

### 9. Asset Management

#### Headline Targets

- BVPI 223 - Principal Road Condition.
- BVPI 224a - Non-Principal Classified Road Condition.
- BVPI 224b - Unclassified Road Condition.
- BVPI 187 - Footway Condition.

#### How we will tackle Asset Management

- By ensuring value for money.
- Efficiency through joint working on highway maintenance, street lighting, bridges and structures.
- Joint Transport Asset Management Plan (TAMP).
- Identifying options for joint monitoring, procurement and delivery.

#### 9.1 Introduction

9.1.1 This chapter sets out our approach to the management of existing and future highway and transportation assets. Asset management refers to the maintenance and management of the infrastructure and facilities to which the public have access. We recognise that efficiently maintained highway networks and transport assets are essential to ensure that the JLTP Shared Priority objectives of tackling congestion, achieving better air quality, delivering accessibility and improving road safety are met.

9.1.2 The JLTP area has a rich heritage ranging from the important historic streetscapes of the World Heritage Site of Bath, to attractive village centres, to stone retaining walls and verges of nature conservation importance in the countryside, to city centres and major shopping areas. High quality maintenance of these assets presents additional challenges.



*Reconstructing the A38*

#### 9.2 Asset Management and the Shared Priorities

##### Congestion

9.2.1 Effective maintenance and transportation planning play key roles in helping to reduce congestion by providing high quality routes for all transport users. An efficiently maintained freight distribution network is also essential for economic prosperity. All highways activities and utility works require accurate and careful co-ordination to minimise network disruption under the Traffic Management Act 2004 (go to Table 5.2).

##### Road Safety

9.2.2 The transport network, including street lighting, must be maintained to an appropriate standard in support of casualty reduction strategies. This is particularly important for vulnerable road users including cyclists and powered two-wheeler (PTW) riders, who account for an increasing proportion of locally killed or seriously injured road casualties.

##### Accessibility

9.2.3 Accessibility to key services and facilities may be significantly enhanced by provision of well-maintained transport infrastructure. We are responsible for planning, managing and maintaining a wide range of facilities that make it easier to use the transport system, particularly for people who are socially excluded in some way. These facilities include

passenger waiting facilities, dropped kerbs, tactile surfacing, rotating tactile cones and visual/audible signals at pedestrian crossing facilities. New or improved lighting can encourage cyclists and pedestrians to use new routes as well as contributing towards crime reduction strategies.

## Air Quality

- 9.2.4 Provision of well-planned and maintained transport infrastructure can help to support congestion reduction strategies, improve traffic flows and city centre environments and encourage people to use alternative modes of transport.

## Other Quality of Life Issues

- 9.2.5 The design and maintenance of transport assets can enhance the quality of the public realm for all users, support neighbourhood renewal and regeneration initiatives, contribute towards crime and disorder reduction strategies through improved community safety and improve the commercial vitality of the area.

## 9.3 Current Asset Management Approach

- 9.3.1 Currently not all schemes proposed and undertaken are subject to a full asset management assessment. Large projects and schemes are evaluated to assess their whole life costs, future investment needs and intervention levels. It is an aim of the

four Councils to strengthen this process in the Transport Asset Management Plan (TAMP).

- 9.3.2 A TAMP is an all-encompassing plan for all the maintenance, replacement and modification of all the transport assets in our area. The TAMP will enable us to identify an accurate picture of the current state of our transport assets which will enable a more efficient programme of works to be undertaken. The TAMP will incorporate the aims and objectives of the JLTP and will set out policies and strategies related to transport asset management (Go to Box 9A).
- 9.3.3 Through the joint officers working group (go to Box 9B) a common approach to the collection and recording of condition survey data has been established. Again, this and other joint principles will be strengthened through the TAMP process.
- 9.3.4 The benefits of new projects and schemes are currently evaluated based on their contribution to the following:
- Reducing deterioration by reducing traffic
  - Reducing signage through increased road safety
  - Reduced congestion as a result of timing of works and selection of appropriate materials and techniques
  - Using techniques to maximise the structural and operational benefits to the network



*Carriage resurfacing in Bath*

### Box 9A Transport Asset Management Plan (TAMP)

#### Progress Report

#### Background

A TAMP covering our assets of the four Councils is being developed. This will comprise of existing network inventory and condition data as well as new and reviewed information where required. This TAMP will enable our assets to be planned and managed in a more co-ordinated and cost-effective way.

