

# 11. Managing our Transport Assets

## 11.1 The Need for an Asset Management Plan

11.1.1 A key challenge is to make transport assets work for the city in a way which fully contributes to the delivery of corporate and transport objectives. Some assets may be purely functional, for example drainage systems, and the level of investment in the asset needs to be commensurate with the risk and consequence of the asset failing to perform its function. Other assets, such as transport interchanges, public transport, car parks and park and ride sites need



investment not only to maintain serviceability but also to ensure a high level of customer satisfaction, which will influence transport choices and ultimately affect revenue flows. For Plymouth, asset management is not simply a case of measuring the change in capital value of the assets as a consequence of investment but also of assessing how the assets can be used most effectively to deliver the transport objectives of the city.

11.1.2 Plymouth is committed to best practice in asset management as a key contributor to quality of service to customers and efficiency of service delivery. The Council is pursuing best practice through a whole lifecycle approach that will provide effective strategies to achieve an optimal allocation of resources to maintain and upgrade existing assets and to create new assets.

11.1.3 Improved maintenance of transport assets will increase operational capacity, reliability and safety and will contribute to LTP2 objectives for:

- Reducing the rate of growth of traffic congestion, (including encouraging use of sustainable modes)
- Improving road safety
- Improving air quality and the environment
- Making maintenance more efficient and effective

Conversely, measures to deliver the transport shared priorities can in themselves reduce the need for interventions to improve asset condition and in some instances may allow dispersal of assets. For example, the policy of 'at grade' pedestrian movements can reduce the ongoing revenue requirements for maintenance of subways and footbridges.

11.1.4 The potential for existing assets to be better exploited through good asset management has been considered in preparing the LTP2. Capital scheme proposals are assessed on a whole life basis and provision for funding of maintenance is included. An accelerated programme of prioritised maintenance work is proposed, in order to reduce the backlog, to prolong the life of the asset and raise finance.

## 11.2 Development of the Asset Management Plan

- 11.2.1 Table 11.1 shows a preliminary inventory of the assets held by Plymouth City Council. The Highway Agency manages and maintains the A38 Trunk Road. Railways have mixed ownership and management through the DfT as successor to the Strategic Rail Authority, and Network Rail. The Council jointly manages the Tamar crossings (bridge and ferry) with Cornwall County Council. Also in the Council's ownership is a majority share in Plymouth Citybus Ltd, one of the City's two major bus companies, which is run as a commercial entity operated independently of the Council. Sutton Harbour Holdings Ltd manages Plymouth City Airport and Associated British Ports (ABP) owns the Ferry terminal.
- 11.2.2 Transport services are dependent on a large infrastructure of fixed and mobile assets. The value of the Council's asset base is provisionally assessed at £1.75 billion (excluding public transport, buildings and land) on a full replacement cost basis, using cost functions derived from recent capital projects and schedules of rates from term maintenance contracts. This valuation is approximate since the methodology is simplistic. The valuation will be revised following application of the County Surveyors Society Guidance of July 2005, as set out in the TAMP implementation plan (see Figure 11.1).
- 11.2.3 Asset management processes within Plymouth are at an early stage of development and current work is focused on comparing current practice against best practice and preparing the TAMP. The TAMP will evaluate performance gaps and set out strategic objectives, performance targets, lifecycle plans, forward work programmes and improvement action plans. The TAMP follows the County Surveyors Society Framework for Highway Asset Management, April 2004. It also aims to provide accounting information for the valuation and depreciation of transport assets in accordance with the requirements of Whole of Government Accounting that will be introduced in 2006. The Council is learning and sharing best practice in asset management through membership of the South West Counties TAMP Working Group that was established in January 2005.
- 11.2.4 A preliminary assessment of Plymouth's transport assets and condition has been undertaken and asset champions have been assigned to lead the development of individual asset management plans for ten asset groups, from which an integrated TAMP for the whole asset base will be prepared. The individual asset management plans will be maintained as working documents that are regularly updated to incorporate best practice and better asset information as they evolve.
- 11.2.5 Our TAMP will include a strategy for appropriate asset information and management systems to enable more effective and efficient maintenance and lifecycle planning.
- 11.2.6 The TAMP implementation plan (see Figure 11.1) will be put in place for highway infrastructure valuation:

### Year 1

Prepare TAMP and progress interim asset valuation which will include the following activities:

