8 Asset management

Introduction

8.0.1 As well as seeking to improve our transport infrastructure and services, we need to maintain our existing highway assets. The county highway network is used on a daily basis by the people of Shropshire for going about their daily lives. It is vital that it is maintained in a safe condition, and that ongoing structural maintenance is undertaken in a cost effective manner.

8.0.2 In this section we set out our approach to road and bridge maintenance, and transport asset management.

Contribution to LTP aims and objectives

8.0.3 The importance of highways maintenance to Shropshire people and the County Council is reflected in the selection of a target for improving public satisfaction with road condition as one our agreed local public service agreement (LPSA) targets.

8.0.4 Although highway maintenance is not part of the shared priorities for transport, it underpins all four of the priorities agreed between central and local government. In the preceding thematic strategy sections we have demonstrated how maintenance activities will contribute towards the achievement of our LTP aims and objectives. Key examples of this contribution are summarised here:

Accessibility

8.0.5 Good road condition, safe bridges and effective street lighting are required for safe, comfortable and timely access by car, bus, motorcycle and cycle. Well maintained footways are required to facilitate access by foot. Highways in poor condition can particularly hinder the accessibility of vulnerable road users, including people with disabilities.

Environment

8.0.6 The highway condition and the way in which highways are maintained can both have a significant impact on the environment. For example:

- the state in which footways, cycleways and roads are maintained can affect people's choice of travel mode, impacting upon traffic and air quality levels
- the type of road surface used effects levels of traffic noise
- the design of lighting can effect landscape tranquillity
- the way in which verges and roadside hedges are maintained can have significant impact on biodiversity
- the number, design and quality of highway signs impacts on landscape and townscape quality
- significant natural resources are used to build and maintain our roads, the sourcing of these materials is environmentally important

Economy

8.0.7 A well maintained road network helps to facilitate the effective movement of goods and people. The way in which maintenance works on the highway are timed and planned will affect the level of disruption and congestion caused on the network.

Safety

8.0.8 A well maintained highway is vital for safety of all highway users. It is important to quickly rectify any dangerous defects which could cause pedestrians to trip or cause damage to vehicles. Routine cleaning and winter gritting are vital to ensure people can continue to use the

network in safety, and undertaking structural maintenance provides an opportunity to modernise and improve the safety rating of roads.

8.0.9 Street lighting can be important in improving safety and influencing perceptions of personal security. Well maintained facilities for walking, cycling and equestrian use are important for encouraging active and healthy travel.

Analysis

8.0.10 Section 3.3 contained a summary of the highway network in Shropshire, the concerns of Shropshire stakeholders and findings of the best value review of Shropshire's highway maintenance service.

8.0.11 The Highway Maintenance Best Value Action Plan (2005) resulting from this work will be implemented over the LTP period, in order to improve effectiveness and efficiency in the way we deliver our Highway Maintenance Programme. Key actions are identified within this chapter.

Approach

8.0.12 It is clear from stakeholder consultation and our own highway condition assessments that we have done well in recent years to improve the condition of principal roads in the County. However, we still have significant work to do on secondary and minor roads to put right many years of maintenance under-funding. Improving the condition of secondary roads will be a key focus during the LTP period. We have identified additional resources to help us achieve this (see section 10.1).

Transport Asset Management Plan (TAMP)

8.0.13 In order to ensure that we continue to achieve and enhance the value for money when improving and maintaining our highway and transport assets we are developing a detailed Transport Asset Management Plan. We aim to complete this plan by June 2006. A report on our progress in developing the TAMP, and our asset management actions to date, is provided in appendix Appendix F.

8.0.14 As part of our asset management plan work we have established a set of levels of service which we will use to drive our maintenance work. Table 8.1 highlights how these levels of service relate to our LTP themes.

8.0.15 The plan will utilise asset valuation techniques to provide a measure of our asset management performance. Good stewardship of transport assets will be demonstrated by the preservation or development of the value of the assets.

8.0.16 Statements on the levels of service to be provided by Shropshire County Council are being developed. These levels of service will be derived from the objectives of this Local Transport Plan (accessibility, environment, economy, safety and health), our corporate objectives and our statutory obligations.