The potential benefits to be gained by the adoption of asset management include:

- Minimising whole lifecycle costs
- Ability to predict the consequences of funding decisions
- Increased understanding of financial, operational and legal risk
- Tracking performance to identify future funding levels and levels of service
- Information and statistics to determine clear targets and priorities

Our TAMP is being developed, with reference to The County Surveyors Society's Framework for Highway Asset Management and in parallel with the JLTP. A working group of officers has been set up to ensure that this work continues to develop during the JLTP period and that it embraces the objectives of the JLTP.

The TAMP will address all parts of existing and future highway network and transport infrastructure. We recognise the value of producing a TAMP as a comprehensive approach to addressing issues beyond the traditionally core areas of highway maintenance.

To help inform the development of the TAMP the first stage of work has already begun. We have already identified where we are in terms of transport asset management and have identified where we want to be by the end of the JLTP period and how we intend to get there.

#### The Way Ahead

The 'Framework for Highway Asset Management' highlights that a number of steps towards asset management can be taken. Our TAMP will be strongly based around these steps (go to Figure 9.1) and a brief update on each area is given below.

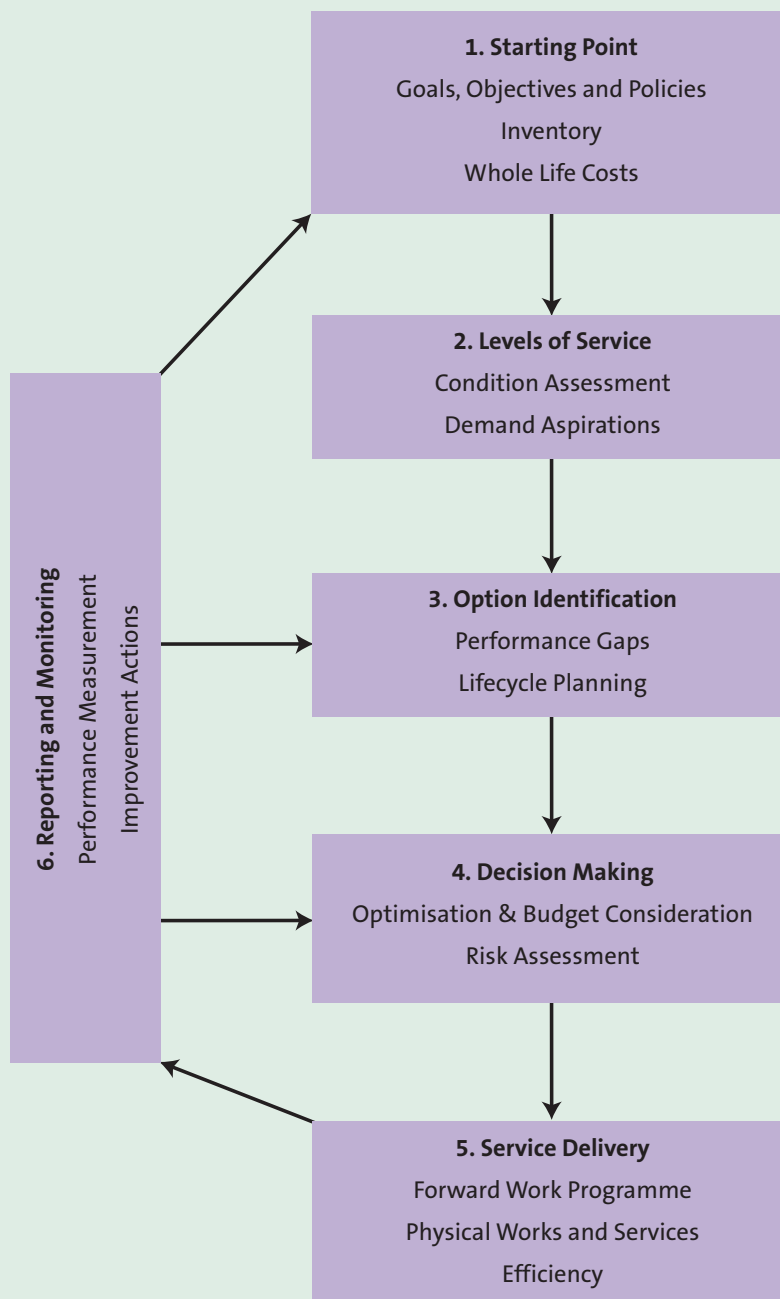
#### 1. Starting Point

The TAMP will support the aspirations of our corporate objectives and the aims and objectives of the JLTP. This will set out clear asset management priorities and their relationship with these other goals and objectives. This will enable a more focussed and effective asset management programme.

