Transport Asset Management Plan

June 2012

Contents

List of Figures:

1: Introduction

What is a Transport Asset Management Plan?

"Asset Management is a strategic approach that identifies the optimal allocation of resources for the management, operation, preservation and enhancement of the highway infrastructure to meet the needs of current and future customers" (CSS Framework for Highways Asset Management, 2004)

Cumbria's Transport Asset Management Plan (TAMP) is a high level strategic document which sets out how we will catalogue our transport infrastructure assets, collect and maintain data on the condition of those assets and make decisions on the maintenance, improvement and replacement of those assets to ensure optimal use of available resources.

The Transport Asset Management Plan (TAMP) and a Highways Asset Management Plan (HAMP) are closely linked yet distinctly different documents serving different purposes. Where the TAMP is concerned primarily with the principles of collection and management of asset data and its use in the decision making process, the HAMP will set out a detailed plan and strategy for managing the Highway Assets, including operational standards and service specifications. The HAMP therefore contains considerably more detail than the TAMP and covers issues such as maintenance regimes, hierarchies, standards of work and reporting standards. A HAMP for Cumbria will be produced in 2012/13.

Why is Asset Management Needed?

Adopting asset management principles allows us to:

- Identify the location and condition of our assets;
- Apply consistent standards of service;
- Produce detailed forecasts of maintenance requirements;
- Make informed budget decisions;
- Plan forward packages of work;
- Ensure service goals and objectives are met.

This approach is considered by the Department for Transport to be the best way to deliver both efficiency gains and service improvements (Guidance on Local Transport Plans, DfT, July 2009). It enables us to meet the Chartered Institute of Public Finance and Accountancy (CIPFA) requirement for robust and consistent financial information to be available in line with its Code of Practice (Code of Practice on Transport Infrastructure Assets: Guidance to Support Asset Management, Financial Management and Reporting, 2010). It also provides a clear and transparent way of identifying the current and future maintenance requirements of the Highways and Transport Infrastructure, the County Council's most valuable asset.

Qualitative Impacts of Good Transport Asset Management

Good Transport Asset Management can help Cumbria County Council to achieve its corporate goals, as set out in the Council Plan 2011-2014:

- Challenging poverty in all its forms;
- Ensuring that the most vulnerable people in our communities receive the support they need; and,
- Improving the chances in life of the most disadvantaged in Cumbria

It can do so by contributing to the Council's aspirations for the economy, for the environment, for children and young people and for independent, safe and healthy lives:

For the Economy

- Improved highway infrastructure, better network management and better managed signals can improve traffic flow rates, journey times and journey time reliability. This will reduce the cost of delay to business users, transport providers and consumers and will help to encourage economic regeneration in the area.

For the Environment

- Improved carriageway condition can help reduce traffic noise and vibration;
- Improved network management can contribute to improved air quality;
- Improved maintenance of highway drainage can reduce the risk of flooding and water contamination;
- Appropriate and considerate use of materials will help ensure that we protect and enhance the quality of the built environment.

For Children and Young People

- Improved walking and cycle links to schools can provide safe and secure routes for children and young people.

For Independent, Safe and Healthy Lives

- Better carriageway surfaces, improved street lighting and suitable maintenance regimes can help improve safety for all network users;
- Improved street lighting will improve perception of safety and security;
- Improvements to roads, footways, cycleways and street lighting can help encourage safe walking and cycling contributing to improved physical fitness and reduced driver stress.

Links to Other Plans and Policies

The link between the TAMP and other key CCC highway documents is illustrated in the diagram below.

