

3. Efficient maintenance and management

Strategic Aim:

To manage, maintain and improve the transport network

3.1 Introduction

Our highway network is the largest and most visible asset for local people, communities and businesses. The way we maintain and manage it is therefore a high priority for residents, visitors and businesses alike. Over the period of the second LTP we have been continuing to improve the condition of our assets with a particular focus on principal and non-principal roads, bridges and structures and busy footways. In doing so our focus has been on using our resources efficiently to maintain our assets in a condition fit for use and to extend their life where possible. Alongside this we have been developing our asset management techniques working towards an Asset Management Plan. Early work has focussed on finding out exactly what our transport asset is and developing better ways to maintain it. The first two years of the Plan has also seen the move towards Local Area Agreements, and with it a greater acknowledgement of the role of transport and thereby the condition of our transport assets in meeting the needs of wider objectives. This brings along additional challenges with greater demands for resources and management techniques.

3.2 Progress 2006-2008

Objectives and Key Actions

Our efficient maintenance and management strategy contained eight key actions which were identified to help achieve six objectives. This brought together the evidence for the need for change, identified key issues in Derbyshire and how we anticipated exploiting opportunities leading to measurable outcomes. Our progress against these key actions is as follows:-

Objective 1: Maintain and improve the existing asset of the transport network

Key Action: Targeting Structural Maintenance

County Road Hierarchy

We have continued to progress the development of a highways hierarchy to meet the recommendations of the Code of Practice - Well Maintained Highways and to provide a foundation for Asset Management and in particular Levels of Service.

Early work identified Regional, Strategic County and Main Distributor routes based upon its road user function and the focus is now on the lower levels of the hierarchy. Secondary Distributor, Link Road, and Local Access Road levels have been determined across two-thirds of the county and this work will be completed by April 2009. Safety inspection routes are being rationalised and brought into line with the hierarchy and this is achieving significant efficiency savings of the order of 30%.

Improving the condition of our principal roads network

Our principal road network falls into our three highest-priority County Road Hierarchy categories (strategic regional/ county routes or main distributors) and measures 672km. Our focus in the first two years of the Plan period has been to

build upon the work we undertook in the first LTP and to continue to reduce the backlog of works to improve the condition of our principal roads. Our work has been extremely successful and the backlog has almost been eradicated with only 4% of the network now requiring structural maintenance at March 2008. By reaching 4% we are confident that we have reached a level where the network can be kept in a good condition and fit for use but by ensuring that resources are used efficiently and not moving into the realms of 'gold-plating' our network.

Our experienced maintenance teams have achieved this success by targeting improvements using a wide-range of evidence based data sources that we have used to help inform our work programmes, such as condition data, casualty data (see below) and user data. 'Scanner' surveys are the principal reporting tool on condition and provide an insight into particular road defects, but the techniques are still relatively new and therefore we continue to supplement this information with deflectograph surveys, visual inspections and skidding resistance (SCRIM) surveys.

The majority of our treatments have been resurfacing or reconstruction. To provide wider benefits to people and wildlife we have generally used noise reducing surfacing as a matter of course. These have been combined with preventative techniques such as surface dressing which provide a cost-effective solution to prolonging the structural life of our network. As part of our maintenance programmes we also incorporate other initiatives to improve other assets along a route e.g. in the last two years we have resurfaced or surface dressed a large proportion of a strategic county route, as defined in our functional road hierarchy - the A515 between Ashbourne and Buxton. In combination with resurfacing, signing and lining has been replaced, followed by the reduction of the speed limit down to 50mph in an attempt to reduce casualties.

Improving the condition of our non-principal road (classified) network

Our non-principal road (classified) network falls within the middle tier of our County Roads Hierarchy (main or secondary distributors), providing a more local network for the movement of the public, communities and businesses. Like our principal road network, we use similar survey and technical data to target works and resources to improve the condition of our non-principal road (classified) network. Because of its placement in the hierarchy, this network has received a lower priority in relation to the principal road network, but we have still targeted significant resources to it. This network is much larger with 1,773 km requiring maintenance. Again the majority of our treatments have been resurfacing and reconstruction and a focus on extending the life of the network through surface dressing. A 2% reduction in the network requiring structural maintenance was achieved in 2007/08 leaving 12% of the network still requiring structural maintenance. The condition of our non-principal road network is now a focus of the new Local Area Agreement and with the backlog of principal road maintenance now tackled our focus for the remaining years of the second LTP will be tackling the backlog of non-principal road maintenance.