Accurate inventory data is key to the asset management process. Asset inventory will help guide the development and prioritisation of works on the network. This will help manage expenditure effectively, and, in particular, to promote the achievement our Shared Priority objectives. Whole Government Accounting (WGA) requires highway authorities to value their highway assets. At present, the four Councils, as part of the South West Area Highways Management Group, are looking at the issue of asset values and depreciation values. This will allow better asset management by providing information of the whole life costs of maintaining the asset.

Currently inventory data for carriageways and footways is held within Bristol. However we have different degrees of inventory collection for street lighting, gullies, signs, signals, bus shelters, bus stops, bus stations, park and ride sites, verges etc. A full inventory of gaps in existing data availability and quality is currently being carried out with a view to a consistent approach being undertaken to inform the TAMP.

**Figure 9.1 TAMP Framework**



## 2. Levels of Service

Through establishing levels of service we are able to determine whether or not we are meeting customer expectations. Working groups are focussed on developing levels of service recommendations, which will be incorporated into the TAMP. These are referred to in other sections of this document and, once complete, will enable the balancing of different priorities designed to achieve JLTP objectives and maximise serviceability of the highway. Specific work has been undertaken on co-ordinating local policy and strategy documents.

The TAMP will identify the current condition of the assets and will develop continuity, consistency and best practice in analysis of scanner data and condition assessment processes. We will seek to expand on current understanding of customer demand systems and devise a mechanism to better include customer aspirations within the decision making process.

### 3. Option Identification

Lifecycle planning will form an integral part of the TAMP process and will be a key driver in our approach to asset management. Strategic assessment of transportation projects and maintenance works will reduce the cost and frequency of works on the network. In doing so, life cycle planning will help reduce congestion and improve air quality. Continuity planning has identified a number of asset related risks. These can be mitigated with effective life cycle planning, ensuring planned investment in transportation and the network attributes at timely intervals.

Increases in funding over the past three years have permitted some preventative structural works saving longer-term costs, although a significant volume of work is still undertaken as reactive work or on assets with zero life. Better lifecycle planning will help to identify how different options can help to close performance gaps. We will develop new processes for the future use and liability of assets and formalise and document a strategy for the implementation of lifecycle planning.

### 4. Decision Making

Improved decision making is one of the key benefits of asset management. The TAMP will enable more informed and cost effective management of the ongoing demands placed on the asset.

Significant work will be undertaken to reduce the effect of reactive or emergency events. A review of existing risk management processes through continuous monitoring and a thorough evaluation of risk will be undertaken.

### 5. Service Delivery

It is recognised that a long-term view of asset management planning is needed, and we will develop a SMART responsive programme with inherent flexibility and cross cutting programmes covering all aspects of the asset. Forward programmes are developed for some functions and these are assisting in co ordination with other asset changes and utility service co-ordination. Further detail is being progressed to get close to Barnsley's model of utility co-operation, a leading example of best practice.

We will review procurement procedures and identify options for co ordination and partnering to reduce costs. Improvements in the co-ordination and management of highway authority schemes, statutory undertakers works and other development works will create opportunities for added value, reduce disruption and improve the efficiency of highway maintenance activities.

### 6. Reporting and Monitoring

We will develop a common approach to monitoring and will adopt the proposed national indicators. The performance management regime will be based around the strategic goals of the TAMP and will provide a mechanism to develop improvement plans.

### Summary

We recognise that we have a long way to go before a TAMP is fully completed and operational in our area. Many of the issues and aspirations of the area have already been discussed above but key actions are summarised in the TAMP Action Plan below.

An outline TAMP will be up and running in early 2007.