Table 8.1 Asset management levels of service

	Level of Service
Our Customers	SCC will provide a highway maintenance service that gives satisfaction to our customers.
	SCC will respond to letters, emails and questions sent to us within ten working days. In addition, further information requested following a telephone call will be sent within three working days, unless the customer agrees otherwise.
	Lamp faults occurring on street lighting managed by SCC will be repaired, on average, within three days
Safety and Health	SCC will carry out inspections on our highway assets at frequencies recommended in National guidelines

	Level of Service
	SCC will make safe dangerous damage to roads and footways within 24 hours of receipt of a notification of the defect.
	SCC will undertake annual skidding resistance surveys of all A and B class roads as well as some C and U class roads and it will investigate areas where poor skidding resistance is found. SCC aims to limit the lengths of principal roads with inadequate skidding resistance to no more than 10% of the total length.
	SCC will endeavour to salt of all precautionary route before the formation of ice.
	SCC will defend all third party claims.
Accessibility	SCC will ensure that no more than two in a hundred street lights is defective at any time.
	SCC will ensure that its Term Contractors will complete 95% of works within the timescales agreed at the time of issuing the work.
	SCC will endeavour to avoid disruption by not carrying out its own works on streets and at times that are deemed to be traffic sensitive
	SCC will ensure that highway structures have sufficient capacity to meet the needs of users
Economy	SCC's maintenance activities will preserve or improve the value of the highway asset
	Defects in the highway will occur. Non-dangerous defects will be repaired according to a planned maintenance schedule, therefore it is expected that the highway network will have some defects. SCC aims to minimise the length of the highway network that contains defects.
	There will always be an amount of expenditure required that is unplanned; however SCC will limit unplanned expenditure.
	SCC carries out a maintainability audit of major schemes.
Environment	SCC will use recycled and secondary aggregates when they are considered to be sustainable.

Measures

8.0.17 We outline here the key activities and improvements we will make during the LTP period. When undertaking Highway Maintenance the principles recommended in the Local Authorities Association's "Delivering Best Value in Highway Maintenance - Code of Practice for Maintenance Management" (July 2001) are followed wherever resources permit.

Structural maintenance of highways

8.0.18 Structural maintenance works are identified and prioritised by analysing information from the annual programme of inspections and condition surveys. Actions include:

- Carriageway renewals
- Surface dressing
- Patching
- Footway and cycle track repairs
- Remedial earthworks and safety fencing works

8.0.19 Key improvement actions for the LTP period based on the Best Value Performance Action Plan are to:

- Continue to target funding at the maintenance of principal roads to a standard to be defined in the Asset Management Plan
- Implement a programme that identifies major drainage problems on all A and B roads and establish a 5 year action plan to address them
- Review and define targets for non-principal roads in the light of allocated funds
- Establish accurately the true extent of deterioration on the non-principal network and the cost of remediation

- Improve the quality and reliability of highway condition data in respect of non-principal roads
- Target investment at securing a prioritised and sustained improvement in a defined 'Community Network' giving access to towns and villages
- Prepare and implement a prioritised programme to repair Category 1 and 2 Footways

Structural maintenance of bridges and structures

8.0.20 In 1990 the County Council began a detailed assessment of the 556 bridges which fell within the scope of the assessment programme required for preparation for the introduction of 40 Tonne lorries in 1999. This work has now been completed and the current position is as follows:

- 133 bridges were found to be substandard.
- 48 bridges have been strengthened, including all on the primary route network.
- 7 bridges are subject to an acceptable pre-assessment weight restriction.
- 4 bridges are expected to receive a permanent weight restriction.
- 32 bridges were found to be substandard but are likely to pass following further testing and analysis
- 42 bridges are expected to require strengthening works (some of which are subject to further testing and analysis).

8.0.21 The decision on whether to apply a permanent or temporary weight restriction will be taken following a review of local access needs and in consultation with local communities.

8.0.22 We have set out a bridge strengthening and maintenance programme for the LTP period which aims to complete all outstanding bridge strengthening works on Shropshire County Council owned bridges by 2008/09. This will complete all the required strengthening to conform to the requirements of 40 tonne lorries. Subsequent years' works will concentrate on regular structural maintenance activities.