Improving the condition of our non-principal roads (unclassified) network

Our network of unclassified roads falls within the lowest tier of our County Roads Hierarchy (link or local access roads), providing for localised journeys generally in rural areas or residential streets. Not surprisingly this is our largest network of roads with 2,658km to be maintained. Again technical data is used

to target schemes, with a greater emphasis on visual inspections, satisfaction levels and user data. In terms of carriageway condition resources, this network receives the lowest priority for maintenance. However solutions are generally less expensive with a wider range of patching and surface dressing rather than resurfacing works to extend the life of roads which suffer less damage from traffic levels. Our techniques have been successful in improving the condition of our unclassified road network from 17% of our unclassified roads requiring structural maintenance to 15% now requiring structural maintenance.

Improving the condition of our Category 1 and 2 footway network

Like other authorities we have an extensive network of footways across the county. Maintaining these is a challenge, but to make most of our resources we have focussed our improvements to improve the condition of our most heavily used footways in the county. We have rationalised our Category 1 and 2 routes which has brought savings in inspection time and targeted remedial works have brought about considerable improvements. To make best use of our resources we have used a combination of resurfacing, reconstruction and preventative measures. Consideration of the local environment and townscape has also been incorporated where appropriate such as stone kerbing in Buxton. By doing this we have made a significant improvement in the condition of our Category 1 and 2 footway network by reducing the percentage requiring structural maintenance from 31.5% in 2004/05 down to 8% in 2007/08. In focussing our attention on busy footways we also recognise the importance of footways in residential and rural areas and have put resources to improving these too. Our focus for future years will be to complete our work on the busy footways and extend improvements to other important routes.

Strengthening and maintaining our bridges and structures

Our bridge stock over the plan period has increased by 5 to 1058 to be maintained. Targeted works has seen the percentage of substandard bridges requiring structural maintenance reduce from 9.2% in 2003/04 to 7.2% in 2007/08. Achieving this success has been through a combination of strengthening and preventative maintenance. A total of 20 substandard bridges have been improved in the first two years by the Authority, developers and Network Rail. A particular focus of our work has been on improving structures on the Primary Route network, supported by additional resources from Central Government. One example is the strengthening of a bridge carrying the A515 over an important mineral line to the south of Buxton. The A515 is a Strategic County Route (DCC Roads Hierarchy) carrying a large volume of quarry traffic and north-south county traffic and therefore measures such as weight restrictions would have damaged the local economy. A £500,000 scheme strengthened the bridge deck and ensures the route can be used safely by all traffic into the future. We are currently undertaking a programme of Principal Bridge Inspections to identify future maintenance requirements for the bridge stock.

Our preventative maintenance encompasses a wide-range of work such as repainting and waterproofing bridges, rebuilding retaining walls of which many are dry stone walls, replacing culverts, stabilising landslips and maintaining ancient monuments such as Swarkestone Causeway. A particular feature of north western Derbyshire is limestone and gritstone valleys that require maintenance to the adjacent rock-faces to reduce rockfalls. An example of this is our de-vegetation, removal of trees, rock netting and rock-bolting of rock faces along A6 Ashwood Dale to the east of Buxton where the road runs along



the base of a limestone gorge. The work, costing around £320,000, was carried out following a survey of the rock faces and implemented during 2007/08 to safeguard the safety of adjacent road users.

Objective 2: Use casualty data to inform maintenance programmes

Key Action: Targeting road, footway and rights of way maintenance at sites where there is a known safety issue

Low Skidding Resistance

In addition to improving structural condition, a key area of our maintenance work on both the principal road network and our non-principal road network is in tackling carriageways with a low-skidding resistance. SCRIM surveys which identify sites where the surface provides a low resistance to skidding are used alongside casualty records to identify sites where we can improve the safety of road users through a programme of resurfacing or surface dressing. In many cases we find that they have a good structural condition but require surface treatment to ensure our road network is safe for our road users. Through before and after monitoring we have discovered that although for maintenance reasons surface dressing is undertaken on a cycle of about six years to be cost-effective, where there is a link to casualties, the accidents begin to return after about three years. Therefore this is something we are looking at in the remaining Plan period.

