the previous year.

Example 2

An authority makes a cash-releasing saving in its activities to maintain highway condition. It refers to the matrix of indicators matrix.

‘Serviceability’ – Maintaining highway condition’ offers several indicators covering roads, lighting and bridges. The authority decides the appropriate crosscheck is to demonstrate that a basket of these indicators, ie NI168 and 169, ex BV187, 215 and 224b, SE11, La – d, B1, B4, are all the same as before or improved.

Note that in this case the authority has chosen to continue to collect certain ex Best Value Performance Indictors for local purposes.

Appendix A **Performance Indicators used in Matrix B**

National Indicators – www.communities.gov.uk

- NI 47 People killed or seriously injured in road traffic accidents
- NI 48 Children killed or seriously injured in road traffic accidents
- NI 167 Congestion- average journey time per mile during the morning peak
- NI 168 Principal roads where maintenance should be considered
- NI 169 Non Principal roads where maintenance should be considered (classified roads)
- NI 175 Access to services and facilities by public transport, walking and cycling
- NI 178 Bus services running on time
- NI 186 Per capita CO2 emissions in the LA area
- NI 195 Improved street and environmental cleanliness – graffiti, litter, detritus, fly posting
- NI 198 Children travelling to school – mode of travel usually used

ex Best Value Performance Indicators (still used by some LAs as local indicators)

- BV 100 Temporary Traffic Control
- BV 165 Pedestrian Crossings with Facilities for Disabled People
- BV 178 Rights of way
- BV 187 Condition of main Footways
- BV 215 Rectification of Street Lighting Faults
- BV 224b Non Principal roads where maintenance should be considered (un classified roads)

Code of Practice for Highway Maintenance - 'Well Maintained Highways' – TSO, July 2005.

www.roadsliaisongroup.org

(Where indicators are the same as NIs or ex BVPIs, only the NI or BVPI occurs in the matrix).

Customer service:

- CS 1 – Net satisfaction with the service (see also the National Highways and Transportation Survey www.nhtnetwork.org)
- CS 2 – Net satisfaction with consultation and information
- CS 3 – Dealing with requests, complaints and claims within policy timescales.

Safety:

- SA 1 – To measure the timelines of safety inspections
- SA 2 – Safety defects repaired on time
- SA 3 – Skidding resistance of Principal Roads
- SA 4 – Third party claims repudiation rate

Serviceability:

- SE 1 – Temporary Traffic Control [BV100]
- SE 2 – Winter service precautionary salting
- SE 3 – Public rights of way easy to use [BV178]
- SE 4 – Pedestrian crossings with facilities for disabled people [BV165]
- SE 5 – Schemes value managed
- SE 6 – Works completed within published dates
- SE 7 – Principal roads where maintenance should be considered [NI 168]
- SE 8 – Non - Principal classified roads where maintenance should be considered [NI 169]
- SE 9 – Non - Principal unclassified roads where maintenance should be considered [BV224b]
- SE10 – Category 1 and 2 footways where maintenance should be considered [BV 187]
- SE11 – Category A and B cycle routes where maintenance should be considered

Sustainability:

- SU 1 – Asset preservation
- SU 2 – Reactive maintenance compared to planned
- SU 3 – Claims compared to planned maintenance
- SU 4 – Schemes subject to maintainability audit
- SU 5 – Schemes subject to sustainability audit
- SU 6 – Works undertaken with recycled and secondary aggregates
- SU 7 – Amenity index

Performance Indicators used in Matrix B (cont)

Code of Practice for Highway Lighting Management – ‘Well Lit Highways’ – TSO, November 2004
www.roadsliaisongroup.org

- L (a) – Number of faults
- L (b) – Lights working as planned
- L (c) – Failed service connections
- L (d) – Damage incidents

Code of Practice for Management of Highway Structures – TSO, September 2005
www.roadsliaisongroup.org

- B1 - Condition
- B2 - Availability
- B3 - Reliability
- B4 - Backlog

Highways Agency Area Performance Indicators

Further Information on APIs can be obtained from HA_PM_Team@highways.gsi.gov.uk

- API 1 Response to Emergency Incidents
- API 2 Response to Category 1 Defects
- API 3 Customer Satisfaction
- API 4 Environmental Amenity Index
- API 9 Winter Maintenance
- API 10 Defect Free Work
- API 11 Road Traffic Accidents at Roadworks
- API 12 Street Lighting Outages
- API 13 Network Availability
- API 14 Third Party Claims
- API 15 Recycling and Re-use

