Coventry City Council

HIGHWAY MAINTENANCE STRATEGY

January 2005

HIGHWAY MAINTENANCE STRATEGY 2004-2011

1 HIGHWAY MAINTENANCE STRATEGY

1.0 INTRODUCTION

This Strategy has been produced to set a clear pathway for the provision of highway maintenance services within Coventry, and to demonstrate how this links with National and Local agendas. It is based upon the key principles of Best Value, particularly emphasising that the services should be based on the needs of the users and the community, rather than for the convenience of service providers.

It incorporates the guidance contained within 'Delivering Best Value in Highway Maintenance - Code of Practice for Maintenance Management' as produced by the Institution of Highways and Transportation in July 2001. This Code of Practice has been adopted by many local authorities as the principal guide to developing a customer focussed, high performing highway service, with consistent aims and processes in place to achieve these outcomes.

The Strategy recognises that improved highway maintenance is one of the highest priorities for residents in the City, a fact borne out by Residents Surveys the most recent carried out in 2003.

The importance of highway maintenance and its relevance to the integrated transport agenda has never been more widely recognised. The inevitable consequences of significant under–investment over many years are increasingly visible and the subject of considerable public concern. Acceptable standards of safety and serviceability have been difficult to maintain and perhaps more importantly the ability of the network to effectively fulfil its wider community function has been compromised.

The response of most authorities to funding constraints has been to focus on limited short-term repairs to the surface of carriageways and footways in order to address their legal responsibilities for safety and mitigate the financial consequences of claims. Necessary works of resurfacing and reconstruction have been deferred as long as possible, well beyond the optimum point for treatment with the result that progressive deterioration has continued and eventual costs of repairs increased.

The need for more effective funding and management of highway maintenance work was first addressed on the national strategic highway network, where heavy traffic flows and the need for more consistent serviceability levels was more obviously apparent. In England, the Highways Agency secured higher, long-term funding and applied this to a new and innovative regime of management and procurement that is still developing. The outcome of these initiatives has been to initially stabilise and then to reverse the decline in network condition for strategic highways.

The Government's Ten-Year Plan for transport, in England, published in July 2000, has now brought to local roads a similar urgency and the prospect of similar increases in funding to those provided for the strategic highway network. The sharing of technical and procurement experience and harmonisation in approaches between strategic and local roads will be an important factor in delivering the necessary improvements in local highway maintenance.

An increased programme of investment in highway maintenance has the potential to increase traffic disruption and consequent user dissatisfaction in the short term. Effective co-ordination and harmonisation combined with careful and considerate design and programming of works can avoid or significantly mitigate this, which is of course, an explicit requirement of Best Value.

In Coventry, highway maintenance expenditure and road surface condition have broadly followed the national trends of deteriorating highway condition compounded by reducing expenditure. Historical road condition indicators have shown that the road surface condition in Coventry to be below the national average. The latest performance indicators demonstrate that for most road classes, the conditions are at, or above west midlands metropolitan authority averages.

The management of a highway network demands a considerable degree of flexibility occasioned by the constantly changing policies, changes in legislation and regulation, changes in corporate policy, changes in materials and maintenance specification. All of these issues rely on a strategy that must be flexible and evolving to ensure that these frequent changes can be satisfactorily incorporated. More often than not, these changes result in increasing rather than decreasing budgetary pressures.

This strategy reflects the outcomes of the Best Value Review of Highways – March 2001 and the subsequent Audit Commission Report published in June 2001, and addresses the outcomes and recommendations contained within the Best Value Review of Coventry's Street Scene which was reported to members in August 2004 and inspected by the Audit Commission in October 2004.

Importantly the strategy sets out how the management of highway maintenance services relates to the City Council's vision and contributes to corporate objectives

2.0 VISION

For most local authorities the highway is one of the most valuable assets under its control. Despite this there is a growing realisation that the management of this asset is not receiving the level of funding required for the provision of an efficient and effective highway maintenance service.

In common with many others nationally the Highway and Public Lighting infrastructure is showing the effects of under investment with continual deferrals of funding of outstanding work and a condition which continues to continue to decay. The Government's Ten-Year Plan has as its main elements the arresting of further deterioration by 2004 and the removal of the backlog by 2011.

Our vision is to improve the riding quality and safety of the highway network and increase its structural strength to a level which compares with the top 25% of highway authorities. At the same time we have planned to co-ordinate our maintenance schemes with other highway initiatives in order to achieve the maximum benefit from the increased level of investment now available.

3.0 EXECUTIVE SUMMARY

Adoption of this Highway Strategy will enable a number of significant service improvements to be achieved. We propose to:-

Planning and Management

- Introduce a new Highways Asset Management Plan (HAMP).
- Adopt the Code of Practice for Maintenance Management 2001.
- Assess options for procurement of Highway Maintenance services with particular emphasis on partnering.
- Deliver a customer focused highway maintenance service by the adoption of a structured programme of consultation on highway maintenance policies and work programmes and report quarterly to Area Forums.
- Maximise contribution to environmental sustainability.
- Work more closely with the Council's insurance section to provide a more robust defence against insurance claims.
- Seek and explore alternative and additional funding for Highway Maintenance.
- Contribute to the development of the Council's wider Transport Policy by closer co-operation with other directorates and by ensuring that the maintenance aspects of all developments have proper consideration and that appropriate and adequate future funding requirements are fully considered.

Service Improvements

- Increase the inspection rates to the highway network to conform to the recommendations of Code of Practice for Maintenance Management 2001.
- Ensure quicker and better quality reinstatement of potholes and other hazards on roads and footways using both conventional and new techniques.
- Adoption of a flexible footway policy for all new construction schemes, developments and reconstructions (detailed in Section 13 of this Strategy).
- Reduce the percentage of the principal road network failing SCRIM (skid resistance) investigatory levels over a period of five years.

- To create a programme for public lighting bulk lamp changes on a two or three year cycle, on an area basis, to be supported by the introduction of telemetry systems for the identification of failed lamps.

- Create a safer and more inviting environment for pedestrians and pedal and motorcyclists by providing appropriate facilities and features in new schemes.

Monitoring

- Collect UKPMS condition data for the entire network over a period of five years and carry out maintenance to all sites when necessary.

- Monitor performance via BVPI's, Local performance indicators, KPI's, benchmarking and relevant service plans.

Information

- Publish operational standards, performance and work programmes.

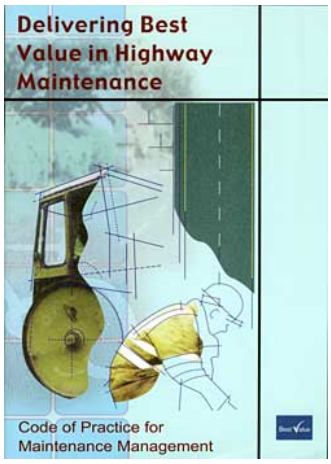
- Review highway maintenance strategy and report annually.

- Develop a communication strategy to focus on the needs and aspirations of local communities.

4.0 OBJECTIVES

The DETR's "Delivering Best Value in Highway Maintenance – Code of Practice for Maintenance Management", guides this Highways Maintenance Strategy, which is based on a logical and systematic approach to highway maintenance. The Code sets out quality and inspection criteria and details performance indicators and strategic priorities together with financial management and procurement strategies. The now almost universal adoption of this Code ensures that network quality standards and maintenance policies are clearly defined and consistently applied.

This document is also used as one of the primary sources of references in court actions for damages and close adherence to its structure and requirements benefits the Authority when such matters arise.



The objectives for highway maintenance embodied in this strategy are:-

- To comply with and enforce statutory obligations.
- To improve safety.
- To improve the strength (and hence longevity) of the carriageway.
- To promote accessibility.
- To contribute to an efficient local economy.
- To promote integration.
- To protect the environment.
- To ensure environmental sustainability, waste management and recycling.
- To develop a long-term Highway Asset Management Plan.
- To address the needs of Stakeholders.