Street Lighting

One of our largest problems in maintaining our asset is the condition of our 1805-type concrete street lighting columns. These were introduced in Derbyshire between 1978 and 1985 and therefore are at least 23 years old and almost all will be past their design life of 25 years soon. Columns have been found to be deteriorating due to corrosion of the steel reinforcement and are at risk of catastrophic failure. Surveys have identified locations at greatest risk and to date we have replaced around 1,200 columns, but there still remains another 5,500 which we plan to replace over the next 8 to 9 years. Keeping lamps working is also an important factor in improving safety and security and we have been successful in keeping over 99% of street lights working for many years now. A review and implementation of an Action Plan in December 2006 means that we continue to improve with 99.6% of street lights working.

Objective 3: Ensure co-ordination of works by different agencies affecting the transport network

Key Action: Development of local operating agreements and inter-authority protocols with statutory undertakers, neighbouring authorities and the Highways Agency

Dealing with delays and congestion due to works on the transport network is being tackled through our obligations under the Traffic Management Act 2004 (see Annex 1). We have already introduced a notification system for the authority's own highway works. We have also set up Task Groups with statutory undertakers and ourselves in locations where a number of works are required over a short period to ensure they are co-ordinated.

We are also planning for the introduction of a Permits System, again as part of our duty to deliver the Traffic Management Act. To do this we have been working with other authorities within the East Midlands Region to develop a



common framework for a Permits System. This work is being done to establish common rules for authorities and statutory undertakers to follow. It is expected that this framework will lead to an application to the Secretary of State for the introduction of a Permits System in late 2009, subject to other authorities' early applications, having been approved.

Objective 4: Ensure all network users and local communities are considered when designing schemes

Key Action: Design of maintenance schemes will take the opportunity to include the wider needs of all network users and local communities

We have continued to use our long-established procedures for liaising with other local authorities, parish councils etc. on proposed work. This has been enhanced with the appointment of three liaison officers who help provide a direct link between local communities and engineers providing more detailed information on what factors are important from a satisfaction, rather than technical, point of view. A change in the methodology in measuring public satisfaction means we cannot make a judgement as to whether there has been an improvement. Satisfaction levels for 2007/08 are 37.6% for carriageways and 38.4% for footways.

Objective 5: Enable efficient operation of the road network and transport system

As described in Annex 1, under our obligations as part of the Traffic Management Act, we are working to deal with delays and congestion on both the highway network and that of neighbouring authorities. Under Objective 3 above we described the work we are doing to co-ordinate works better and below we detail how we time works to avoid traffic sensitive times. Annex 1 also provides details on how we are dealing with incident management, civil parking enforcement and how we are becoming better informed through the collection and analysis of congestion data.

Key Action: Targeting structural maintenance to those roads in greatest need and carrying the greatest traffic volumes

Focusing maintenance on the busiest roads and those in greatest need is further explained in Objective 1 above.

Key Action: Targeting Rights of Way and other footway maintenance at those points identified as being in most need and/ or with the potential to benefit the greatest number of users

This key action is reported under Objective 6 below.

Key Action: Ensuring that maintenance is undertaken at times and using methods designed to minimise traffic disruption and delay

Reducing the impact on the road network and transport system is not only being tackled through better co-ordination of works but also timing of construction. We have successfully managed to implement our local transport plan initiatives without impacting on our network of traffic sensitive (most liable to congestion) routes during peak times; mainly through night-time and weekend working. This has obvious benefits for local business and communities movements, but does have an impact on the scale of improvements that can be delivered due to the increase in cost of works

outside normal hours. Typically this ranged from +20% (on normal scheme costs) for night working in the week to +40% for works on a Sunday. A full review of Traffic Sensitive routes is planned before the introduction of a Permits System to co-ordinate works by both the authority and statutory undertakers.