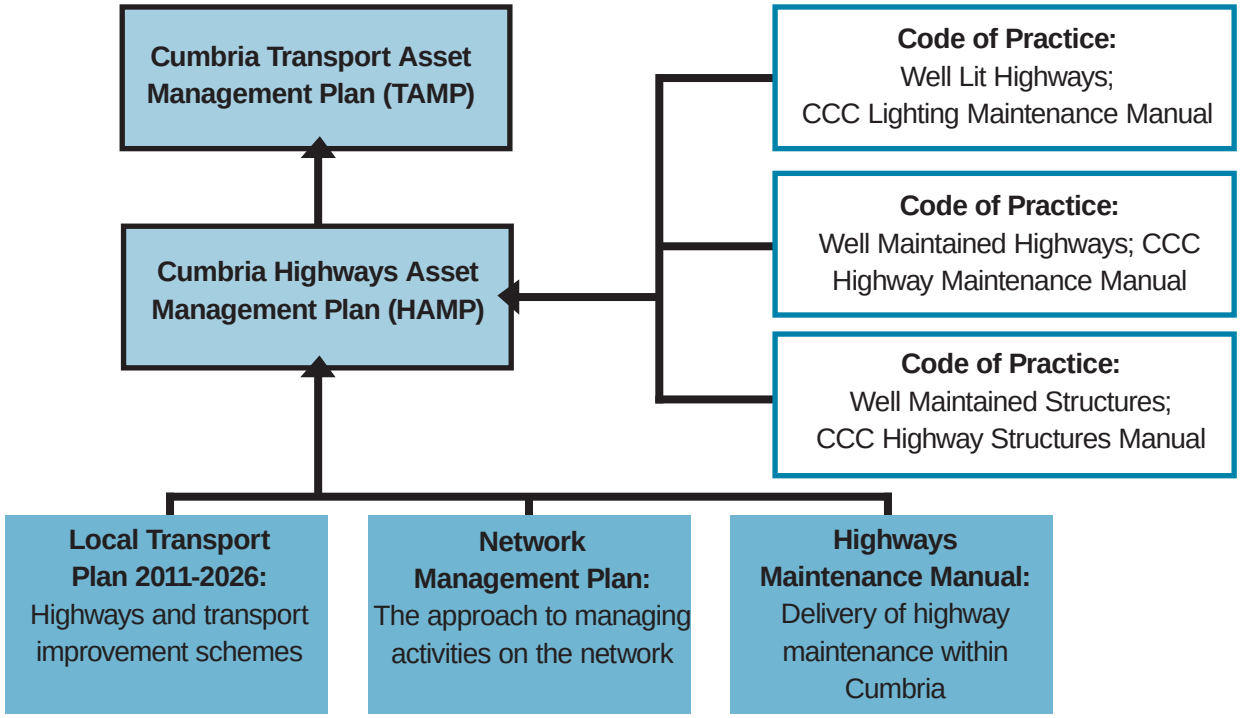


Figure 1 – Link between TAMP and other key documents

The TAMP should be neither static nor isolated. It provides a strategic link between the corporate goals and objectives included in the Local Transport Plan (LTP3), Council Plan and associated documents and operational delivery plans (eg Highways Maintenance Plan etc). It is not concerned with the overall transport strategy of the County Council which is the role of the LTP, nor does it provide detail on specific highways interventions and treatments which are better suited to operational highways manuals. The TAMP has a very specific role of helping to understand and manage the transport infrastructure assets which are owned by the County Council.

"We are responsible for managing and maintaining over seven and a half thousand kilometres of roads (and a further seven thousand kilometres of paths and bridleways), three thousand bus stops, many other transport facilities including the Windermere ferry. To improve how this is done we are taking an approach that records the location, ownership, conditions of roads and transport facilities and plans investment in repair or replacement, according to their value and need." (Cumbria Local Transport Plan 3, 2011)

Cumbria's Local Transport Plan (LTP3) commits to use asset management to:

- Deliver a first class highways network;
- Be accountable to the communities of Cumbria;
- Improve Cumbria's transport infrastructure and quality of the local environment;
- Support economic growth and regeneration;
- Provide exceptional customer service through outstanding professional practice.

Cumbria Highways' 'Highways Maintenance Manual' (c 2007) aims to: "ensure that the network is maintained to a high standard to enable effective movement of people and goods and to manage use of the network, guiding traffic to the most appropriate routes".

The Highways Maintenance Manual builds on the revision of the National Code of Practice for Highway Maintenance Management, 'Well-Maintained Highways' (UK Roads Board, 2011).

The objectives within the Code of Practice include: *"encouraging the adoption of asset management planning as a means of demonstrating value for money in the delivery of highway maintenance".*

2: Use of Asset Management Plans

Figure 2 describes a generic asset management system taken from the County Surveyors' Society Framework (2004). It illustrates how the main activities are linked and suggests the priority for addressing each of these, as part of an overall management framework.

The process clearly illustrates how information on the assets owned by the organisation combined with the organisation's goals and objectives can be used to identify priority areas for improvement, make robust funding decisions and plan future works. It also makes clear the importance of review and upkeep of accurate performance information in order to maintain accurate asset inventory.