Street lighting improvements form an integral part of the delivery of this strategy's objectives as part of:-

- Safer route to schools.
- Road safety, casualty reduction schemes.
- Community safety/enhanced lighting schemes.
- Highway improvement and capital maintenance schemes.
- Transport initiatives to encourage modal change.

Revenue funding is enhanced by private sector funding for lighting on new housing and commercial estate roads and on highway improvements associated with these developments. Consideration must be given to incorporating commuted sums for maintenance/energy costs from these sources within the primary maintenance budget.

Public concern about the need for good lighting is potentially a major factor in choice of travel mode when making journeys in the hours of darkness. Personal safety considerations greatly affect the decisions people make.

Good street lighting will increase the effectiveness of casualty/speed reduction measures and in some cases will form an integral part of the scheme, for example in ensuring road width restrictions are visible at night.

City and town centres are becoming more reliant on the use of closed circuit television (CCTV) cameras as a tool to fight crime and to monitor activities in public areas. It is essential that sites where these cameras are used are particularly well illuminated with white light to make it easier for operators to see and identify people, vehicles etc.

Adequate street lighting is an essential part of safety and transport schemes and resources need to be made available to support lighting replacement and improvement schemes.

5.0 HIGHWAY AUTHORITY OBLIGATIONS

5.1 Legislation

The core functions of highway maintenance are based on statutory powers and duties contained within the relevant legislation. Local authorities also have a general duty of care to maintain the highway in a condition that is 'fit for purpose'.

The Highways Act 1980 sets out the main duties of highway authorities in England and Wales. This Act is fundamental to highway maintenance as it imposes a duty to keep highways in repair at the public expense. Almost all claims against local authorities relating to highway functions arise from an alleged breach of Section 41 of the Act. However, there is provision for a defence against such actions - 'that the authority has taken such care as in all the circumstances was reasonably required to secure that the part of the highway to which an action relates was not dangerous for traffic'.

The Highways Act sits within a much broader legislative framework specifying powers, duties and standards for highway maintenance and management including:-

- Traffic Management Act 2004, requiring the appointment by April 2005, of a designated person (Highway Manager) to be responsible for all traffic management undertakings.
- The New Roads and Street Works Act 1991, setting out the duties of Street Authorities to co–ordinate and regulate works carried out in the highway by any organisation under a series of Regulations and Codes of Practice.
- Road Traffic Regulation Act 1984, and the Traffic Signs and General Directions 1994.
- Road Traffic Act 1988 which provides a duty for highway authorities to promote road safety.
- Road Traffic Reduction Act 1997.
- The Local Authorities (Transport Charges) Regulations 1998, as applicable to RTRA 1984 and other legislation, provide a power for the traffic authority to impose a charge for a number of its functions.
- The Transport Act 2000 introduced a power for authorities to charge Utilities for the occupation of road space during works.
- Disability Discrimination Act 1995.
- Local Government Act 1999 provides for the general duty of Best Value.
- Health and Safety at Work Act 1974.
- 'Woolf Report' on Access to Justice.

There is an increasing range of legislation regulating the environmental effects of highway maintenance operations, including:-

- Wildlife and Countryside Act 1981
- The Environmental Protection Act 1990
- The Noxious Weeds Act 1959
- Rights of Way Act 1990
- Countryside and Rights of Way Act 2000

There is also a fairly recent framework of legislation not specifically related to highway maintenance but affecting wider community issues including:-

- Criminal Justice and Public Order Act 1994
- Human Rights Act 1998
- Freedom of Information Act 2000
- Local Government Act 2000

Legislation is also in place requiring works to be carried out in a safe manner including:-

- The Health and Safety at Work Act 1974
- The Management of Health and Safety at Work Regulations 1992
- Construction (Design and Management) Regulations 1994

There are also a wide range of regulations and Codes of Practice relating to the assessment, prevention and management of health and safety risks on site and the reporting of injuries and other incidents.

This is not an exhaustive list but serves to demonstrate that highway maintenance activities are constrained by a considerable body of legislation, which must be fully complied with in the effective delivery of this service.

5.2 Transport Policy and Highway Maintenance

The Government's Ten-Year Plan for transport, published in July 2000, is the 'long-term strategy for delivering a quicker, safer, more punctual and environmentally friendly transport system'. In England, the plan places highway maintenance as a key priority for investment and contains specific targets as follows:-

- Halting the deterioration in local road condition by 2004, and eliminating the backlog by the end of the Plan period.
- For strategic roads over the period of the Plan, road condition to be maintained to a high standard, so that the proportion requiring maintenance in any future year is held at an optimum level (between 7% and 8%)

(Our most recent projections indicate that we have not halted the deterioration in road conditions, and that our principal route network requiring maintenance could be as high as 23%, well outside the optimum level target. It should be noted however that this is an subjective assessment as definitive TRACS surveys (electronically generated vehicle based surveys) will not start becoming available until later in this financial year.)

Central Government has recognised that the transport system has suffered from decades of under-investment and has increased funding for local authorities, principally through the LTP fund process, in order to meet these key targets. However, there are concerns that there are still insufficient funds available to meet these targets. This is clearly illustrated by the conclusions drawn by the House of Commons Transport Committee in their report on Local Roads and Pathways dated June 2003 and the Institution of Civil Engineers annual report ' Local Transport and Public Realm Survey 2003' both of which give relevant comparison figures for the West Midlands and nationally to support the under-funding of highway maintenance.

6.0 OUTLINE OF STRATEGY

The strategy to achieve each of our objectives is:-

6.1 Improving safety

- Implementing proactive policies to determine defects and carry out identified safety and routine maintenance repairs.
- Implementing responsive policies to repair roads and pavements when stakeholders raise concerns, including repairing pavement trip hazards and filling potholes within 24 hours/four weeks as appropriate.
- Reducing the percentage of the principal road network failing SCRIM (skid resistance) investigatory levels over a period of five years at a target rate of 10% per annum for principal roads and 15% for non-principal roads.
- Collecting UKPMS condition data for the entire network over a period of five years and carrying out maintenance on all carriageway surfaces with a skid resistance at or above investigatory level, a level at which insufficient resistance is available to slow progress of vehicles under braking.
- The creation of a safer and more inviting environment for pedestrians and pedal and motor cyclists (and the incorporation of appropriate facilities and features into schemes) by promoting the maintenance of pavements, footways, cycleway and public lighting.
- Continuing to upgrade lighting intensity and colour perception by the installation of additional or upgraded equipment to reduce the risk of collision between road users (to see and be seen).
- To maximise the number of lighting units that are working as planned.
- To ensure the structural stability of existing lighting units.
- To achieve a level of lighting consistent with current standards.
- To ensure the electrical integrity and safety of existing lighting units.
- To reduce the risk of collision or accidents from road users' inability to clearly see potential hazards on the highway (e.g. footway trips, potholes etc).

6.2 Improving the strength of the carriageway by:

- monitoring the structural condition of the network and carrying out maintenance to arrest deterioration and to ensure, where applicable, that the network will continue to be able to carry increasingly heavy traffic flows
- formulate a policy to manage the network asset to ensure that strengthening work is carried out at the right time to minimise the whole life cost of maintaining the infrastructure

6.3 ***Improving accessibility*** *by:*

- ♦ continuing to improve access for disabled people, for example by the inclusion of dropped kerbs at main crossing points and raised kerbs at bus stops whenever maintenance work is carried out or in conjunction with new corporate development programmes.

6.4 ***Contributing to an efficient economy*** *by:*

- ♦ creating an attractive, well maintained highway environment through the promotion of good maintenance practice, to contribute to urban renewal and to help attract new businesses to industrial and commercial areas
- ♦ implementing maintenance designs which are appropriate to the style of the area and which will help to promote tourism by the enhancement of the street scene
- ♦ arranging co-ordination with road safety schemes, bridge and wall maintenance and public transport initiatives
- ♦ integrating, wherever possible, maintenance schemes with schemes for the provision of bus lanes and other designs developing the optimal usage of the carriageway.