Objective 6: Implement prioritised Public Rights of Way improvements (and maintenance)

Key Action: Targeting Rights of Way maintenance at those points identified as being in most need and/ or with the potential to benefit the greatest number of users from a safety and accessibility point of view.

Following an extensive public consultation process we published the Rights of Way Improvement Plan (ROWIP) for Derbyshire 2007 to 2012 in November 2007. Our Plan sets out our vision to have an integrated, well managed and inclusive rights of way and access network. Views collected as part of the process have been used to identify locations and initiatives which we are implementing to achieve our vision. The first two years have seen a wide range of improvements being made such as improving surface condition, new bridges and way-marking to ensure that the network is open and available for use. One area where we have been making significant progress is in improving our rights of way furniture and making them more accessible by replacing stiles with gates or removing them altogether. Across the county we have installed over 370 wicket gates during the first two years of LTP2.

Our efforts have been rewarded with a marked improvement in the percentage of our rights of way network being classed as easy to use from 51.5% in 2003/04 to 70% by March 2008. One area where we have been focussing our attention is to work with landowners to ensure they keep rights of way on private land open and available for use. This area was identified as a risk during the development of the second LTP. This work such as working closely and producing advice leaflets has seen a turnaround in performance and latest surveys are showing a greater proportion of paths being reinstated after ploughing and cropping.

Good Practice

Good Practice Case Study 1: Transport Asset Management and Asset Inventory

In September 2005, we started work with Atkins Consultants to develop and produce a Transport and Highways Asset Management Plan, as well as developing an Action Plan to embed the concept of Asset Management within the Environmental Services Department of the council. One of the key actions highlighted in the action plan was to improve the effectiveness of asset management by producing a detailed assessment of the assets comprising the existing transport and highway infrastructure; this is known as the asset inventory.

The specification of the asset inventory has been developed over the past two years through the process of discussion groups and workshops to define details on what objects will be recorded and how. Processes were discussed at length to devise ways in which the human interaction can be reduced to avoid certain levels of error.

The data is to be collected by using state of the art video recognition software that runs through pre recorded video images of the surveyed area. The software scans the video, picking out predetermined assets; signage, lining, gullies, kerbs etc. This not only produces an inventory of how many assets we have, but the technology can identify the condition status of some of the assets indicating what state of repair they are in. As the whole process is integrated with global positioning systems (GPS), mapping of the assets is quick and easy to do with pin-point accuracy.

The software also has the capability to identify further information regarding the integrity of the carriageway. This assessment provides the highways team with fundamental evidence for prioritising where network improvement needs to be completed in order to provide better roads, pavements, lighting and signage.

The asset inventory also plays a big part in the delivery of road safety as problems with road surfacing and signage can be identified through the inventory auditing process and these issues can be tackled through immediate work or built into the maintenance programme.

The initial cost of the survey is approximately £275,000 but there has been a contingency attached to this figure to cover costs incurred through maintenance of the video and mapping links, resurveying of specific locations if problems occur, and IT training and updates.

The benefits of having a detailed inventory of our assets means that we know exactly what we own, the condition that it is in and what we are required to do to make it better. This helps us to work out the most cost effective and efficient manner of planning maintenance of our existing assets and the whole of life costs and resources required to introduce new assets onto the network.

As a result, the survey will improve our understanding of the network, enabling us to draw up long term budgets (15 years) to invest in the infrastructure and produce 5-year forward work plans. This will provide more accurate information for the LTP and other strategies in terms of future need and monitoring expenditure.

The asset inventory will enable staff to investigate recent trends, identify hotspot areas as well as contributing towards the development of a knowledge base for understanding asset group lifecycles.

Further benefits will be; the availability of information for smarter decision making, especially in the case of maintenance; the opportunity to test and develop new methods and show the effect of current spending on the whole of the asset base and the effect that has had on the standard of the assets throughout the county. This will also highlight existing problems e.g. when the cost of having to replace an asset after 5 years due to poor servicing is substantially more than properly maintaining it over the same period. These problems can be assessed and addressed to make the programme more efficient.



Collecting asset information using specialist contractors

Derbyshire County Council is one of the first authorities of its size to take on a project of this scale, so in many respects we are developing our own best practices and learning as we go forward.