- a) Take part in and contribute to the South West Regional TAMP Asset Valuation Group
- b) Assess how current inventory / data and systems align with the needs of asset valuation; integrate asset valuation needs with those identified from the Asset Management gap analysis
- c) Identify asset groups, sub-groups, and adjustment factors
- d) Compile scheme data, determine unit rates and develop GRC models
- e) Trial the asset valuation procedure on a sample of highway assets

## Year 2

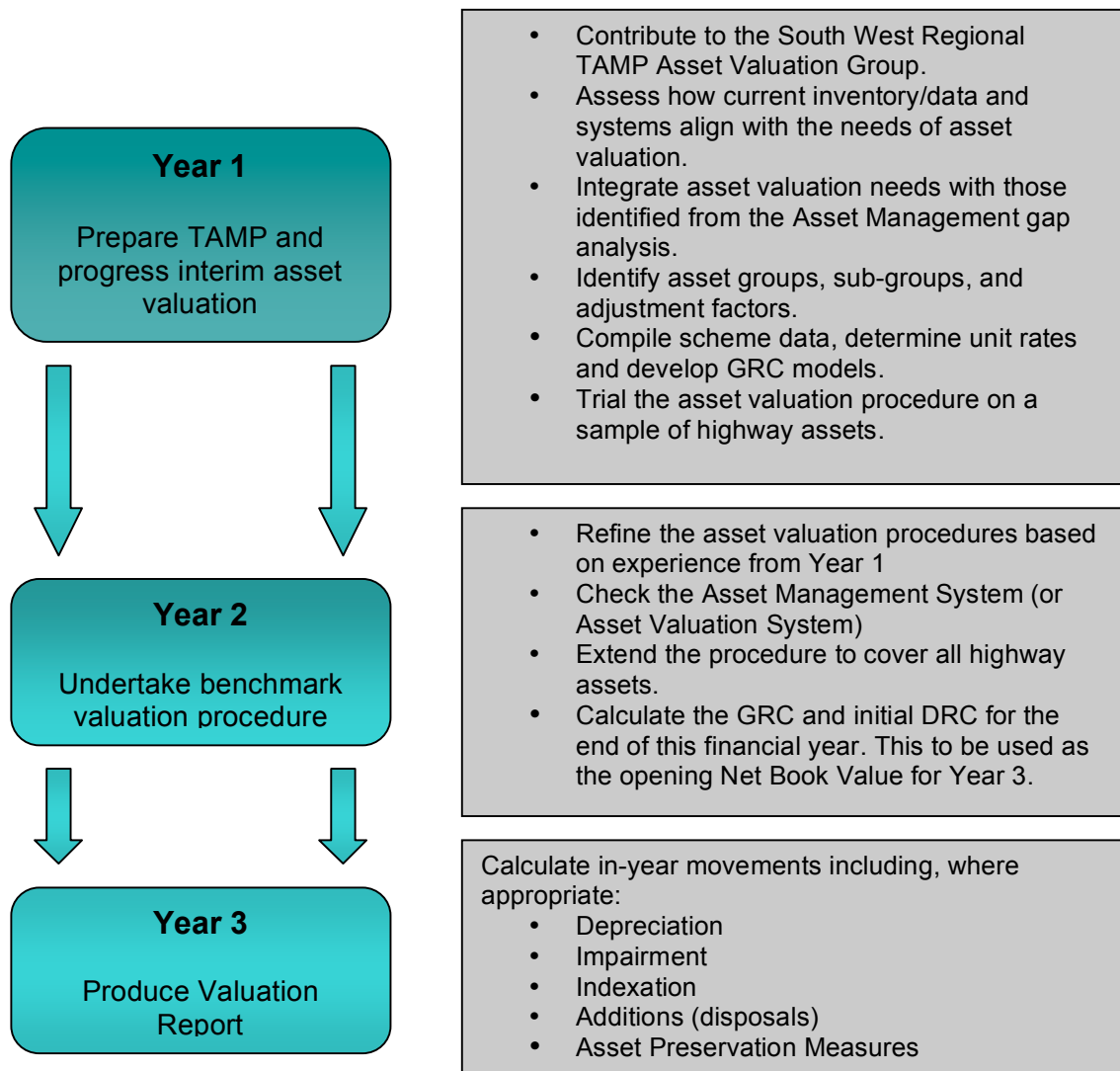
Undertake a benchmark valuation procedure that will include the following activities:

- a) Refine the asset valuation procedures based on experience from Year 1
- b) Check the Asset Management System (or Asset Valuation System)
- c) Extend the procedure to cover all highway assets
- d) Calculate the GRC and initial DRC for the end of this financial year to be used as the opening Net Book Value for year 3

## Year 3

Calculate in-year movements including, where appropriate, depreciation, impairment, indexation, additions (disposals), Asset Preservation Measures etc. A Valuation Report to be produced for the end of year 3.