6.5 ***Promoting Integration*** *by:*

- ♦ facilitating the safe and convenient integration of communities by allowing free and efficient movement between areas of the city with varying transport requirement and differing characters
- ♦ ensuring that the goals of local communities are met and positive links are established to a developing and vibrant city centre

6.6 ***Protecting the environment*** *by:*

- ♦ using appropriate materials to complement the appearance of Conservation Areas when works are carried out
- ♦ using maintenance treatments which reduce the long term reliance on quarrying new materials and disposing of existing materials to landfill sites thereby minimising the use of the road transport of construction materials
- ♦ utilising materials which can dramatically reduce traffic noise levels.

6.7 *Ensuring environmental sustainability by:*

- adopting policies on materials procurement which favour products made from recycled materials
- utilising local materials to minimise transport costs, support the local economy, and to maintain local character
- retaining and re-using materials on site in order to avoid the environmental implications of transport and disposal
- maximising the value of the re-used materials rather than utilising them for low grade fill
- making use of in-situ and ex-situ recycling processes in appropriate circumstances
- ensuring that any materials that cannot be re-used or recycled are disposed of to licensed sites in accordance with statutory requirements. (This will include silt and other solids arising from gully emptying and the cleansing of oil interceptors)
- managing the use of energy for public lighting effectively and efficiently.

6.8 *Developing a long-term Highway Asset Management Plan by*

- Taking a longer-term view to planning and programming.
- Introducing life cycle modeling to identify the best whole life option for an asset.
- The greater use of asset performance information to inform decision-making.
- The allocation of resources based on assessed needs.
- Explicit consideration of customer expectations and documentation of levels of service.

6.9 *Addressing the Needs of Stakeholders by*

- developing a customer focused highway maintenance service
- consulting widely on maintenance policies and programmes
- reporting progress of both implementation and performance indicators.

To ensure the effectiveness of all aspects of this strategy, the objectives set out apply to the whole of the Highway network irrespective of the funding sources, specifications and designs.

The delivery of an effective Highway Maintenance Programme has to balance the need to keep the network safe and respond to the public's reasonable expectation that minor defects will quickly be made safe, against the need to preserve and improve the long term strength of the network by carrying out reconstruction schemes.

7.0 NETWORK DEFINITION

The Highway network consists of the following:-

784 Km	Principal and non Principal roads (Including 350km of highway subject of winter maintenance activities)
1,500 Km	Footways
34,000	Streetlamps (including 28,000 Lighting columns)
11,500	Trees
3,800	Illuminated signs
200 Km	Road barriers
1,500	Keep Left Bollards
55,000	Gullies

plus many other signs, bollards, fences, guard-rails, road markings, traffic lights, pedestrian crossings and many kilometres of drainage.

There are indications from recent GIS data capture that the above figures, which are used for LTP and other similar settlements, are understated. The development and implementation of a Highway Asset Management Plan referred to elsewhere in this report will enable an accurate assessment of all highway assets to be made.

Coventry's highway network now includes the A45 (within the City boundaries) which was de-trunked on July 1st 2003. The maintenance of this carriageway is now the responsibility of the City Council. Funds transferred from the Highways Agency to cover both capital works and routine maintenance are significantly less than those required to maintain this key strategic road to a high standard and this is creating further pressure on the existing highways maintenance budget.

Through various regeneration initiatives the city's highways infrastructure is expanding, requiring the adoption of additional carriageways, footways, street lights, bollards and directional signs without any corresponding increase in maintenance budget provision. As referred to above, the development and implementation of a Highway Asset Management Plan will enable the growth in highway infrastructure to be accurately quantified.

As a guide, officers consider that the defined network of 784 kilometres (upon which LTP maintenance related funding is allocated) may be understated by up to 106 kilometres, a variation of 13.5%.

Both capital and revenue funds are provided for all categories of highway and careful apportionment is needed to ensure an equitable distribution. Though the demands of the principal roads are obvious, those of the non-principal road can be greater. Because they were constructed to lower standards they are now more susceptible to damage by heavy vehicles such as buses and large goods vehicles.

8.0 HIGHWAY INFRASTRUCTURE CONDITION ASSESSMENT

Consistent, reliable, comparable condition data is an essential foundation for this strategy.

8.1 *Network Condition*

Currently we undertake visual condition assessments to confirm that maintenance is required on a significant proportion of the network. This is based on analysis against the Highway Maintenance Code of Good Practice intervention levels built into the MARCH PMS systems.

Network condition is an ever-varying situation. As certain roads are brought up to standard, others are deteriorating below an acceptable level and it is recognised that there will never be a zero maintenance requirement. However the National Road Maintenance Condition Survey (NRMCS) assessment results indicate that the network is well below the national average condition.

In setting objectives to improve the network condition the following condition surveys and investigations have been used and will now be augmented by Tracks Type Survey (TTS) data:-

- Coarse Visual Inspection.
- Detailed Visual Inspection.
- Coring (cutting cores from the highway structure).
- Skid Resistance (SCRIM) Surveying.

Recognising that the public are concerned mainly about visual defects rather than network strength, carriageway defects over 40mm deep and footway defects over 20mm will be dealt with within 24 hours/four weeks of being identified and areas should be treated before they reach a UKPMS Coarse Visual Inspection score of 70. All carriageway surfaces should have a skid resistance at or above investigatory level, a level at which insufficient resistance is available to slow progress of vehicles under braking.

In considering the public lighting provision there are approximately 34,000 streetlights in Coventry, with this total increasing year on year. A large proportion of the 28,000 columns are now reaching the end of their design working life. Approximately 60% of the current street lighting needs to be replaced due to age and/or deteriorating condition (approximately 17,000 columns). Each year an additional 3,000 columns are reaching a similar condition. Renewal of the existing stock is also required to deliver current best practice lighting standards and improvement in lighting standards will usually increase the number of lighting units. Also, any improvement in standards of lighting may also result in higher energy consumption.

Even without a major replacement programme, the number of streetlights on the highway network is increasing between 1% and 2% per annum. As a result the routine maintenance liabilities are increasing which diverts resources from renewal programmes.

A recent survey of the structural integrity of lamp columns conducted in 2004, coupled with information on age profile of columns contained in the lighting inventory, identified a number of columns that have reached their maximum design working life. Interpretation of this information indicates that an investment in the order of £14million is necessary to address this situation through a programme of replacement, with an urgent minimum investment of £1.5m to mitigate the risk of column failure.

Systems are being developed to improve on the reporting of existing information utilising the Confirm database for asset management and the Geographic Information System (GIS) for visual display. These systems enable highway information to be stored, accessed, analysed and displayed using digital mapping. It is intended to incorporate other highway related information detailed below:-

- Inventory of Highway Assets (Pavement materials, Street Lighting and Street Furniture, Signs and Road markings).
- Accident information.
- Highway maintenance and street lighting records.
- Street Works Register.

A full and accurate inventory of highway assets is not available at the present time. However, this is now being actively addressed through the development and implementation of a Highways Asset Management Plan. Integrating these systems will assist with the development of future highway maintenance strategies and policies and the setting of budgets for all aspects of Highway Maintenance linked to asset management. This will also enable predictions to be made on how various treatments and levels of expenditure will affect the condition of the highway network in the short, medium and long term.

The network is in such a condition that making sure that we achieve best value from the limited funding available is a major challenge. Short-term solutions may have to be adopted where funding is not available for long term resolution of problems.

We need to achieve better coordination of maintenance activities within the wider development of the highway network including safety schemes, sustainable transport schemes as well as major new development works.

Bus and HGV traffic flow on the network continues to increase, albeit slowly, causing increasing damage. In addition, the increase in HGV axle weights to 44 tonnes over five axles with a maximum axle load of 11.5 tonnes produces a major increase in the stress on the road structure and is contributing to the deterioration of the highway network.

It must also be recognised that, if buses are to become a transport mode of choice, people will want to board them close to home. However, the weight of modern buses on local and residential roads not designed for the purpose causes a disproportionate degree of damage with the consequent repair costs.