The different aspects of the asset management process are described in more detail in Chapter 5: Key Themes.

Decision Making Process

The fundamental use of a Transport Asset Management Plan is as a decision making tool.

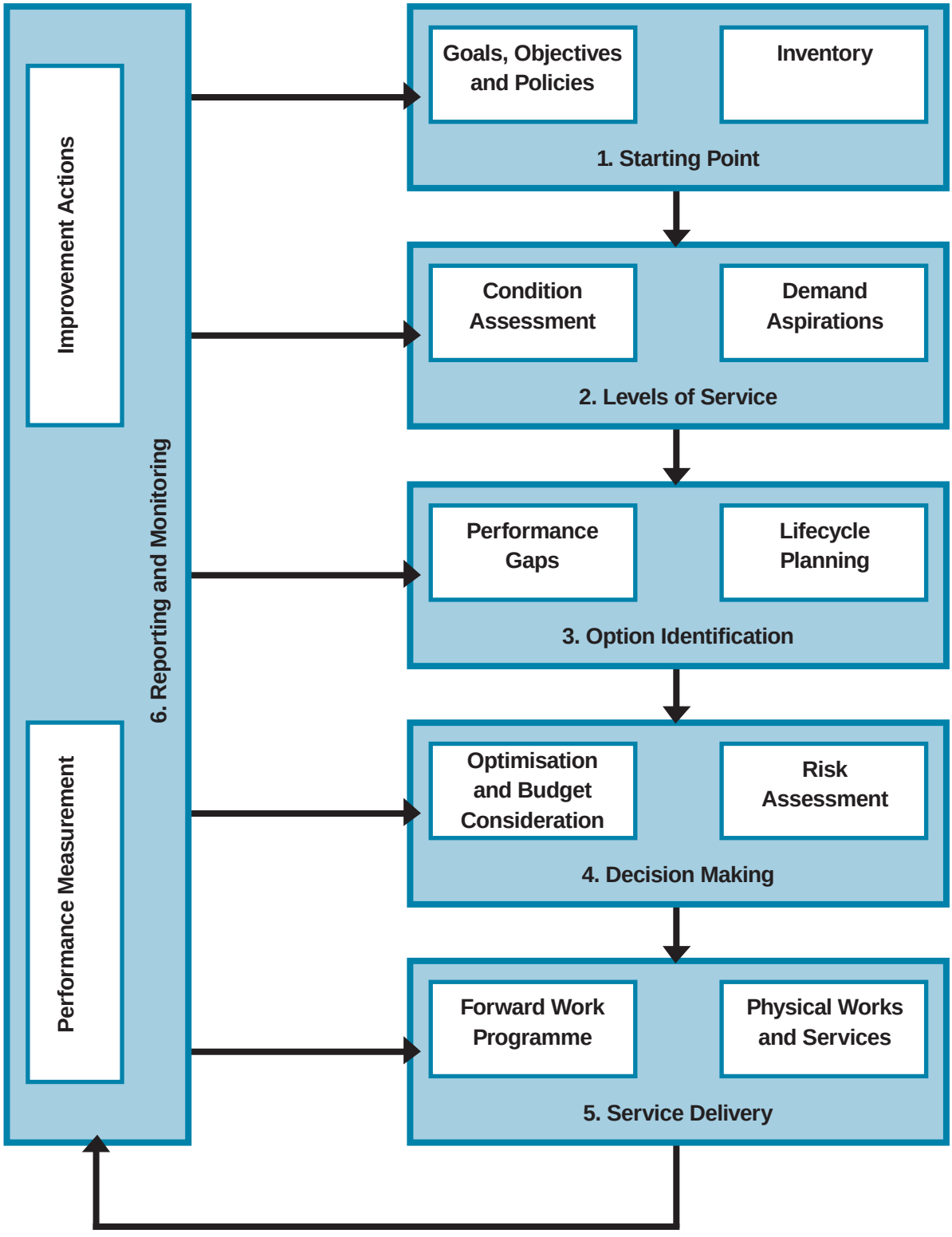
Decisions regarding investment in the transport infrastructure assets can be complicated and involve competing priorities. Poor decision making can be expensive both in terms of initial outlay and future liability. It is also important to ensure that decision making takes into account the broader social and environmental benefits and the impact on communities.