We are also promoting the further development of initiatives and innovation in Asset Management in our submission for DfT funding offered for Transport Asset Management. Work undertaken in road condition data interpretation, energy savings in street lighting and better and safer signing and lining will be the thrust of the bid. Not only will we be submitting our own bid, but we are also leading a potential bid by MSIG to show how asset management and better practice is being driven forward by the authorities comprising the Midlands Service Improvement Group in areas of valuation and renewals depreciation as well as footway condition surveying.

Good Practice Case Study 2: Recycling Road Materials

Since the introduction of our certified Environmental Management System in 2002, we have improved our highway waste management and increased our recycling, thus meeting our commitments to reducing and recycling waste and the requirements of tightened legislation.

The 'Duty of Care' waste legislation means that waste producers have ultimate responsibility for all their waste until it is correctly disposed of or recycled. This means that we have to ensure that we use authorised companies and sites to carry and recycle or dispose of our waste.

The selection of waste carriers and recycling or disposal sites is in part based on geographical location to reduce transport impacts and costs. Reuse and recycling facilities are used in preference to landfill sites.

We have been recycling highway wastes for more than 20 years but developments in the recycling processes and changes in legislation and the market have enabled a greater range of materials to be recycled and an increase in the number of facilities offering this service.

Government legislation and charges regarding landfill sites, such as the Landfill Regulations 2007 and Landfill Tax, have increased considerably the costs of sending material to landfill. This has resulted in the cost of recycling becoming comparable to that of land filling waste.

At the moment, we re-use or recycle over 50% of our highway waste. This includes, for example, aggregates, road planings and chippings, concrete posts, metals, electronic equipment, street furniture, street lighting lamps and tree and hedge cuttings. The department has a target of reusing or recycling all suitable highway waste by 2010. To aid this we are developing our waste management data and monitoring system. This system will help us to identify where our wastes are created, improve the tracking of their handling and recycling or disposal and enable more accurate reuse and recycling figures to be produced.

Targets

The following targets were developed to measure the outcomes from the efficient maintenance and management strategy. As can be seen, excellent progress has been made against all our key outcome indicators for the efficient maintenance and management strategy. More information can be found in Annex 3 (Table A3.1).

KEY: The target titles are coloured to highlight the position we are currently at in achieving the target compared to the milestones we set ourselves. **Green = achieved/ on track; Amber = milestone target narrowly missed; and Red = not on track.**

Key Outcome Indicators

- **NI168 Percentage of the principal road network where structural maintenance should be considered (was BVPI223) [On Track]** - this target has been revised since the second LTP was published following changes to the Scanner survey methodology. In 2007/08 the percentage of the network requiring structural maintenance has reduced to 4%, which has exceeded original expectations. The target for the remaining plan period is to maintain the percentage of the network requiring structural maintenance at this level.
- **NI169 Percentage of non-principal (classified) road network where structural maintenance should be considered (was BVPI224a) [On Track]** - A new baseline and target has been set in 2007/08 as part of the development of the new LAA target under the new National Performance Framework and due to the Scanner survey methodology changing. Although no comparable data is available for the new methodology, we have also recalculated 2007/08 data using the old methodology and this shows that the percentage of the network requiring structural maintenance reduced from 19% in 2006/07 to 17% in 2007/08.
- **BVPI224b Percentage of non-principal (unclassified) road network where structural maintenance should be considered [On Track]** - The milestone for 2007/08 was 18.27%. This was exceeded following a continual improvement of the network during the first two years from the baseline of 18.27% in 2006/07 to 15% in 2007/08.
- **BVPI187 Percentage of Category 1 and 2 footways where structural maintenance should be considered [On Track]** - The milestone target for 2007/08 was 29.7%. The 2007/08 detailed visual inspection surveys found that only 8% of footways now required structural maintenance compared to 32.7% 2003/04 and 2004/05 average baseline and therefore the milestone target and 2010/11 targets have both been exceeded significantly.
- **Percentage of Rights of Way that are easy to use [On Track]** - The milestone target for 2007/08 was 70% and this was met with 70.6% of rights of way being surveyed as being easy to use in 2007/08. There has been a significant increase in performance from a baseline of 51.5% in 2003/04.