Utility Company street works openings and reinstatements continue to be a major cause of structural damage to the highway network. The large number of telecommunication companies who were granted Government licences to install new networks caused particular problems. There are still high rates of reinstatement failures of utility trenches. The effect of so many damaging openings (and failures) is to create the appearance of a poorly maintained network, to dramatically increase the rate of deterioration and reduce the life of the highway. The introduction of further NRSWA regulations as part of the new Traffic Management Act 2004 which received Royal Assent at the end July 2004, will demand increasing and robust control and inspections of utilities works.

Potholes in the road and trips in the footway can cause damage, injury, pain and suffering. They can also be costly both in terms of the handling and settlement of claims and the cost to the community of medical care and lost time to employers. The record of these claims gives rise to concern because of the increase in the numbers and the cost of settlement. Adoption of this strategy will assist the corporate Risk Management Strategy to minimise the degree of risk and consequent exposure of the authority.

At the present time responsibility for the highway network and infrastructure is vested in both the City Development and City Services Directorates. This will continue to present challenges in co-ordinating the often-conflicting demands of highway development and maintenance. Funding to meet many of these demands cannot be secured from within existing Repair and Maintenance budgets. When developing citywide transportation initiatives e.g. the Primelines scheme, which extends the bus network, appropriate allowances need to be built in to the overall scheme in order to provide adequate funding for maintenance over the life of the asset. The adoption of a highway asset management plan will ensure that the costs of maintaining such assets are clearly identify and considered prior to approval and commencement of such schemes.

Increasingly the street scene is being developed with high specification materials and casualty/speed reduction features. Some of these features are vulnerable to impact and have a relatively short life. A high standard of maintenance is required to ensure that special features continue to perform their intended purpose. Channelling heavy wheel loads for example, increases and concentrates the damage. The annual maintenance budget does not have an index-linking factor that allows for the continuing increases in costs of these expensive materials or systems when they are used in new schemes. This results in increased pressure on an already overstretched budget.

8.2 Inspection Regime

The City Council as a highway authority has a duty under the Highways Act 1980 to maintain the public highways to an adequate level of repair. In Coventry, the inspection and assessment regimes that have been in place over a number of years do not reflect the recommended levels and frequencies of inspections set out in the Code of Practice for Maintenance Management 2001. Adoption of this Strategy (including the Code of Practice for Maintenance Management) will ensure the recommended inspections regimes are implemented and closely aligned to the authority's risk management policies thereby strengthening the authority's position in the repudiation of claims.

The Authority needs to regularly review its approach and management of risk in this area to ensure adequate defence against the rising number of public liability claims and to focus remedial work on those areas that give rise to legitimate claims. A key strand to the successful reduction in claims is to ensure that detailed inspections are undertaken across the highway network and closely aligned to a repair mechanism that completes repair work within published timescales. The DETR's publication entitled 'Delivering Best Value in Highway Maintenance – Code of Practice of Maintenance Management', promotes the need for a systematic approach to highway maintenance. This requires that the network quality standards and maintenance policies are clearly defined and consistently applied. Adoption of this strategy will ensure Coventry's compliance with this requirement.

The following inspections will be implemented to continue to meet the Authority's obligations and to mitigate associated claims:-

- A new system of inspections will be introduced from April 2005 to ensure that all roads and footpaths areas are inspected strictly in accordance with the Code of Practice for Maintenance Management 2001.

- Routine inspections are carried out to identify highway defects, particularly trips in the footways, in accordance with the requirements of the City's Risk Management Strategy and the limits laid down by the Authority's insurers.

- Additional inspections are carried out in response to enquiries from Elected Members and the public.

The Code of Practice for Maintenance Management sets out the following frequencies (as a starting point) for an inspection regime:

Feature	**Category**	**Frequency**
Roads	Strategic Route	1 month
	Main Distributor	1 month
	Secondary Distributor	1 month
	Link Road	3 months
	Local Access	1 year
Footways	Prestige Area	1 month
	Primary Walking Route	1 month
	Secondary Walking Route	3 months
	Link Footway	6 months
	Local Access Footway	1 year
Cycleways	Part of Carriageway	As for Roads
	Part of Footway	As for Roads

8.3 National Road Maintenance Condition Surveys (NRMCS)

With the transition from Compulsory Competitive Tendering to Best Value, the need to be able to measure and compare performance, both between authorities and generally against a national base line is increasingly important. Coventry supports the National Road Maintenance Condition Survey (NRMCS), both with the submission of Visual Condition data and SCRIM data. The receipt of the annual data from this survey allows us to measure our performance and progress against that of other comparable authorities.

8.4 UK Pavement Management System (UKPMS)

Coventry are MARCH PMS users and are committed to adopting the policies and standards of UKPMS, sharing expertise and knowledge with other Authorities (UKPMS is the highway industry standard management process for recording and managing the delivery of repair and maintenance priorities on highway running surfaces).

Each Authority has, historically, collected condition data and all are now collecting visual condition data from Coarse Visual Inspections (CVI) and Detailed Visual Inspections (DVI) in accordance with the UKPMS national rules and parameters. The corporate lead for this work rests with CDD however the results generated will eventually determine priorities in the Maintenance Programme managed by CSD.

In addition, the entire Principal Road network is subject to regular safety inspections to identify defects that may lead to trips or to vehicle damage and which could result in third party claims.

Difficulties nationally in the implementation of UKPMS using live data mean that a totally objective ranking of schemes on a condition basis is not yet available.

DfT has therefore now determined that surveys will be carried out using vehicle based, radar systems which will produce reliable and repeatable data. This is known as Tracs Type Survey (TTS) and will be introduced progressively commencing in 04/05 on sections of the primary road network. There are currently only two companies with accredited equipment capable of undertaking this type of assessment, however, officers have already made arrangements for future condition surveys of the City's highway infrastructure to be undertaken using the new technology.

9.0 ASSET MANAGEMENT

It is the intention of Government from April 2006 to implement Resource Accounting and Budgeting that will require all highway authorities to identify, quantify and value their highway assets. Robust asset information will be required in order to discharge this responsibility. In addition, the recent introduction of the Prudential Code requires local authorities to have specific regard to option appraisal, asset management planning and strategic planning when making capital investment decisions. The Department for Transport (DfT) has strongly advised highway authorities to prepare highway asset management plans in the instructions for the next 5-year Local Transport Plan.

Asset management in this context is a strategic approach that identifies the optimal allocation of resources for the management, operation, preservation and enhancement of the highways infrastructure to meet the needs of current and future customers. Changes required to current practice include:-

- Taking a longer-term view to planning and programming.
- Introducing life cycle modeling to identify the best whole life option for an asset.
- The greater use of asset performance information to inform decision-making.
- The allocation of resources based on assessed needs.
- Explicit consideration of customer expectations and documentation of levels of service.

The service wide application of asset management in highways is a new concept. City Services officers have held discussions with the leading consultants in this field, visited other authorities to discuss their approach and experience, met with DfT representatives, conducted data collection timings for asset inventory collection, investigated alternatives and timescales for the necessary data collection and identified an outline programme for the development of Coventry's Highways Asset Plan (HAMP). A specialist company has been appointed to facilitate this work which must be completed against a demanding time frame. This company is a major contributor to National conferences, are advisors to the County Surveyors Society and are leaders in this field. The original concept of HAMP comes from New Zealand and has been adopted successfully in Australia, Canada and at States level in the U.S.

A Highway Asset Management Team has been established within City Services to provide a co-ordinated, focused and robust platform for the delivery of a HAMP. Details of the Coventry Highway Asset Management Plan will form part of the City's LTP submission in July 2005 and will influence Government's distribution of 25% of the block allocations. It is anticipated that the introduction of a HAMP will take in the order of eighteen months to complete. The work will be undertaken in four phases:

Phase	Activity	Complete by
1	Gap analysis of existing highway asset inventory	January 2005
2	Missing Data collection process	September 2005
3	Construction of an active HAMP including necessary software integration, training and management processes	March 2006
4	Outline business case for significant investment in the highway infrastructure	Sept 2006

10.0 MEASUREMENT OF PERFORMANCE

10.1 *National Performance Indicators*

Central Government sets the national Best Value performance indicators. Authorities have to measure all the indicators relevant to the services they provide, although the authorities set most of the targets themselves locally after taking account of Government guidance.