Appendix B Cash-releasing Value for Money Gain Examples

Business Process Improvement

BPI 1. Electronic Integrated Control System for Highway Maintenance

A review was carried out of the order and payment processes associated with highway maintenance operations. Separate systems and processes were replaced by an integrated system that enables highways client/supplier and highways client/corporate services to communicate electronically. The efficiency gain is calculated as the difference between the cost of the process before the efficiency measure and with the new integrated system in place.

| | 2006/07 | 2007/08 | 2008/09 |
|--|----------------|----------------|----------------|
| Cost of software, development and implementation | £44,500 | | |
| Savings - systems | £39,100 | £39,100 | £39,100 |
| - release of staff resources | <u>£24,600</u> | <u>£24,600</u> | <u>£24,600</u> |
| Total | £63,700 | £63,700 | £63,700 |
| Efficiency Gain | £19,200 | £63,700 | £63,700 |

Quality Crosschecks: ex BV187, BV 223, BV224 and BV224b.

Contact for further enquiries:

GSD Wilkinson, Best Practice Manager, Cambridgeshire County Council (Tel: 01354 753815; Email: geoff.wilkinson@cambridgeshire.gov.uk)

BPI 2. Minor Works by Parish Lengthsmen

Parish Councils have the option of having minor works prioritised and addressed by the Term Maintenance Contractor (TMC) according to the Highways Management Plan, or to take a £2,000 contribution to the cost of a locally employed Parish Lengthsman. The Parish Lengthsman is managed by the Parish Council giving local control to works undertaken and to the level of service. There is a reduction of workload on the TMC. The Parish Lengthsman reports problems he cannot deal with, providing higher quality communication and clarity. Local residents feel 'someone cares' and report higher satisfaction (quality crosscheck). There are 44 parishes participating in this scheme.

Parishes: Contribution: £2,000/year. After clerk's administration costs this equates to £1,850/year for works. At £10/hr this is 185 hours work/year. TMC: Two-man teams, so equivalent for comparison is half i.e. 92.5 hours. Since the TMC is not local, add travelling time at 3 hours/month i.e. 36 hours/year. Therefore hours/year = 92.5 + 36 = 128.5.

For 2005/06, comparing the TMC team with the cost of the lengthsman, there is a saving of £3,358 per Parish. With 44 parishes participating this would give an efficiency of £147,000, however Parishes took up the offer at different times in the year and the actual efficiency was £120,000.

Quality crosschecks: The QCC used is the result of satisfaction surveys undertaken with parishes participating in the scheme.

Contact for further enquiries:

Nick Yarwood, Partnerships & Contracts Manager, Worcestershire County Council (Tel: 01905 728648; Email: nyarwood@worcestershire.gov.uk)

BPI 3. Increasing Highway Inspection to Reduce Unjustified 3rd Party Claims

An Authority increases its inspection and support to undertake a locally enhanced inspection regime. It improves the recording of defects and claims handling and reduces sums paid out on unjustified claims. A rigorous review of claims received is undertaken which provides evidence to support claims handling.

The efficiency gain is calculated as the difference between the cost of the service without the efficiency measure and with the cost of activities undertaken. The reduction of claim costs occurs over a short period and will then be maintained at the lower level. Efficiency gains recorded will be related to the actual achievement in reductions in claims in the appropriate year.

| | Year 1 | Year 2 | Year 3 | Year 4 | £k |
|-------------------------------|--------|--------|--------|--------|----|
| Cost of additional inspection | 60 | 60 | 60 | 60 | |
| New reductions in claims | 165 | 90 | 80 | 0 | |
| Net new efficiency gains | 105 | 30 | 20 | 0 | |

Quality crosscheck: CS3 (see App A).

BPI 4. Proprietary Road Repairs

A 'Jetpatching' process was used to repair potholes in order to improve cost efficiencies and value for money when compared with conventional methods of repair.

| Patch | Traditional Hand Lay (per sq. m) | Jet Patch (per sq. m) | Difference (per sq. m) | Annual Quantity (sq. m) | Efficiency Gain (£) |
|-------|----------------------------------|-----------------------|------------------------|-------------------------|---------------------|
| 50mm | 38.49 | 24.59 | 13.90 | 13,770 | £191,403 |
| 80mm | 64.81 | 39.34 | 25.47 | 96 | £2,445 |
| | | | | Total | £ 193,848 |

Quality crosschecks: Compares favourably with traditional hand-laying processes. Has additional substantial benefits over temporary repairs, namely safety, time, and process benefits. Minimises disruption to travelling public during application.