**Figure 11.1 Highway Infrastructure - Implementation Plan**



- 11.2.7 Our performance in asset management activities and outcomes will be monitored through the following measures:
- A first TAMP will be completed by December 2006 to enable the benefits of improved practice to be incorporated in LTP2 delivery at an early stage and to provide a valuation of assets for the 2006/07 accounts in accordance with the programme for Whole of Government accounting. Some asset groups will be better developed than others in the first TAMP, since the availability and confidence level of asset data vary for each group
  - An extended and updated version of the TAMP will be completed by December 2009 to provide full coverage and integration of all asset groups in preparation for informing the next LTP 2011 to 16
  - An improvement action plan for the TAMP will be established and updated annually; progress in delivering the action plan will be reported in the LTP Progress Report
  - The contribution of asset management activities to achieving the LTP objectives will be reported in the progress report
  - The contribution of asset management activities to generating maintenance efficiencies will be reported annually in the progress report
- 11.2.8 Another key feature of the TAMP is to develop a strategy for appropriate asset information and management systems to enable more effective and efficient maintenance and lifecycle planning. The Council's strategy will be based on a two-step approach, firstly to make better use of all existing databases and proprietary systems and secondly to progress to more intelligent information systems that provide a capability for predictive modelling of asset deterioration and performance. Only two proprietary asset management systems are currently employed: two computer software packages MAYRISE and WDM PMS provide tools for comprehensive maintenance management for streetlights and condition analysis and reporting for carriageways respectively. These software packages will be linked to the corporate geographical information system in the early period of LTP2.
- 11.2.9 The strategy for IT based intelligent asset information and management systems will be critically evaluated and new systems for each asset group prioritised and introduced on a cost/benefit basis. The benefits comprise:
- Assisting improved service delivery and value for money through informing decisions in operating, maintaining and replacing assets
  - Better targeting of maintenance interventions and optimising the balance of preventative and reactive maintenance
  - Improving availability of transport infrastructure through integrated scheduling of interventions
  - Improving records of asset inventory, condition, serviceability and maintenance history and enabling wider accessibility to records
  - Facilitating determination of lowest cost strategies on a whole life basis through analysis of alternative deterioration scenarios and intervention options
  - Assisting automatic production of performance monitoring reports

#### Resources

- 11.2.10 An assessment of resources needed to complete the Asset Management Plan and Asset Valuation has been made. This includes the following:
1. Hardware and software needs
  2. Data collection, entry, storage and upkeep
  3. Staff training
  4. Staff time to develop Unit Rates, Gross Replacement Cost (GRC), Depreciated Replacement Cost (DRC), depreciation and impairment, attend SW Regional Working Groups and prepare the Valuation Report

### 11.3 Whole Government Accounting

11.3.1 Best practice in asset management is founded on a good understanding of the asset base in terms of its inventory, condition profile and financial value. A preliminary assessment of the asset base with regard to these has been completed for asset groups where existing records are available.

11.3.2 The need for further surveys is being carefully evaluated and prioritised in order to target key data gaps during the first year of LTP2. Alternative procurement arrangements for survey work will be considered; for example, updating of the inventory and condition data of street lighting assets by the term maintenance contractor, which has proved very cost effective. It is intended to complete all necessary surveys during the first year of LTP2. We have identified management level staff to act as an 'asset champion' for each of the asset groups listed in Table 11.1.