Our Local Partners

Although much of the work we undertake in maintaining the transport network is driven by technical data, we also benefit from our work with a wide range of stakeholders (see table below). This ranges from national organisations such as the Highways Agency and Environment Agency, other local authorities

through the Midlands Highways Alliance and 3 Counties Alliance, through the District/ Borough Councils, Peak District National Park Authority to many local organisations and volunteers such as parish councils, landowners and statutory undertakers.

Table 3.1 Efficient Maintenance and Management Stakeholder Audit

	Funding (additional to LTP)	Planning and reviewing	Doing
National	<ul style="list-style-type: none"> • Former trunk roads • British Waterways • Network Rail 	<ul style="list-style-type: none"> • Highways Agency • Environment Agency • British Waterways • Network Rail 	<ul style="list-style-type: none"> • Highways Agency • Suppliers (aggregate etc.) • British Waterways • Network Rail
Regional/ sub-Regional		<ul style="list-style-type: none"> • Government Office East Midlands • 3 Counties Alliance • Midlands Highways Alliance • Regional Benchmarking 	<ul style="list-style-type: none"> • 3 Counties Alliance • Suppliers
Local organisations and volunteers	<ul style="list-style-type: none"> • Local Area Agreement 	<ul style="list-style-type: none"> • District/Borough Councils • Peak District National Park • Public transport agencies • Statutory Undertakers • Scott Wilson • Atkins • Groundwork Derby & Derbyshire 	<ul style="list-style-type: none"> • District/Borough Councils • Peak District National Park Authority • Scott Wilson • Parish Councils • Groundwork Derby & Derbyshire • Landowners • Statutory Undertakers • Suppliers
Local communities		<ul style="list-style-type: none"> • LTP public consultation • MORI (public opinion) • Community Area Profiles • Community Forums • Local enquiries • Scheme consultation 	<ul style="list-style-type: none"> • Local Volunteers
Derbyshire County Council	<ul style="list-style-type: none"> • Countryside/Rights of Way 	<ul style="list-style-type: none"> • Countryside/Rights of Way • Bridges and Structures • Area Teams • Street Lighting • Highways Information Group • Traffic Signals • Highway Liaison 	<ul style="list-style-type: none"> • Countryside/Rights of Way • Bridges and Structures • Area Teams • Street Lighting • Highways Information Group • Traffic Signals

Inform, consult, involve

A consultation, “Are We on the Right Track?” sought the views of a wide range of people about the draft Rights of Way Improvement Plan.

- Key Issues questionnaires were sent to county stakeholders, Local Access Forums, district based Countryside Access Networks, along with district and parish/ town councils. More than 200 responses were received.
- Derbyshire’s Citizen’s Panel consultations also led to more than 5,000 responses being received.
- General User Surveys were also issued and aimed at individuals with as

wide a range of ability levels and type of use as possible; to include local residents and visitors, non-users and users. This method of consultation attracted 3,250 responses.

- Focus/discussion groups were held to explore additional issues relating to conservation/heritage, landowners, businesses/tourism and disability issues.

The results of the consultation were developed into an Assessment of Needs report (2006) which was then used to inform the finished plan which was published in November 2007.

Delivering Rights of Way improvements in partnership

A Service Level Agreement has been set up between our countryside service and Groundwork Derby and Derbyshire. We contribute £10,000 annually from Countryside Capital and in return we get 572 hours of Groundwork officer time to be allocated to working with specific parishes to encourage local councils and volunteers to carry out full path surveys and then put in place a works programme to tackle some of the problems found. LTP funds the cost of any works needed on the ground through the Rights of Way Improvement Plan programme. During 2007/08 Groundwork Derby and Derbyshire (GDD) worked with 7 parishes in Derbyshire Dales and High Peak. Work completed in Longford by a PRoW inspector as a result of Longford surveys resulted in 93% BVPI pass rate afterwards. Two practical clearance tasks were also carried out by a local horse rider group in Bonsall and two routes in Whaley Bridge identified as needing improvements to make them “safe routes to school”. This work with GDD generated an additional 127 volunteer days in 2007/08 through the work of parish volunteers and through work carried out by High Peak Volunteer Rangers.