Contact for further enquiries: Tim Pemberton, Network Management, Cheshire County Council (Tel: 01244 603938
tim.pemberton@cheshire.gov.uk)

Smarter Procurement

SM 1. Two Contracts Combined into One

London Borough of Bromley let a new street lighting contract, combining improvement works and maintenance, which were previously two separate contracts awarded to different contractors. The new contract provided tenderers with an option to apply for one or both contracts. Where tenderers applied for both contracts, a discount was offered. This left the potential to remain with the current service split, dependent on the “best value” (ie monetary and quality) option.

The discount offered by tenders ranged between 2.6% and 5% year-on-year on a contract with an annual worth of £1.7 million (£1 million maintenance; £700,000 improvement works). For the tender selected, the saving made by combining the two contracts amounts to £50,000 per year.

Quality cross-check: ex BV215

Contact for further enquiries: Kirsty Armstrong, Business Coordinator, London Borough of Bromley (Tel: 020 8313 4317; Email: kirsty.armstrong@bromley.gov.uk)

SM 2. New Street Lighting Contract

Efficiency savings on a street lighting contract were made through a new contract. A comparison is made using the current contract and the 2005/06 contract prices inflated using ROADCON at 7% (illustrative value).

| | |
|---------------------------------|----------|
| Cost based on previous contract | £633,000 |
| Actual cost 2006/07 | £551,000 |
| Efficiency | £ 82,000 |

Quality crosscheck: Time to rectify faults, ex BV 215a 2005/06 3.34 days, 2006/07 3.09 days, ie improved

Asset Management**AM 1. Capital Investment in a Programme of Carriageway and Footway Strengthening**

An Authority adopts a capital programme of renewals rather than annual localised patching to provide performance and safety improvements and reductions in future revenue maintenance expenditure.

Roads that have a high annual maintenance requirement are targeted so that future annual maintenance will be reduced. This will include roads where high traffic disruption is caused by patching works. A 'one-off' capital programme is developed for strengthening of targeted roads. The efficiency gain is calculated as the difference between the cost of the service without the efficiency measure and with the cost of activities normally undertaken.

| | Year 1 | Year 2 | Year 3 | Year 4 | £k |
|-----------------------------------|---------|--------|--------|--------|----|
| Capital works with a 20 year life | 403,800 | | | | |
| Annualised cost of capital | 21,199 | 21,199 | 21,199 | 21,199 | |
| Alternative revenue maintenance | 27,690 | 27,690 | 27,690 | 27,690 | |

Quality Crosscheck: NI 168, NI 169, ex BVPI 187

AM 2. Capital Investment in Upgrading Traffic Signal Heads

An Authority invests capital in a programme of new LED Traffic Signal Heads. This will reduce energy requirements and lamp replacement costs. Existing lamps are around 50 watts and LEDs are around 15watts - approximately 300kwh/year reduction. Existing lamps have to be replaced every 6 months whereas the LEDs are assumed to last for 10 years. (LEDs have substantial life which is yet to be established but railway LED signals are known to have remained operational for 15 years).

The efficiency gain is calculated as the difference between the cost of the service without the efficiency measure and with the cost of activities undertaken. The efficiency gains are also likely to reduce energy requirements providing an additional efficiency.

| | Year 1 | Year 2 | Year 3 | Year 4 | £k |
|-----------------------------------|--------|--------|--------|--------|----|
| Capital Works with a 10 year life | 39500 | | | | |
| Annualised cost of capital | 4148 | 4148 | 4148 | 4148 | |
| Alternative revenue maintenance | 5782 | 5782 | 5782 | 5782 | |
| Net new annual efficiency | 1636 | 1636 | 1636 | 1636 | |

Quality crosscheck: L(a), see App A

Further Examples

Further examples of actual experiences by local authorities over the last few years can be seen at:

www.helg.org, see Knowledge Bank - *Local Authority Efficiency Experiences* menu tab.

A number of case studies can be seen at:

www.helg.org, see Knowledge Bank - *Case Studies* menu tab.