Transport improvement and maintenance is delivered through the Transport Capital Programme. Schemes are identified on an ongoing basis from a variety of sources and are scored and prioritised in accordance with the LTP3. Asset Management information should be used to ensure decisions on scheme specification and priority are made which make best use of County Council resources. This process is managed by the Area Highways Manager, in association with Local Committees. It is important to ensure that systems exist for improvement and maintenance schemes, whether routine or otherwise, to feed back into the asset management process as illustrated in Figure 2.

Use of asset management also allows us to asses the impact of non-treatment on the accessibility and availability of all network assets. By categorising the assets as Red, Amber, Yellow or Green (RAYG), based on condition survey and inspection data and by adopting life cycle planning as a means of forecasting deterioration, we are able to illustrate the potential future benefits or detrimental impact of investment or non-investment in the asset.

Annual RAYG reports will be produced to inform budget decision making and to make a case for required levels of funding. These reports will be used to illustrate the current condition of the network as well as forecasting the future changes in asset condition subject to varying levels of future investment. These reports will be presented to cabinet on an annual basis and as required.

Figure 2 – Overview of the asset management process



Source: Framework for Highway Asset Management (CSS, 2004)

Performance Management

The LTP3 contains a chapter dedicated to performance management. This contains a set of key indicators and targets which allow us to assess the effectiveness of our work. Performance against these indicators will be measured on an ongoing basis and reported quarterly (where possible) to the Highways and Transport Management Team. Annual progress reports will be produced on all LTP3 indicators and actions identified to ensure continuous improvement.

Current indicators cover:

- Carriageway Condition;
- Road Safety;
- Passenger Transport;
- Public Rights of Way;
- Accessibility;
- Air Quality;
- Travel Planning.

A current list of LTP3 indicators and their reporting frequency can be found in Appendix A.

In addition to the LTP3 indicators, it will be important to manage the performance of our Asset Management Procedures. To this end we will measure the quality and reliability of our data and its use to ensure that asset management principles are securing an improvement to our service. Data will be collected to report on:

- Accuracy of baseline data;
- Completeness and relevance of inventory;
- Performance against Levels of Service.

Cumbria will also endeavour to share performance information with neighbouring and comparable authorities. This benchmarking approach encourages continual service improvement and sharing of best practice between authorities.

Risk Management

"Risk management is a structured approach to managing uncertainty related to a threat, ie a sequence of human activities including, risk assessment, strategies developed to manage it, and mitigation of risk using managerial resources". (A Rough Guide to Risk Management, Cumbria County Council, September 2008.)

3: Contents of Cumbria's Transport Asset Management Plan

What is Included

The core purpose of the Transport Asset Management Plan is to encourage good decision making. To that end the plan contains details of how Cumbria County Council gathers and records information relating to the transport infrastructure assets, what that information will be used for and who the intended audience should be.

Information is provided on the key asset groups and on the key themes of asset management, including lifecycle planning, deterioration, depreciation, valuation and levels of service.

The TAMP is intended to be a strategic document providing a link between the plans and policies contained in the Council Plan and the Local Transport Plan with the operational element of Highway Network Management. The TAMP therefore contains references to documents where further information can be found on the specific elements of Highways and Transport practice.

What is Not Included

The TAMP is not a service manual, and therefore does not go into detail on service procedures and standards. These can be found in the relevant Highways Service Procedures.

Likewise it is not a Local Transport Plan, so does not attempt to set out the priorities and strategies of the County Council to achieve its transport goals and objectives. Cumbria's LTP3 should be referred to for this detail.

The TAMP provides the link between the policy and the practice, ensuring that the service we deliver is in line with transport goals and objectives whilst making best use of the resources available and meeting standards in service procedures.

4: Asset Groups

Inventory

Information on the transport infrastructure assets is gathered and recorded in a Highways Integrated Management System (HIMS). For all assets the inventory should contain information on:

- Type of asset;
- Location of the asset;
- Known specification/construction;
- Condition of the asset;
- Asset owners;
- Maintenance responsibilities.

Asset Group Summary

The following asset groups will be recorded as part of the inventory of Cumbria's transport infrastructure assets:

- Carriageway;
- Footways (and Cycleways);
- Structures;
- Lighting;
- Traffic Management Systems;
- Street Furniture.

Recording and Management of Asset Information

Asset information is recorded in the asset register which forms part of Cumbria's Highways Integrated Management System. The asset data is managed using the WDM integrated asset management systems which link condition data with accidents, structures, customer services, inventory, routine maintenance, works orders, street works and street lighting.