The best value performance indicators (BVPI's) are designed to enable comparisons to be made between the performances of different authorities, including different types of authorities, and improvements or reductions in performance by authorities over time.

In order to ensure that the Best Value performance indicators give a balanced view of performance, the Government has adopted five "dimensions" of performance. These are:-

- Strategic Objectives: why the service exists and what it seeks to achieve.
- Cost/Efficiency: the resources committed to a service and the efficiency with which they are turned into outputs.
- Service Delivery : how well the service is being operated in order to achieve the strategic objectives.
- Quality: the quality of the services delivered, explicitly reflecting users' experience.
- Fair access: ease and quality of access to services.

The current highway maintenance Best Value Performance Indicators are as follows:-

- BVPI 93 - cost of highway maintenance per 100km travelled by a vehicle on principal roads.
- BVPI 95 - average cost of a working streetlight.
- BVPI 96 - condition of principal roads – percentage of the network with negative residual life derived from condition surveys.
- BVPI 97 - condition of non-principal classified roads – coarse visual inspection survey of the non-principal road network.

- BVPI 100 - number of days of temporary traffic controls or road closure on traffic sensitive roads caused by local authority road works per km of traffic sensitive road.

- BVPI 105 - damage to roads and pavements – total number of reported incidents of dangerous damage to roads and pavements repaired or made safe within 24 hours from the time that the authority first became aware of the damage, as a percentage of such incidents.

10.2 Local Performance Indicators

The local performance indicators recommended in the Code of Practice for Maintenance Management were developed through linkage to finance, operational standards and users' views of the service.

The indicators are based on the constituent activities of highway maintenance defined in the Code, which are:-

- Overall highway maintenance service.
- Reactive maintenance.
- Routine maintenance.
- Programmed maintenance.
- Winter service.
- Street lighting maintenance.

Indicators developed from the above process can then be identified with the core objectives of the maintenance management regime, and correspondingly listed under the headings of:-

- Network safety.
- Network serviceability.
- Network environmental sustainability.

This strategy proposes the adoption of the following local indicators as recommended in the Code of Practice for Maintenance Management 2001 :-

10.2.1 Network Safety

Indicator SA1 highway safety inspections – the percentage of routine safety inspections completed within the required time limits by the authorities highway inspectors

Indicator SA2 skidding resistance – the percentage of the principal road network with a skid resistance above the investigatory level

Indicator SA3 street light repairs – the average length of time in repairing street light faults and compare with the authority's policies and objectives

Indicator SA4 street light column replacements – the percentage of the lighting stock that is life expired

Indicator SA5 third party claims - the percentage of third party claims repudiation rate over the previous three years

10.2.2 Network Serviceability

Indicator SE1 actionable defects – the average length of time in executing non-safety actionable repairs in the highway compared with the stated objectives of the authority's policies

Indictor SE2 major road works – the percentage of major road schemes which overrun the published completion dates

Indicator SE3 NRMCS index – to assess the overall condition of the highway network by inspection on an annual basis

Indicator SE4 user satisfaction – score of user satisfaction by conducting a regular survey of a representative sample

Indicator SE5 winter service salting – the percentage of occasions that all precautionary salting routes were completed before the formation of ice

10.2.3 Network Sustainability

Indicator SU1 maintenance cost rating – the annual expenditure for reactive maintenance to running surfaces compared with the annual expenditure for programmed structural maintenance

Indicator SU2 noise pollution – annual road length resurfaced with low noise road surfaces

Indicator SU3 recycled materials in maintenance – the cost (or value) of recycled road construction material that is incorporated into maintenance works

Indicator SU4 winter service cost rated – the outturn cost of winter service salting per salted kilometre

Relevant targets and base line data will be incorporated within the operational plan for Street Services in relation to highway services and reported through the relevant performance management framework.

10.3 Benchmarking

Coventry actively participates in and supports the District Maintenance Engineering Group, which encompasses all the authorities in the West Midlands conurbation. Through this body, comparisons of Coventry's performance against similar urban authorities can be made. The group also continues to contribute to Best Value benchmarking groups outside the conurbation.

11.0 PROCEDURES AND PRACTICES

11.1 Day to Day Maintenance Procedures

Outlined below are the current and proposed levels of service response to potholes, trips and routine non-safety items.

Activity	*Current Practice*	*Proposal*	*Comments*
Repair Potholes	Potholes repaired on a three tier priority system - within 24hrs, 10 or 25 days of inspection	Two tier priority system - within **1** or 15 **working day** notification	More responsive, better quality and permanent reinstatement of potholes through use of new innovative pothole repair technology such as 'Rhinopot' which has undergone national trials in Coventry earlier this year.
Repairs to Trips	Trips repaired on a three tier priority system – within 24hrs of inspection, 10 or 25 days of inspection	Two tier priority system dangerous trips to be inspected and rectified within **one working day of notification.** All other trips rectified within 15 working days of notification.	Response in accordance with the Code of Practice 2001
Requests for attention to Routine Non-safety items	Two tier system for repairs based on 10 and 25 day response following notification	Will be inspected **within 5 Working days** of being notified and the customer will be contacted and advise of response **within 15 working days**. Repairs, where required, will be carried out within **four weeks** of initial notification.	Response in accordance with the Code of Practice 2001

Highway Inspectors will continue to identify defects and commission repair work, which will then be carried out to agreed performance standards, without the need to carry out further inspections or measurement of the works upon completion.

11.2 Maintenance Priorities and Scheme Selection

Experience gained in the maintenance of the Principal Road Network, together with a study of the impact of previous years expenditure, has demonstrated that future works need to balance expenditure between surface treatment, resurfacing and reconstruction to produce a long term improvement in the strength of the network while still addressing preventative maintenance and routine safety work.

When UKPMS prioritisation systems become available, future programmes will be developed on a 'whole life' costing basis rather than the current 'worst first' approach.

The annual programme of highway works have been prioritised based on a judgemental condition assessment which will seek to maximise co-ordination with other works identified in the same location thereby meeting the objectives of this strategy. This will include link schemes to other programmes (e.g. structures, transport initiatives, safety schemes, developments) by making due allowances in the design.

The Highway Maintenance Programme presented to members in July 2004 contained the programme for 2004/05 and the provisional programme 2005/06. Traditionally programmes for highway maintenance have focused on a year-by-year approach to service provision. A longer-term approach to the programming of works will facilitate improved planning, better coordination of schemes and opportunities for strategic partnering. It is anticipated that in future years the Highway Programme can be extended to 5 years when suitable procedures become available.

11.3 Scheme Design

Effective planning and design is essential to execute the construction of maintenance schemes with the least inconvenience to all road users and will ensure that the network remains accessible to all.

Whenever possible every opportunity must be taken to co-ordinate works with Utility Companies to reduce the disruption to both pedestrians and other highway users, ensuring that all works are completed before the final surfacing.

It is generally acknowledged that there is a shortage of qualified technical staff particularly in civil and municipal engineering. This is particularly acute in the design disciplines; this factor coupled with constant changes in legislation and techniques make it increasingly difficult to maintain an in-house design facility.

12.0 SERVICE DEVELOPMENTS AND IMPROVEMENTS

The delivery of highway maintenance services has changed over recent years to reflect a variety of internal and external drivers affecting service delivery. The increasing pressure on resources, the need to demonstrate improved levels of performance and the move towards a more customer-focused service has all impacted on how repair and maintenance is programmed and undertaken. The following processes practices and technologies have been adopted over recent years.