## TAMP Action Plan

- Identify clear transport asset management priorities and objectives.
- Carry out inventory of existing data availability and quality.
- Identify a consistent approach to data availability and quality.
- Develop service level strategy.
- Devise clear mechanisms to include customer aspirations in the development of work programme.
- Implement a lifecycle planning strategy.
- Develop work programmes with SMART targets.
- Review procurement procedures and identify options for value for money savings.

## Box 9B

### Officers Working Group

Officers from the four Councils have met regularly over the past 12 months and have been investigating the most effective arrangements for preparing and implementing a TAMP. The input of various specialist staff and partners will ensure this work culminates in a single TAMP that supports delivery against the objectives of JLTP.

We are already members of the South West Highways Management Group, which contributes to the Department for Transport's Roads Liaison Group. This ensures that best practice in asset management is consistently built into our review and benchmarking processes.



*Maintaining the network of signs*

## 9.4 Road Hierarchy Review

- 9.4.1 Officers developing the TAMP will contribute to the road hierarchy review, (go to Table 5.3). This along with the implementation of the Traffic Management Act (go to Table 5.2) will inform development of the TAMP by establishing the appropriate level of service and hence maintenance intervention required on different parts of the network.
- 9.4.2 Incorporation of the revised road network hierarchy into the TAMP will enable investments to be tailored towards achieving JLTP objectives and targets. These are focused on the four Shared Priorities and included in other supporting statements for example Network Management and Freight.

## 9.5 Public Rights of Way Improvement Plan (ROWIP)

- 9.5.1 A Rights of Way Improvement Plan (go to Chapter 5 Box 5H) is also being developed by us to improve the effectiveness of maintenance on the JLTP area Public Rights of Way network.

## 9.6 Delivering Value for Money through Asset Management

- 9.6.1 Asset Management is recognised as the process through which we will seek to achieve value for money during the JLTP, and by which resources to maintain the

## 9. Asset Management

effectiveness and structural integrity of the network will be targeted at specific needs. It will enable us to better understand and manage the relationship between cost and performance and value for money (go to Box 9C Case Study).

- 9.6.2 A common approach will be developed to ensure that the full life costings of proposed integrated transport schemes are fully considered, thus ensuring Shared Priority objectives are met in the most cost-effective way possible.
- 9.6.3 Programmes of maintenance work will consider the options available for the lifetime of the asset concerned. Cheaper,

### Box 9C

#### Case Study - Comprehensive Approach to Carriageway Schemes

It is our aim, whenever possible to undertake maintenance and works in an integrated and comprehensive way.

In 2003/04, 'exceptional maintenance' funding was secured for the A367 Wellsway between the A36 and Odd Down in Bath. This intensively used carriageway had not been resurfaced since the 1970s and had recently started to require extensive patching works. Included in the scheme was surfacing, strengthening, drainage, footway, lighting and signing works.

Similar 'exceptional maintenance' funding was devoted in 2004/05 towards the £2.1 million reconstruction of a 3.2 kilometre stretch of the A38 near Barrow Gurney in North Somerset. By carrying out the scheme in one operation, an estimated saving of £0.4m was made and traffic delays reduced by 24 weeks. As in Bath a similar approach was taken to achieve improved facilities for pedestrians, cyclists and bus passengers as well as carriageway works and new street lighting. Some of the old carriageway has been crushed and recycled on site which has reduced the amount of new quarried aggregates used and reduced the amount sent for landfill.

shorter-term treatments will be compared with more expensive options that would extend the life of the asset and avoid more frequent remedial measures and their impact on congestion.

- 9.6.4 Maintenance work programmes will also reflect the impact of the activities of developers and utility companies.
- 9.6.5 Under our asset management approach we will work with partners and stakeholders to minimise disruption and congestion to comply with the Traffic Management Act. Traffic Managers appointed by the four Councils (go to Table 5.2) will oversee the smooth running and safe and efficient use of the network on a day- to-day and longer-term basis. Intelligent Transport Systems and improved information will keep road users informed of the worst and potential delays.