The precise location of assets is recorded and GIS mapping interfaces allow asset information to be shared between relevant service areas and the wider department.

Data gathered is compliant with national audit requirements of local authorities, using UKPMS rules to record and interrogate the data. The WDM Pavement Management System (PMS) module can be used to calculate maintenance backlogs, asset valuation and whole life costing as well as providing a tool to interrogate the network in different levels of detail.

Continually updating the data to reflect changes in the asset and its condition is important in maintaining a register which accurately reflects the assets owned by the County and ensures confidence in the information held.

5: Key Themes

Lifecycle Planning

Lifecycle planning aims to achieve the minimum whole life cost of an asset, giving consideration to the cost of creation or acquisition, routine maintenance, renewal or replacement, upgrading and disposal. In doing so it will recognise the interdependency of these phases, for example it will recognise how the level of investment in routine maintenance affects the renewals required or how original construction specifications affect the future demands for maintenance expenditure.

The specification of purchased assets, the standard of routine maintenance and the decisions when to renew or replace all have significant implications on the potential lifetime cost of an asset. Lifecycle planning should also give consideration to options which can extend the functional life of the asset, for example demand management.

Lifecycle planning encourages us to assess how different levels of intervention affect the useful life of an asset. This information should be used to make decisions based on 'do minimum', 'medium-life treatment' and 'long-life treatment' principles.

Valuation

Local Authorities are now required to take an asset management approach to the provision of financial information about its transport infrastructure assets. The way in which we value the asset is governed by the CIPFA Code of Practice and forms part of an annual CIPFA return.

The purpose of adhering to the CIPFA Code in valuing our transport infrastructure asset is to ensure that Local Authorities provide a consistent approach, therefore supporting:

- good, evidence based, asset management, including the development of more cost effective maintenance and replacement programmes;
- delivery of efficiency savings and service improvements;
- long term financial planning and budgeting;
- corporate capital planning and the operation of the Prudential Code;
- performance assessment and benchmarking;
- resource allocation, locally, at regional level and nationally;
- production of transparent information for stakeholders on the authority's management of its highway assets;

- production of financial information that is compliant with International Financial Reporting Standards (IFRS) and meets the needs of Whole of Government Accounts (WGA) and National Accounts;
- any future move to current value financial reporting of the assets in local authorities' own accounts.

The intention is that use of financial information in accordance with CIPFA's guidance will support good decision making and deliver efficiency savings, as is the main purpose of asset management. Potential uses include:

- whole life cost based modelling, to understand and minimise costs/maximising value over the long term;
- scenario planning and option appraisal to model and understand the cost consequences of different maintenance strategies;
- prioritising work programmes to maximise the return on a given level of investment;
- reducing the amount of unplanned, reactive maintenance;
- reducing the number/value of successful third party claims;
- understanding and adjusting trade offs between capital and revenue spend to achieve the best balance;
- using the detailed information that the system will provide about the cost of individual maintenance activities to drive down the cost base, and to monitor whether treatments deliver the expected performance;
- informing better procurement;
- monitoring performance trends over time;
- benchmarking.

When considering asset valuation for financial reporting purposes it is important to value both the Gross Replacement Cost (GRC) and the Depreciated Replacement Cost (DRC) and to be aware of the difference between the two.

Depreciated Replacement Cost (DRC) is a method of valuation that provides the current cost of replacing an asset with its modern equivalent asset less deductions for all physical deterioration and impairment.
Gross Replacement Cost (GRC) is defined as "the total admissible cost of replacing either the whole of an existing highway network, or some part of it" (CIPFA).

GRC is therefore based on the cost of constructing an equivalent new asset and the difference between the gross and depreciated cost is therefore the cost of restoring the asset from its present condition to "as new".

Further information on asset valuation can be found in the CIPFA Code of Practice on Transport Infrastructure Assets (2010).

Deterioration

Deterioration is a change in the physical condition of an asset as a result of wear and tear, ageing and other uncontrollable factors such as damage caused by adverse weather conditions.

Transport infrastructure is not static, and deterioration is inevitable over its service life. Unless managed effectively, asset deterioration can result in increased reactive maintenance costs, a work-programme backlog, having to adopt a short term "worst first" prioritisation philosophy, and a decline in the value of the asset. Lack of maintenance could lead to structural assets deteriorating to the extent that they are no longer safe and need replacing, having significant cost implications.