8.0.23 There is continuing dialogue and negotiation with other bridge owning authorities in the County, with a view to establishing commitment to jointly resolving bridge capacity issues.

Street lighting

8.0.24 The illumination of the highway to reduce night-time accidents is the main purpose of street lighting. However, there are additional benefits to commercial and leisure interests as well as to the community in general in the built up night-time environment. In these circumstances lighting can contribute to a reduction in crime and fear of crime.

8.0.25 The provision of new street lighting in Shropshire is prioritised using the following criteria:

- reduction of night-time accidents
- crime prevention
- effect on the environment
- cost and maintenance liability
- commercial and leisure amenity value
- any other significant local factors

8.0.26 In order to assist the determination of appropriate levels of lighting that reflect the environmental sensitivity of different areas, Shropshire has been divided into the following zones:

- Zone E1 - Areas of environmentally sensitive lighting (Outstanding Natural Beauty, Conservation Areas, Sites of Scientific Interest, Environmentally Sensitive Areas, Special Areas of Conservation and Urban Conservation Areas)
- Zone E2 - Areas of low district brightness (rural locations outside Zone 1)

- Zone E3 - Areas of medium brightness (urban locations)
- Zone E4 - Areas of high district brightness (urban centres with high night-time use)

8.0.27 Key improvement actions for the LTP period based on the Best Value Performance Action Plan are to:

- Ensure that columns assessed as being in a critical condition are replaced within a year (as a minimum).
- Re-introduce an annual replacement programme to enable the planned replacement and improvement of the lighting stock.
- Consider options for improving the integration of street lighting management to provide if possible a seamless public interface with district and parish councils and address user concerns.

Routine and winter maintenance

8.0.28 Routine maintenance includes:

- Drainage cleaning
- Road marking and reflective studs
- Traffic signals and signs
- Vegetation control and boundary maintenance

8.0.29 Winter maintenance is carried out on 22% of the highway network, including all A and B roads and a small number of high risk other roads.

8.0.30 Key improvement actions for the LTP period based on the Best Value Performance Action Plan are to:

- Clarify responsibility and prepare a policy concerning ditch clearance and increase priority for this work. Consider the role that could be played by local farmers.
- Review arrangements for dealing with the highway management in times of flood and clarify the programme for dealing with the legacy of drains and systems needing attention from the last flooding incident.
- In respect of flooding to property, gain a clear understanding of why the drainage system floods.
- Review salt specifications and salting procedures in light of the provision of the new salt barns.

Reducing the environmental impacts of highways maintenance

8.0.31 Reducing the environmental impact of highway maintenance activities is a key consideration and a specific action plan has been developed to help enhance the use of sustainable practices. This is shown in Table 5.11.

Performance management

8.0.32 Table 8.2 sets out the LTP performance indicators which we will use to measure the effectiveness of our highway maintenance work. It also highlights the areas of the overall LTP strategy that these indicators relate to.

Table 8.2 Asset management performance indicators

Objective	Outcome	Indicator
Improve local environmental quality and reduce the impact of traffic	People will enjoy a better quality environment	Perception of traffic noise as a problem Use of low polluting street lights Use of recycled and secondary aggregates
Reduce and prevent congestion	People will make fewer car journeys in main urban areas preventing further traffic growth; together withy effective network management this will ease congestion	Perceptions of congestion Temporary road closures (BVPI 100)
Support rural regeneration	People will be able to use roads maintained in a structural sound condition	**Principal road condition (BVPI 223)** **Non-principal road condition (BVPI 224a)** **Unclassified road condition (BVPI 224b)** Satisfaction with road conditions in Shropshire
Reduce fear of crime and accidents when travelling	People will feel safer when they and their families are moving about in their local area	**Footway condition (BVPI 187)** Rectification of dangerous highway defects Skid resistance on principal roads Proportion of street lights which are defective

8.0.33 Further detailed asset management performance management indicators are being developed based on our levels of service These will enable us to benchmark our performance with our peers and learn from the collective experience of similar authorities.