- Area Forum based reporting and consultation.
- Advances in materials technology have led to the adoption of, for example, Stone Mastic Asphalt (SMA) forms of thin surfacing which have the benefit of major noise reduction, economy and resistance to deformation.
- The replacement of flagged footways with flexible surfacing and, where appropriate, slurry sealing on footways helping to reduce risks from trip hazards and to reduce cost whilst also reducing the skills demands, in carrying out repairs and replacements.
- The investigation, trial and adoption of new techniques such as Rhinopatch, Rapidrhino and Crack and Seat. Many others have been investigated and rejected as unsuitable for use in Coventry.
- Partnership Work – the Coventry Framework Partnership with Babtie in which CSD is a participant together with the other appointed contractors.
- Rationalisation of Confirm, Servitor and Symology software computer based management systems by the adoption of new Confirm modules.
- The adoption of a UK Pavement Management System (UKPMS) – a sophisticated assessment system for recording highway condition using data based on mechanical and visual inspection procedures. The system used is MARCH PMS which will become an increasingly important tool as records build year on year.
- Use of recycled concrete and other road materials in lieu of granular sub-base, particularly for use by utilities in footways and other areas that have produced cost savings and environmental advantages.
- The use of Retreading and ex-situ Full Depth Recycling techniques which both reuse the existing highway material after reprocessing.
- The development of robust service standards for emergency repairs to the carriageway and to footway trip hazards as part of a risk management strategy.

These processes and practices have all contributed to the provision of a more efficient and cost effective service and enabled the Authority to make some progress towards meeting the Government's Ten Year Plan for Highways Maintenance.

13.0 FOOTWAY POLICY

13.1 Current Position

The city's footways are made up of approximately 57% flexible materials (black top), 42% flags and 1% blockwork in the total length of 1500km (940 miles).

All new footway construction as part of planned/programmed maintenance works or as new developments is constructed utilising flexible surface materials.

Analysis of the insurance claims profile shows that 85% of all claims relating to slips, trips and falls occur on flagged footways. The current response to slips, trips and falls occurring on our flagged footways and footpaths is to repair the trip hazard using a bituminous product (black top). This repair process delivers a increasing 'checker board' effect on the 58% of footways that are of a flagged or blockwork construction.

This situation has caused increasing public dissatisfaction with the appearance of our city's footways.

13.2 Proposed Footway Policy

This strategy proposes the adoption of a new Footway Policy that will deliver a cost effective, environmentally sustainable and visually acceptable solution to repair and development of our city's footways. This strategy proposes that:

13.2.1 New Footways

All new footway construction whether by planned/programmed works or new development will be constructed using a flexible footway surface of a colour and style acceptable to the local environment. In most instances this will mean a black top construction. The policy would not apply to the areas listed below due to their local, historical and strategic importance and contribution to the local environment.

- Conservation Areas
- City Centre
- Areas of particular age or style
- Main pedestrian routes into the city centre
- Specific district shopping centres

13.2.2 Remedial Works

All repairs to footways will be undertaken using the local material present at the particular site. Therefore, where footways are of flagged construction they will be repaired by lifting and/or replacing broken or dangerous slabs in the timeframe detailed in the Code of Practice. The practice of using black top to repair paved footways will cease from the adoption of this strategy.

Where footways are constructed with flexible materials they will be repaired using the same materials.

13.2.3 Footway Protection

The overriding of the footway by vehicles can cause damage to flagged footways. Should damage of this type occur on a regular and repetitive basis footway protection schemes may need to be considered. Typically the use of bollards to prevent the paved area being overridden will be the most cost effective solution and will contribute to both a reduction in the number of trips, slips and fall hazards and improve whole of life costs for flagged footways.

14.0 COMMUNICATION AND CONSULTATION

National Surveys carried out by MORI in 2002 on behalf of the Department of the Environment ranked street lighting, road and footpath maintenance and refuse collection as a high priority for local communities. Rapid response to emergency repairs, prompt repair to failed lamps, improvement in standard of lighting on poorly lit roads, monitoring and maintenance and the safeguarding of the quality of workmanship were seen as key issues.

Effective channels of communication are necessary in order that stakeholders are kept fully informed about planned highway maintenance activities. This strategy will ensure effective communication and consultation is achieved by:

- Presentation to and consultations with stakeholders via local consultation forums in respect planned maintenance schemes
- Officers attending and contributing to Local Area Forums, Ward meetings and resident group meetings on day-to-day highway related issues.
- Publishing information on highway maintenance matters in the local press, through local radio and through AA Road Watch information.
- Publishing information on highway maintenance programmes on the Council's Web site.
- Utilising web connections email and fax facilities together with telephone and person-to-person contact to enable information exchange and reporting of repair/maintenance requirements.

- Pre-notification of residents and local businesses in respect of impending maintenance schemes including information on road closures, diversions, estimated scheme time disruption, officer contact details for advice and assistance and road signage

The following consultation process will be adopted in respect of the selection of schemes for inclusion in the programme of planned maintenance works:-

- ♦ Technical condition criteria will be used to produce an initial programme.
- ♦ Briefing and consulting local stakeholders via residents groups, local area forums and Ward clinics, etc.
- ♦ City Services Advice Centre will facilitate further input into the process through service requests and complaints records that which will be analysed to help inform maintenance programmes.
- ♦ Views of elected members in each of the wards where planned maintenance works are proposed will be considered before the final programme is presented for approval.
- ♦ The outcome of work undertaken will be communicated to local communities and stakeholders via existing consultation forums and will assist in the formulation of subsequent programmes.

Information access points such as the City Services Advice Centre, free-phone service, e-mail and internet access have and are being further developed to enable stakeholders to report problems or seek advice or information on highway and other street related matters.

15.0 HIGHWAY NETWORK INVESTMENT

15.1 Funding

Highway maintenance is generally funded by a combination of Capital and Revenue budgets. Capital allocations are made by Central Government through the Local Transport Plan (LTP) process taking into account factors such as road length, classification, traffic figures and road condition data derived from the BVPI's, NRMCS and condition surveys. Revenue allocations are generally funded from a combination of local council tax, business rate and other Government revenue support grants. This is provided for all local services for use largely at the discretion of authorities. However, there are a number of other potential sources of funding:-

- Dedicated capital funding provided either directly or indirectly by Government and delivered by means of Grants and either Basic or Special Credit Approvals.
- Challenge capital funding, targeted at specified transport themes or objectives, which may have direct or indirect relevance to highway maintenance. Examples include 'Primelines'.
- Challenge capital funding for wider strategic themes or objectives, which may have direct or indirect relevance to highway maintenance. Examples include Walsgrave Corridor.
- Capital or revenue funding from Private Developers, secured as a condition of planning approval (Section 106 agreements).
- Capital or revenue local commercial sponsorship. The most common example of this is maintenance of landscaped areas, in particular on Roundabouts.
- Private Finance Initiative (PFI) Credits. This is now an established process and most of the recent examples have been for Street Lighting maintenance and replacement.
- Capital or revenue funding from Private Sector Service Providers in partnership arrangements.
- The use of revenue budget savings to fund prudential borrowing of capital funds to address maintenance backlog.
- Potential for funds generated via decriminalisation of parking restrictions contributing to highway maintenance.

Best Value requires that authorities should review all of these potential sources of funding to ensure that the benefits therein are maximized. Although the sums involved in some cases, for example in local sponsorship, may not be significant, they can help build local pride and support for the service.

It will be particularly important to ensure that maximum benefit is obtained for highway maintenance from contributions in respect of new developments. Although such contributions will be primarily to provide new or improved integrated transport infrastructure to mitigate the effects of the development, there may be a need to modify or bring forward maintenance works, which could be incorporated into the agreement. Unusual maintenance requirements, following adoption, may also be reflected in commuted sums.

The objectives and strategy for the delivery of road maintenance on principal and non-principal roads is covered earlier. The same challenges and opportunities apply to all other classes of roads.