3.3 Forward look 2008-2011

Policy update

An analysis of influence from recent policy and programmes at a national, regional and local level (see Annex 2) has resulted in the following summary for this strategy area:-

Street Design - Focus needs to be given to the design of road layouts in order to reduce the risk of road accidents.

Co-ordination of Road Repairs - Co-ordinate road works with other street related repairs to minimise the interference on traffic flows.

Maintenance and Road Safety - Continuation of the link between road maintenance and road safety implementation e.g. signage, street lighting, safety camera installation.

Asset Management - With guidance from LTP2, continue to collect information on the condition of the highway assets.

Improvements of the Network - focus on delivering public transport improvements e.g. transport interchanges, bus stops and train stations as well as local walking and cycling facilities.

Although not particularly a policy update, a particular influence on this strategy has been the change in survey methodology for measuring the condition of the principal road network and non-principal road (classified) network. This is providing much greater detail about different defects that contribute to a carriageway requiring structural maintenance. It is also contributing to efficiencies in the way these defects are tackled.

New Performance Framework

A review of the effect of the new National Performance Framework on this strategy is illustrated below (See Annex 3, section A3.3 for more details).

LTP Mandatory and Best Value Performance Indicators	New Performance Framework 2008 onwards
Efficient maintenance and management	
✓ BVPI 224a Non-principal classified road condition	NI 169 LAA Sustainable Communities Non-principal classified roads where maintenance should be considered
✓ BVPI 223 Principal road condition	NI 168 Principal roads where maintenance should be considered
✗ BVPI 224b Unclassified road condition	
✗ BVPI 187 Footway condition	
✗ BVPI 178 Rights of Way easy to use	

KEY

✓ Continuation of LTP2 indicators

✗ 'Remaindered' indicators

LAA: Indicators selected by the Local Area Agreements are highlighted in **bold**

The table shows that our two principal performance indicators will remain within the new National Performance Framework. However, the priority for structural maintenance has moved from improving the condition of our principal road network, to improving the condition of our non-principal (classified) road network with the selection of NI169 as one of our new LAA targets. The Rights of Way indicator will continue to be reported through the annual reporting on the Rights of Way Improvement Plan. Our other two indicators relating to the condition of our unclassified road network and footway network will no longer be formally reported, but the information will continue to be collected to inform our maintenance programmes.

Risk Register

During the development of our second LTP we developed a risk management register which identified the key and other risks associated with the efficient maintenance and management strategy (see Annex B6 of our LTP2). We have monitored these and we reviewed the risks again during our SWOT analysis to develop this report. Our original risk register identified four key risks (based upon impact and likelihood) that could affect this strategy. We have since downgraded or deleted three of these:-

Key Risk	Comment
Reduction in funding levels would reduce the number/ extent of maintenance schemes.	Finance remains a key risk for this strategy. To date an improvement across all our maintenance targets has been achieved, but it is likely that resources will have a greater bearing in future. Increases in material costs are being observed e.g. due to increases in oil prices. Whilst the need to undertake works at outside peak periods etc can also add up a third onto costs. Therefore this remains a key risk.
Scanner surveys class stone mastic asphalt as failing on texture depth.	This was studied by the Transport Research Laboratory and it was found that there was no evidence to back up this claim. Therefore this risk has been deleted.
Increase in heavy vehicle tonnage/ heavy vehicle use accelerating road and bridge deterioration	There has been some discussion in the past couple of years within DfT about whether to allow larger lorries (up to 60 tonne) but any move to this in the short-term was ruled out in the Summer 2008. This risk has been reduced to medium.
Change in monitoring techniques e.g. Scanner may highlight more roads requiring maintenance	This risk was identified before the first Scanner surveys had reported. In reality once the surveys had reported in many ways the headline targets showed the roads to be in better condition than through other older methodologies and therefore this risk was also deleted.

Areas for Improvement - Risk Management Project Plan

During the Summer 2008 we undertook an exercise to carry out an internal review with reference to our objectives and actions of this strategy which were included within the second LTP. This is seen as the first stage in identifying key issues and taking these up as appropriate internally, with working partners and the Department for Transport.