Recognising the impacts of deterioration and implementing appropriate routine maintenance regimes can minimise the need for more expensive and time-consuming treatments and can extend the life of an asset. Deterioration and lifecycle planning should therefore be closely linked; understanding long term needs, identifying deterioration, prioritising and work programming is the key task of asset management in order to maintain infrastructure in a suitable condition, either protecting from, or slowing down the rate of deterioration, and to be cost effective in the long term.

Depreciation

Depreciation is the loss, in monetary terms, of value in an asset over its service life as a result of age, usage, deterioration, damage or obsolescence. Most assets lose their value over time, and must be replaced at the end of their useful life.

Since 2006, all local highway authorities have been required to produce a valuation of their highways assets. Local highway authorities are not only required to establish the value of their assets, but must also monitor on an annual basis whether these assets are depreciating or not following investment, in order to provide a current value of the assets. Meeting these accounting requirements requires a detailed knowledge of the asset groups. An accurate assessment of the current maintenance backlog is needed, along with condition surveys carried out on a consistent basis covering a representative proportion of the asset in order to determine whether or not the overall situation has changed.

An accurate baseline valuation is essential to enable reliable calculations of depreciation. This is important as the measure of depreciation provides a good indication of the likely maintenance needs, in financial terms, of the infrastructure asset in order to raise the condition of the asset to desired standards. Depreciation of infrastructure assets forms part of a local highway authority's budget and is treated in the same way as direct expenditure on maintenance and renewal. Depreciation rates are therefore essential in predicting future financial needs and can strengthen a business case for investment at the present time to save money in the future.

Levels of Service

Levels of service describe both what the customer wants from the asset and what is necessary to ensure that a proper maintenance regime is in place. They are a way in which we as the Highway Authority can determine whether or not we are meeting customer expectations and our statutory obligations in the delivery of the highway service.

It is important that we determine what customers want and set our levels of service aimed at meeting those aspirations.

The Levels of Service enable the authority to:

- Document and measure the service provided;
- Rationally evaluate service versus cost trade offs;
- Determine if adequate focus is given to what is important to the customer;
- Establish if operational activities actively support the achievement of strategic goals.

Its development has been divided into five technical service levels:

- Programming and planning;
- Safety of the asset;
- Condition of the asset;
- Availability / accessibility of the asset; and,
- Environmental impact of the asset.

These are supplemented by two sections which reflect the way that the service is to be delivered and financially managed:

- Customer Service;
- Financial Performance.

Levels of Service must reflect the balance between aspiration, obligation and available budget. The performance indicators referred to in Chapter 2 have been designed to measure how the authority performs in relation to these Levels of Service.

Further information on Levels of Service can be found via the link in Chapter 7.

6: Asset Management Practice

Management of Key Themes

Lifecycle Planning: Information on the asset inventory and value are combined to enable lifecycle planning. This information is managed and monitored by the Asset Management Team, in coordination with the Area Highways and Finance Teams. Data is stored in the HIMS database.

Levels of Service: Levels of Service are documented and are available via the link in Chapter 7. The Asset Management Team will maintain and update this document as information changes.

Valuation: An asset valuation must be reported on an annual basis and must observe the CIPFA Code of Practice to be suitable for Whole of Government Accounting. The County Council's Finance Team makes this submission in consultation with the Asset Management Team.

Deterioration: Information relating to the condition of the transport assets is gathered by the Asset Management Team through inspection and surveys. This information is maintained in the HIMS database and used to influence decision making and work programming.

Depreciation: The depreciation of the monetary value of the asset must be measured and monitored alongside the valuation data. The Asset Management Team and County Council Finance Team must therefore work together to ensure valuation and depreciation are properly linked and can be used for accounting purposes.

Area Delivery

The reactive and planned maintenance of the transport assets has an impact on each of the key themes of asset management. It is therefore important that information on maintenance is properly recorded and shared to ensure that it is accurate, up to date and consistent across the County. The Asset Management Team will work with the Area Highways Team to agree an approach and ensure that information requirements are clearly specified, understood and monitored. Systems will be put into place to allow the teams to record their work as required. Training will be provided to the Area Highways Teams wherever necessary.

Finance Involvement

The recording and reporting of financial information is required to comply with the CIPFA Code of Practice and Whole of Government Accounting. The County Council Finance Team and the Asset Management Team will work together to ensure the transport assets are identified, recorded and properly valued. The annual submission of the asset valuation will be made by the County Council Finance Team.