The Local Transport Plan settlement is apportioned to both principal and non-principal roads. The non-principal road funds are granted as a block settlement to reduce the maintenance budget under the DfT 10-year plan. This non-principal funding is augmented by revenue funds. Recent experience demonstrates that the sums involved are inadequate and that the demands of the carriageway repairs have increased the pressure on funding of other maintenance on non-principal roads.

Highway Maintenance activities contribute towards other strategically important initiatives e.g. Primelines and also support other strategies e.g. Cycling, Walking, Safer Routes to Schools etc. The costs of maintaining these additions to the existing network are funded from revenue. Examples of these increasing demands on budgets include:-

- The additional maintenance of pavements and road edges as an essential element of the strategy to encourage more walking and cycling.
- Addressing the structural damage caused by local bus services on local roads, particularly on housing estates.
- The increasing pressure to include high specification materials and casualty /speed reduction features.
- Regular and expensive renewal of carriageway markings, coloured and anti skid surfacing – some now costing five times the cost of previously specified surfacing.
- The regular replacement and repair of features such as refuges, kerb build outs and bollards which are, of necessity, located in particularly vulnerable locations.
- Repairs on streets with road humps and cushions – features which increase the requirement for carriageway resurfacing by concentrating damage in very localised narrow wheel tracks. This then requires more expensive repairs due to the labour intensive work form needed around the features, often with extensive traffic control arrangements or even road closures.

The role of these features in casualty reduction, the encouragement of the use of other modes of transport and in improving the environment is vital. However, the resulting pressure on revenue-funded maintenance does need to be recognised in the budget setting process.

The allocations for Highway Maintenance Budgets Revenue and Capital Funding for 2004/05 and 2005/06 (provisional) are set out below:-

	2004/05			2005/06 (Provisional)		
	Capital £,000	**Revenue £,000**	**Total £,000**	**Capital £,000**	**Revenue £,000**	**Total £,000**
Programmed Works						
Highway Programme	2,424	3,621	6,045	2,424	3,621	6,045
Acceleration of 2005/06 provisional capital programme to fund Gibbet Hill Scheme over one year	398			(398)		
Local Transport Plan	1,189		1,189	1,189		1,189
Grand Total	**4,011**	**3,621**	**7,632**	**3,215**	**3,621**	**6,836**

Clearly, the levels of funding currently available for maintaining the highway network fall well short of those required to meet community aspirations or those required to deliver the levels of investment in the network as evidenced and supported by technical condition assessments. It is expected that the introduction of the Highway Asset Management Plan in Summer 2006 will provide options advice that will assist prioritization of schemes to balance community aspirations against technical requirements by giving consideration to whole life costing for each operational solution. This will enable better longer term planning and advice to be published on programmes of work to the highway network and advise on the levels of investment necessary to promote highway improvements identifying any shortfalls.

15.2 Procurement

Over recent years, the construction industry has undergone radical changes to the way that works are commissioned and delivered. National reports on procurement, notably the Egan, Latham and Byatt reports, have highlighted the need to re-engineer service delivery, and set targets to improve the performance of all aspects of the industry.

Construction projects, such as highway maintenance works, benefit from an examination of the whole procurement chain, right from the 'client,' through the designer, to the contractor delivering the work on the ground. Industry best practice now demonstrates that the involvement of all parties at the earliest opportunity creates an environment where delivery becomes more effective, efficient and economic.

Modest trials of this principle within existing contractual arrangements have been undertaken, including:-

(i) Fixed term contractors for recycling, retread, surface dressing and minor civils work.
(ii) Outsourcing sign making facilities to a local company and closing the sign shop at Whitley Depot.
(iii) Contracting elements of the winter gritting service to Warwickshire County Council.
(iv) Joining with other West Midlands authorities to let joint contracts for condition surveys, winter maintenance, weather forecasting and SCRIM surveys etc.

Other areas of highway activity which may benefit from other procurement arrangements are being explored including:-

- Road Markings.
- Structural survey of lighting columns and maintenance and inspection of highway barriers.

In addition City Services has confirmed its participation as a Quasi Framework Contractor, in the Framework Partnering Contract recently established between the City Council and Jacobs Babtie Group. We are seeking specific advantages from the partnering arrangement by:-

- Building capacity to deliver projects both now and in the future.
- Improving time and cost predictability of projects.
- Driving continuous improvements and sharing Best Practice.

16.0 RESOURCE DEVELOPMENT

The development of this strategy and the positioning of the City Council's Highway DSO as a Quasi Framework Contractor in Capital Works (through the Framework Partnering Contract) affords the opportunity to:-

- Initiate programmes to develop the skills base of our employees.
- Identify the demands of specific features introduced as part of improvement schemes.
- Give consideration during the design of maintenance schemes to making the route more attractive to public transport, cyclists and pedestrians (this includes measures such as bus and cycle lanes, specific crossing points, advanced stop lines at traffic signals and cycle friendly gully grids) by co-operation with scheme sponsors.

17.0 SUSTAINABLE DEVELOPMENT

An important consideration within highway maintenance operations is the need to meet the challenge of environmental sustainability.

Environmental sustainability will continue to be addressed through a number of initiatives such as:

- Advances in materials technology have led to the adoption of, for example, Stone Mastic Asphalt (SMA) forms of thin surfacing which have the benefit of major noise reduction, economy and resistance to deformation.
- The investigation, trial and adoption of new techniques such as Rhinopatch, Rapidrhino and Crack and Seat.
- Use of recycled concrete and other road materials in lieu of granular sub-base, particularly for use by utilities in footways and other areas that have produced cost savings and environmental advantages.

Appropriate materials need to be considered to complement the appearance of areas of special amenity value including conservation areas, the city centre and public squares. Maintenance treatments should be chosen which reduce long-term reliance on the quarrying of new materials or the disposing of excavated materials to landfill sites, thereby minimising transport costs associated with construction materials.

The safer an individual feels in an environment, the more likely will be their choice of a sustainable mode of transport. A well-lit environment will encourage people to walk, cycle or use public transport. For example, access to and links between public transport interchanges need well-maintained, quality lighting.

All local Highway Authorities are required to submit a Local Transport Plan (LTP). The LTP is a substantial document, which contains transport policies, a strategy, a programme of capital funding, and targets/indicators against which progress is measured. The LTP should focus on four shared priorities these are:

- Accessibility
- Congestion
- Air Quality
- Road Safety

These priorities all contribute strongly to sustainable development of the transport infrastructure.

The Highways Maintenance Strategy can make a major contribution to the City Council's sustainable development commitments objectives as set out in the Agenda 21 Strategy. Working within this framework will ensure that all aspects of the authority's long term decision making and everyday activities on highway maintenance help move the city towards sustainable development.

18.0 RISK MANAGEMENT

The number claims for compensation from the City Council as a result of accidents on the highway is increasing along with the value of settlements associated with each claim. The main reason for this increase in claims is due to the development of a claims culture encouraged by aggressive advertising campaigns by private sector businesses.

Claims are processed and investigated in accordance with the timescales set out in the protocols of the 'Woolf' report on Access to Justice. These are to:

- Acknowledge receipt of personal injury claims within 21 days
- Investigate the claim and decide on liability within 90 days from the date of acknowledgement

If these timescales are not met, the City Council can incur financial penalties in the form of court fines and have default judgments imposed with no option to appeal, which would dramatically increase the claims costs.

The City Council makes every attempt to contest claims in the Courts where appropriate, however the growing number and value of claims has driven up the level of the annual contribution insurance claims fund recommended by the actuary appointed to assess the funds viability each year. These continued increases in insurance claims costs place further strains on budgets.

Significant resource is being applied to analyse claims data to clearly identify areas of greatest risk. The analysis identifies what factors affect the number of claims in each location – for example, type of accident, highway construction, material type etc.

It can take up to 10 years for any one full year's claims to be finalised, therefore "real time" information on the payments made is difficult to determine. A number of accident claims are contested delaying final settlement.

The majority of highway related claims relate to trips in flagged footways and these continue to be the greatest risk to the Authority. By the nature of their construction, any differential settlement between adjacent or broken flags can create a trip and a potential hazard. Bituminous footways are of a continuous construction and, although still susceptible to differential settlement, the nature of these defects are generally less hazardous than those presented by a flagged footway.