**Table 11.1 Existing Asset Records**

| Asset Group           | Asset Inventory | Condition Profile | Age Profile | Replacement Value £m |
|-----------------------|-----------------|-------------------|-------------|----------------------|
| Roads                 | ✓               | ✓                 | ✗           | 1278                 |
| Cycleways & Footways  | ✓               | ✓                 | ✗           | 220                  |
| Drainage              | ✓               | ✗                 | ✗           | 88                   |
| Signs                 | ✓               | ✓                 | ✗           | 6                    |
| Street lighting       | ✓               | ✓                 | ✓           | 23                   |
| Traffic Signals & UTC | ✓               | ✓                 | ✓           | 3                    |
| Bridges & Structures  | ✓               | ✓                 | ✓           | 92                   |
| Car Parks             | ✓               | ✓                 | ✓           | 44                   |
| Public Transport      | ✓               | ✓                 | ✓           | ✗                    |
| Buildings & Land      | ✓               | ✗                 | ✗           | ✗                    |

|   |  |
|---|--|
| ✓ | <i>indicates a preliminary assessment of inventory, condition profile or valuation has been prepared</i> |
| ✗ | <i>indicates a quantitative assessment is not currently available</i>                                    |

## **11.4 Spend Targets and Gershon Efficiency**

- 11.4.1 The maintenance backlog will be objectively re-assessed with regard to its impact on levels of service and whole lifecycle plans will be developed to enable:
- Better targeting of maintenance and management of risks to service delivery associated with asset deterioration
  - Optimising the balance of preventative and reactive maintenance
  - Timely replacement of assets before routine maintenance becomes disproportionately expensive
  - Efficiency savings from revised maintenance standards and procurement arrangements
  - Improved strategies for long term funding of maintenance and replacement
- 11.4.2 In order to achieve the government's Gershon efficiency targets the Council has set 'standstill' budgets for the period 2006-2009, with no allowance for inflation. Action plans have been prepared to ensure these efficiency targets are achieved. These action plans include:
- Procurement savings
  - Reprioritisation of expenditure to areas giving greatest value for money
  - Increasing pre-planned maintenance to reduce the need for more costly reactive maintenance
- 11.4.3 The Council is currently undertaking a Transformational Change Programme which is reviewing all services carried out by the Council and it is anticipated that a review of highway maintenance delivery will be undertaken during the first year of LTP2. This would include consideration of the Private Finance Initiative (PFI) under the recently announced round of PFI bids for highway maintenance. Further cost savings are likely to be identified as a result of this process.

## **11.5 Asset Management Service**

- 11.5.1 The Council published its Corporate Asset Management Plan and Capital Strategy in October 2005. Asset Management is seen as a key vehicle to the financial recovery of the Authority. This will be achieved through releasing capital from surplus assets and the maximum utilisation of those assets that we retain and invest in. Although the plan focuses on the Building Assets the same principles will be applied to Transport Assets. The Transport Asset Management Service through the TAMP will set out where we are now, where we intend to be in 5 years and what measures will be taken to achieve a 'fit for purpose' transport system helping to deliver first class services for the people of Plymouth.
- 11.5.2 The TAMP will be used to achieve savings and best value by:
- Optimising appropriate levels of spend
  - Analysis to show the effects of modifying rates of investment
  - Provide a case for bidding for funding and prioritising schemes
  - Help define more explicit links between investment, levels of service and outcomes
- 11.5.3 The TAMP will support year-on-year improvement of performance management through:
- Service measurement
  - Setting our levels of service (scoping)
  - Managing performance (improving)

The linkages between capital and revenue interventions, and targets measured against performance indicators have been developed such that the future performance of the assets can be more accurately predicted, enabling intelligence led decisions on investment based, on sound business case methodologies.

## **11.6 Revenue Support for Transport Intervention**

- 11.6.1 All significant investments (in excess of £75,000 for individual interventions) require a business case to be prepared demonstrating value for money in terms of outcomes or benefits, related to the cost, both in terms of capital and ongoing revenue support requirements.
- 11.6.2 The proposed capital and revenue programmes are linked, with the revenue consequences of both new infrastructure and revenue only interventions being identified and these additional revenue costs being met from on and off street parking revenue income.
- 11.6.3 The valuation of assets will be undertaken in line with the 'Guidance Document for Highway Infrastructure Asset Management' (County Surveyors Society, July 2005). Required investment levels will be determined through an evaluation matrix, which balances customer expectations of asset condition with transport objectives and achieving value for money in terms of outcome or benefits verses cost of interventions. Disposing of assets can generate capital receipts that can be reinvested in delivering corporate priorities. For example, public transport and measures to achieve modal shift may negate the need for investment in new network infrastructure. Capital receipts from disposal of safeguarded sites could potentially be used to offset the capital investment in the modal shift interventions.