Our review was based around a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis which we then followed through to a draft risk management project plan. The risk management project plan for each strategy will be reviewed by senior management and any subsequent actions will be incorporated into the Service Plan for 2009/10 onwards. Suggestions include:-

Objective 1: Maintain and improve the existing asset of the transport network

Reduce/ Restrict New Infrastructure

Our transport asset is ever increasing either through improvements undertaken through LTP programmes or from developers extending networks and assets. This asset comes with a maintenance cost. A key issue raised through the SWOT analysis is to whether we can continue to maintain an increasing asset. The work to develop the asset management plan and the asset inventory will provide an evidential basis to planning what and how we can maintain the network and to develop whole life costings. The SWOT identified that the asset management plan will need to be used to assess more carefully the implications of any further assets that we decide to introduce or allow developers to introduce. This assessment could also include the removal of, or allow the deterioration of assets that are assessed as superfluous to reduce maintenance costs.

Statutory Undertaker Reinstatements

The accelerated deterioration of condition of the carriageway and footway network being caused by lower standard reinstatements undertaken by statutory undertakers was raised as a key risk in both the LTP2 risk management register and also through our SWOT analysis. We are aware that Devon County Council has introduced a regime for monitoring reinstatements to ensure that they are undertaken to a high standard and therefore better protect the structure of the carriageway or footway. Therefore we intend to check the feasibility of monitoring statutory undertaker reinstatements in terms of its likely costs and benefits.

Environmental Impacts

The SWOT analysis identified the emerging issues of incorporating the impacts of climate change within the maintenance and management of our transport network. The 3 Counties Alliance (Derbyshire, Leicestershire, Nottinghamshire) has been undertaking a joint project to identify critical areas for action. The next stage is to update our policies and working practices to be in line with the findings of the project. This work will help us in our ambition to reach level 3 of the new National Performance Framework target NI 188 'Planning to adapt to climate change.' (i.e. embedded adaptation in its decision-making processes)

Objective 2: Use casualty data to inform maintenance programmes

Improving the condition of the carriageway, including improving skidding resistance contributes significantly to achieving a reduction in casualties.



Climate change workshop

The SWOT analysis identified that casualty data is already used widely when prioritising maintenance schemes. However it also questioned whether casualty and SCRIM data should be a more important factor than Scanner data by which our LTP and LAA performance is measured.

Objective 3: Ensure co-ordination of works by different agencies affecting the transport network

As mentioned above and in Annex 1. We are currently working with other authorities within the East Midlands to look at developing a framework for introducing a Permits System. Although the system has not been introduced as yet, the SWOT analysis identified that the new system will need careful monitoring to ensure it delivers real benefits.

Objective 4: Ensure all network users and local communities are considered when designing schemes

Maintenance issues are always a high priority with local residents. The introduction of the Highways Liaison Officers is improving links between the public and engineers. The SWOT analysis identified that this could be improved further. Key to this is gaining a greater understanding to what is important to residents. But equally important is to better inform residents and businesses to the reasons why we maintain as we do and the consequences of this and what levels of service they can expect across the whole network. Balancing public concerns, the need to meet targets and technicalities through the LAA can skew where resources are targeted and to maintain satisfaction whilst meeting targets will be a challenge over the next few years. The LAAs and our partnership working provides us with a real opportunity to widen the ownership of maintaining the transport asset and to help meet this challenge.

Objective 5: Enable efficient operation of the road network and transport system

Maintaining the transport network and ensuring it operates efficiently is supported by a wide range of technical data. The SWOT analysis identified that improvements could be made to the way we bring data together to improve the efficiency of the way we work, particularly related to integrating information on users of our network. Examples were to develop the County Roads Hierarchy further to provide more detailed information for road users.

Objective 6: Implement prioritised Public Rights of Way Improvements (and maintenance)

A risk identified within the second LTP and through the SWOT analysis is that performance in ensuring the rights of way network is easy to use is largely dependent on landowners managing the network. As described earlier, through working closely with landowners improvements have been made. However the SWOT analysis highlighted that this is required to remain a key area of work to ensure that improvements continue to be made.