### 9.7 Efficiency in Asset Management

- 9.7.1 We will identify annual programmes of maintenance. Where appropriate, consideration will be given to combining quantities and schedules to ensure that local suppliers of high volume material can submit competitive quotations and are not overloaded at peak times. It is also anticipated that purchasing procedures may be synchronised whenever opportunities arise.
- 9.7.2 Regular meetings of our asset management officers will ensure that information and best practice is exchanged. They will also co-ordinate maintenance operations across the authorities whenever efficiency savings can be initiated.
- 9.7.3 Currently both planned and reactive maintenance work is carried out. Reactive maintenance work is carried out in response to reports of problems with the asset base. We aim, through improved asset management to carry out less reactive work and more planned maintenance to enable value for money savings and increased efficiency.

## 9.8 Network Infrastructure

9.8.1 Traditionally we have looked at carriageways, bridges and structures and street lighting as the main components of asset management. However, through the development of the TAMP we will include all other elements of network infrastructure including cycle ways, passenger waiting facilities and safety cameras.

### Bridges and Structures

9.8.2 We will maintain and strengthen bridges and structures with due care and efficiency (go to Box 9D Case Study). As a key part of the JLTP area's highway network, bridges and structures cannot be managed in isolation. We will share best practice on their management where appropriate.



Roadworks on A4 Portway

### Street lighting

9.8.3 Good street lighting supports several of the JLTP's Shared Priorities. It has a valuable role in increasing safety for all road users. Through effective asset management the JLTP will seek to provide an effective, value for money and sustainable street lighting service which reduces the number of road accidents,

### Box 9D

#### Case Study- Yanley Viaduct Bearing Replacement Scheme

The Yanley Lane Viaduct carries the A370 Weston-super-Mare to Bristol road over Yanley Lane and experienced problems with the bearings that transferred the load of the deck down through the concrete support columns.

Because of the high volume of traffic on the road the scheme was designed to ensure the A370 stayed open with no traffic management requirements.

The project was scheduled to take place over 20 weeks with each section of the bridge having to be jacked up from underneath on temporary supports, to allow the old bearings to be removed. One of the spans had to be closed for a period of four weeks and a temporary road was constructed to allow traffic to continue to use Yanley Lane.

reduces crime and the fear of crime, improves accessibility, minimises the impact on the environment and speeds up repair and replacement times.

9.8.4 Options for developing a common approach for the design, monitoring, procurement and delivery of street lighting schemes are currently being appraised.

### Asset Management Action Plan

- Work together to complete the joint TAMP (see TAMP Action Plan).
- Demonstrate the clear link between asset management and wider JLTP objectives and targets.
- Investigate the whole life maintenance implications of integrated transport schemes.
- Work together in drawing up annual capital programmes for the maintenance of footways, cycle-ways, carriageways, bridges and other structures that give maximum value for money.
- Options appraisal for joint procurement and delivery of highway maintenance schemes.
- Develop common approach to the monitoring, procurement and delivery of bridges, structures and street lighting schemes.
- Work towards the completion of the Inventory of Road Lighting Stock.

### Targets

- Information regarding targets relating to the Asset Management plan can be found in Chapter 12:
- BVPI 223, 224a, 224b and 187.

### Value for Money

#### LTP1 Scheme Delivery

In the four years 2001/02 to 2004/05 we have delivered the following schemes:

Schemes/Measures	Delivery	Spend £m	Impact
Footway Maintenance Schemes	448 schemes affecting 104km of footways	5.75	Supported economic prosperity, encouraged walking and cycling, aided accessibility, improved safety and contributed towards other quality of life objectives.
Carriageway Maintenance Schemes	261 schemes affecting 174km of highway	31.32	
Bridge Strengthening	Works to 48 bridges	7.02	
Structural Maintenance Schemes	54 schemes	5.19	
Other Schemes (including street lighting)	88 projects delivered	5.44	

# Final Joint Local Transport Plan 2006/07 - 2010/11

## JLTP Capital Funding

In the five years 2006/07 to 2010/11 we propose to allocate JLTP capital funding as follows (£m):

Schemes	JLTP Capital Spend £m Indicative		
	2006/07	2007/08	Rest of period
Footway maintenance	2.25	2.30	7.30
Carriageway maintenance	5.45	5.70	19.4
Bridge strengthening/ Structural maintenance	4.00	2.35	7.35
Other, including street lighting	1.00	1.05	3.65

## Council Revenue Support

- Indicative annual spending of £18.7m on asset management (based on 2004/05 outturn).

## Managing Risks

Go to Chapters 12 and 13.