## **11.7 Cross Cutting Impact**

- 11.7.1 The Local Strategic Partnership has identified eight strategic objectives, one of which is 'Developing an effective transport system' (see Chapter 2). The priorities and actions for this transport objective are cross cutting in nature and will be supported by the maintenance strategy in the emerging TAMP. For example, school travel plans will identify the need for interventions as part of the Safer Journeys to Schools programme and necessary reprioritisation of maintenance interventions. These could be either additional requirements or reductions as a consequence of achieving modal shift in journeys to schools.
- 11.7.2 The Traffic Management Act 2004 will provide new opportunities through increased powers to deal with, for example, pavement parking. Pavement parking can increase deterioration of footways which if not well maintained can be a contributory factor in the loss of independence and social exclusion of those with particular mobility needs. This in itself can add to the costs of Social Care and Health Care.

## **11.8 Public Rights of Way Position Statement**

- 11.8.1 The Council is committed to developing an integrated local transport network that includes a Public Rights of Way (PROW) network.
- 11.8.2 It is acknowledged that the statutory duty requiring a Definitive Map and Statement to be published has not been met. The Definitive Map and Statement of Devon County Council (DCC) cover the Plympton and Plymstock districts of the current Plymouth City Council area. This was drawn up in preliminary draft form in 1950, based on paths put forward by the then Parish Councils. After following the statutory procedure the Definitive Map was published and put on deposit in 1962. The area of the old Plymouth Borough Council was not included in the area covered by the DCC Definitive Map and Statement. A number of confirmed Public Path Orders and Definitive Map Modification Orders have been identified for inclusion in the republication of the Plymouth Definitive Map. This map, which will provide comprehensive coverage of the Plymouth City Council area, will be the basis for the continual review of PROW in Plymouth. A programme to identify and record PROW in Plymouth will begin following this republication.

- 11.8.3 The requirement to form a Local Access Forum and to meet 'e-government' targets for producing information about the PROW network on the Council's website has been fulfilled. The Council redesigned its website in August 2005 and PROW now has its own subsection within this. Information regarding the Plymouth Local Access Forum (LAF) has been incorporated into this re-launch and the first LAF meeting took place in March 2006.
- 11.8.4 The Countryside and Rights of Way Act 2000 also introduced a duty for all Local Highway Authorities to prepare a Rights of Way Improvement Plan (ROWIP). The ROWIP provides an opportunity to effectively utilise the existing PROW network as a foundation for delivering a better network for all walkers, horse riders and cyclists.
- 11.8.5 The ROWIP for Plymouth City Council will present a strategic overview of the PROW network as it currently exists. A Definitive Map and Statement will be produced in 2006, which will consolidate all existing legally defined public rights of way routes. This will form the foundation for the future developments to be detailed in the ROWIP.
- 11.8.6 Working together with their Local Access Forum, user groups and in consultation with neighbouring authorities (in order to improve cross boundary links), the Council will assess the present and future needs of the public and where necessary, improve and/or create additional public rights of way within their area.
- 11.8.7 An initial programme of works will be drawn up to achieve, where possible, the targets set out in the Draft Milestones Statement and those identified within the PROW Strategy produced by consultants WS Atkins. At the current time the Council is in the process of assembling information on the existing PROW network and this is primarily taking place through the carrying out of a full condition survey. A financial commitment towards the purchase of dedicated software and advanced GIS based mapping has been made and this, combined with the above condition survey, will provide a sound foundation upon which to build the ROWIP with specific emphasis on feeding directly into the greater information gathering process.
- 11.8.8 This baseline will help identify opportunities to co-ordinate PROW improvements in-line with LTP priorities and we shall seek to establish financial links with LTP funds to facilitate this. The Council recognise the key role PROW have to play in achieving a truly integrated transport network and recognise that by providing a variety of transport modes the needs of pedestrians, cyclists and even horse riders can be better met. Although the ROWIP is still in its infancy there is a strong desire to ensure a close alignment to the LTP and its priorities to ensure strong links between the two documents.
- 11.8.9 There are areas within rights of way which have already become apparent as likely key priorities within the ROWIP and which tie in with LTP priorities. One such example is the estimated 800 unrecorded public rights of way within the city. It is envisaged that routes that create strategic transport links under the LTP will receive higher priority in the ward-by-ward review currently being undertaken and where appropriate will receive greater consideration in future network enhancements funded by LTP monies. Throughout the ROWIP process opportunities such as these will be sought and exploited and with the backing of a proactive LAF it is envisaged that many advantages will be gained.