IT Responsibility

The HIMS database is held within the WDM integrated asset management systems. The Asset Management Team work with WDM to develop the system specification and ensure that it meets all the requirements of the County Council.

7: Supporting Information

The table below provides information on the status and location of information referred to in this Transport Asset Management Plan.

Item	Source	Status	Location
CSS Framework for Highways Asset Management (2004)		Published in 2004	https://pronet.wsatkins.co.uk/RoadsCodes/documents/doc_highway_asset_management.pdf
Highways Asset Management Plan	Cumbria County Council	To be produced	n/a
Guidance on Local Transport Plans	DfT	Published in July 2009	www2.dft.gov.uk/pgr/regional/ltp/guidance/
Code of Practice on Transport Infrastructure Assets: Guidance to Support Asset Management, Financial Management and Reporting	CIPFA	Published in 2010	N:\Parkhouse\Asset_Management_PC\AM_Library\CIPFA
Cumbria County Council: Council Plan 2011-14	Cumbria County Council	Published in 2011	www.cumbria.gov.uk/councilplan/default.asp
Cumbria LTP3	Cumbria County Council	Core Strategy Published in 2011. Implementation Plans in Draft	www.cumbria.gov.uk/roads-transport/public-transport-road-safety/transport/transportplan/3rdcumbriatransportplan.asp
Highways Maintenance Plan	Cumbria County Council	Published in 2007	https://workingtogether.cumbria.gov.uk/
Well Maintained Highways	UK Roads Board	Published in 2005 Latest version November 2011	www.ukroadsliaisongroup.org/
A Rough Guide to Risk Management	Cumbria County Council	Published in 2008	www.intouch.ccc/managingyourcouncil/riskmanagement.asp
Highways Service Procedures	Cumbria County Council	Published and continually updated	https://workingtogether.cumbria.gov.uk/
Highways Integrated Management System			https://workingtogether.cumbria.gov.uk/
Levels of Service	Cumbria County Council	Draft working document	\\Ccc-fs-highw\highways$\Parkhouse\Asset_Management_PC\Work_Activities\Levels_of_Service_2011

8: Future Actions for Asset Management

In order to effectively implement the Asset Management principles set out in this TAMP document, the Highways and Transport Team will need to take a number of actions. Some of these actions relate to the development and adoption of systems and processes, whereas others concern the production of associated policy and procedures documents.

Timescales for the completion of these pieces of work must be agreed giving consideration to priority, capacity and resourcing available to the Asset Management Team.

Matters for future development include:

Objectives	Timescale
Produce Highway Asset Management Plan	Nov 2012
Full implementation of HIMS system	2012-2013
Revise Highway Maintenance Service Procedures to reflect Levels of Service and HAMP methodologies	2012-2013
Develop Service Procedures for Inventory data recording and data updates to include methodology and process plans	2012-2013
Revision of Highway Maintenance Service Manual	2012-2013
Produce Data Coordination Plan	2012-2013
Develop Levels of Service	2012-2013
Clear identification of roles and responsibilities facilitated by Strategic Asset Management Team	2012-2013

It is recognised that all Asset Management documentation needs to reflect current conditions and as such future changes are inevitable. An annual review will therefore take place to ensure documentation is up to date and fit for purpose.

Appendix A:

List of LTP3 Indicators and their Reporting Frequency

NB: The LTP3 indicators and their reporting frequency have not yet been approved by Cabinet. This section will be completed once approval has been given.

If you require this document in another format (eg CD, audio cassette, Braille or large type) or in another language, please telephone 01228 606060.

আপনি যদি এই তথ্য আপনার নিজের ভাষায় পেতে চান তাহলে অনুগ্রহ করে 01228 606060 নম্বরে টেলিফোন করুন।

如果您希望通过母语了解此信息，
请致电 01228 606060

Jeigu norėtumėte gauti šią informaciją savo kalba, skambinkite telefonu 01228 606060

W celu uzyskania informacji w Państwa języku proszę zatelefonować pod numer 01228 606060

Se quiser aceder a esta informação na sua língua, telefone para o 01228 606060

Bu bilgiyi kendi dilinizde görmek istiyorsanız lütfen 01228 606060 numaralı telefonu arayınız

CCCJ/N.16677