It is not possible to put a cost on the additional risk posed by flagged footways, however it is possible to state that the largest volume of claims relating to footway trips is in flagged surfaces.

19.0 BEST VALUE REVIEW OF HIGHWAYS 2001

19.1 Actions Arising

The Best Value Review of Highways - March 2001 and the subsequent Audit Commission Report made 28 recommendations. As a result of these recommendations new policies have been adopted, new strategies have been developed and, in some cases, circumstances have changed. The City Council's response to the recommendations made by the Audit commission in 2001 are outlined in Appendix 1 in the order that the recommendations appear in the Review document.

20.0 CONCLUSIONS

The development of this highway maintenance strategy for Coventry has been based on a thorough review of the aims and objectives of management of highway maintenance and the way in which the Authority provides services to the customer.

The strategy demonstrates how Coventry understands the expectations that legislation places on a highway authority and how Coventry will embrace new legislation (Traffic Management Act 2004, etc.) whilst recognising that flexibility in service delivery is needed as new legislation impacts on the delivery of highway services.

The strategy demonstrates how we will achieve our vision for Coventry's highway infrastructure by improving our management, operational and planning processes to include:

- The adoption of a Highway Asset Management Plan to be implemented by March 2006.
- The adoption from April 2005 of the practices and procedures contained in the Code of Practice for Maintenance Management 2001.
- Ensuring that there is an appropriate contribution to the maintenance aspects of all developments as part of the Council's wider Local Transport Plan.
- Investigating options for procurement of highway maintenance services with a strong emphasis on partnering arrangements.
- Introducing from April 2005 a Footway policy which will ensure repairs are undertaken using materials which are in keeping with those present at the location.

This strategy embraces the recommendations contained in both the Best Value Review of Highways 2001 and Best Value Review of Coventry's Street Scene 2004

This strategy needs to be constantly reviewed to ensure that it remains closely aligned to the vision to 'improve the riding quality and safety of the highway network and increase its structural strength to a level which compares with the top 25% of highway authorities'.

Technological advances in materials, processes and their applications, together with amendments to existing highway legislation and further anticipated revisions to the Code of Practice for Highway Maintenance 2001 will also require this strategy to be updated periodically.

ACTIONS ARISING OUT OF THE BEST VALUE REVIEW OF HIGHWAYS 2001

1 Patchwork repairs of damaged footway flags will be adopted as an emergency safety measure only. Where vehicles damage large areas of flagstones these will be replaced with a uniform, smooth tarmac surface unless they are in conservation areas or the city centre. (*Note: This practice is being revised as part of the Highway Maintenance Strategy 2004)*

2 New surfacing materials have been specified and research and trials of new patching techniques carried out resulting in the adoption and acquisition of modern equipment.

3 Regular liaison meetings with utilities have been implemented. New inspection staff have been appointed and trained. All aspects of NRSWA are now monitored and controlled using a new software package.

4 A full audit of street trees is underway utilising newly acquired surveying hardware with data held on a Confirm module. This information will form part of the Coventry's Highways Asset Management Plan. Charges levied against undertakers now form a useful source of revenue. The New Traffic Management Act 2004 will cause major changes to this area of our operations.

5 New arrangements and materials used in weed spraying now ensure that the whole city is treated annually.

6 A dedicated footway-crossing officer has been appointed in order to reduce delays in processing applications for footway crossings. New policy proposals were approved by the Cabinet Member (City Services) in November 2004.

7 When grass verges are repeatedly and substantially damaged by overriding vehicles, or where safety is a major consideration, bollards may be installed. *(Note: A pilot scheme for verge treatment (Sewell Highway) was approved by the Cabinet Member (City Services) in November 2004 and the outcomes of this pilot will advise future policy in this area.)*

8 Metal framed Keep Left Bollards are being progressively replaced across the city with plastic, bottom lit units. This policy is very cost effective and allows rapid reinstallation of bollards following collisions.

9 Cycleways form part of the Highways Asset Management Plan and the necessary maintenance will be monitored using this policy. The costs of maintenance of the increasing number of coloured surfacing, white lining, signing etc. associated with these features will need to be addressed when such schemes are proposed.

10 The issue of commuted sums for the maintenance of new Public Highway Amenity Features is under discussion with other directorates. New high profile bus schemes and highway corridor developments need to give consideration to the ongoing costs of maintenance particularly when unusual and expensive materials are included in design solutions.

11 City Services has been created out of the former Client Agency and Coventry Contract Services, working as one organisation with a strong customer focus. Regular meetings now take place at all levels within the organisation to discuss operational and service deliver issues.

12 Coventry has now adopted the new European Codes of Practice for Lighting, which has superseded the previous British Standards. These new codes allow greater flexibility in scheme design thereby allowing a reduction in energy consumption. In addition new, more efficient technology has been evaluated and is being progressively introduced including the latest lamp technology, new lanterns with electronic controls and illuminated signs utilising LEDs. (Light Emitting Diodes).

13 An extensive specialist survey has been carried out into the structural stability of the City's lighting columns. This has quantified the percentage of columns requiring replacement and the costs associated with this.

14 A dedicated Team has been established and a detailed survey to collect highway asset inventory data is underway as part of the development of a Highway Asset Management Plan. A full inventory of lighting equipment has been completed and is now available on the Confirm system. This will shortly be available also in a map display form. The tree survey information mentioned above will be held in the same way. Proposals for the capture of other highway asset data by electronic methods are in preparation.

15 Condition surveys are now well established as they form part of the BVPI reporting procedures and The National Road Maintenance Condition Survey. Coventry meets all of Governments' requirements in this respect and use The March Pavement Management System, Coarse Visual Inspections, Detailed Visual Inspections, Tracs Type Surveys and SCRIM (Skidding) Surveys. The latter two systems are currently being carried out under a joint contract with other West Midlands authorities.

16 In order to monitor performance to an acceptable level a Performance Quality process has been introduced. In addition the statutory BVPIs and local PIs provide an overview of performance.

17 All major roadworks are now notified to the AA, local press and local radio. All local residents and business likely to be affected by highway, footway, lighting or drainage schemes have individual letters of notification and explanation delivered in advance of any works. The City Services Advice Centre gives improved access by phone, email and web as well as personal callers. In addition, arrangements are in hand for the Council website to show locations of all works. All necessary hardware and software is now to hand and waits commissioning to allow this process to commence. All major schemes are also discussed at the Area Forums that are, when necessary, attended by the appropriate officer.

18 The earlier difficulties in achieving speedy resolution of service problems have been largely overcome by the restructuring which formed City Services.

19 A Corporate Training and Development Strategy has been introduced to develop the skills base and ensure continuing development of the workforce. A dedicated CSD training officer had also been appointed.

20 New winter gritting plant has been acquired after an exhaustive investigation of the options available. The routes used have been reviewed by an external specialist consultant and revised when this benefited performance and efficiency. Some works have been outsourced where this showed cost and other advantages, such as risk reduction. We are a core member of the DMEG Winter Service Group who are actively investigating plant, materials and techniques and trialing the use of brine instead of rock salt and the newly available molasses coated salt. This group meets monthly and has links to other groups nationally where findings are shared. New cost effective materials have been ordered for use in the 2004/05-winter period.

21 The formation of City Services has removed the necessity for a service level agreement. Work carried out by City Services for City Development is undertaken using the partnering mechanism of the new Coventry Partnering contract with Jacobs Babtie. City Services are a quasi framework contractor in this contract. In this latter context the ‘open book’ nature allows ready comparison of our performance against the other appointed external contractors. A review of all existing schedules of rates against the nationally accepted norms is currently in hand. This will show, in Standard Method of Measurement (SMM) terms, the real costs of work carried out by City Services and allow accurate estimating.

22 The levels of spend on highway maintenance and/or the proportion of FSS allocated to highway maintenance is determined through the PPR, the Council's budget setting process.