

CSS/TAG GUIDANCE ON HIGHWAY INFRASTRUCTURE ASSET VALUATION

INTRODUCTION

This annex gives a high level summary of the key features of the approach to valuation of highway infrastructure that is set out in the Guidance Document produced by the County Surveyors Society/TAG Asset Management Working Group. The full document is available as a Stationery Office publication (ISBN 0 11 552695 1) or on-line.

BACKGROUND

The Guidance Document was published in July 2005 to provide guidance to local authorities on the valuation of highway assets. It is a companion document to the 'Framework for Highways Asset Management' published by the County Surveyors' Society (CSS) in 2004. Preparation of the Guidance Document was overseen by a steering group whose members included representatives of the CSS, the Local Government Technical Advisers Group (TAG) and H M Treasury, Department for Transport and the Scottish Executive. The project consultants were Atkins Global with PKF as accountancy advisers. The Guidance Document was endorsed prior to publication by the Treasury, Office of the Deputy Prime Minister, Department for Transport and the relevant professional bodies — CSS, TAG and the Society of Chief Officers of Transportation in Scotland (SCOTS). It is published by the UK Roads Liaison Group which brings together representatives of the four national governments and the relevant professional bodies to advise on roads infrastructure engineering and operational matters.

The purpose is to provide guidance that aligns valuation of highways infrastructure assets with financial and asset management requirements and provides a common framework for highways authorities across the UK. It covers all fixed assets, e.g. road pavements, footways, cycleways, structures, streetlighting, traffic and communications equipment and street furniture. The Guidance Document provides a step by step procedure that covers asset classification, data requirements, calculations of Gross Replacement Cost, depreciation and impairment, and reporting and monitoring of asset value. The approach is consistent with Financial Reporting Standard (FRS) 15.

VALUATION REGIME

The Guidance Document recommends that an authority should establish a valuation regime which, as a minimum, should include a full benchmark valuation every five years with annual adjustments to take account of changes to the asset stock and fluctuations in construction prices.

A SIX STEP PROCESS

The Guidance Document recommends that the process should consist of the following steps.

- 1 **Establish the principles, basis and rules for valuation.** These need to: - comply with relevant accounting standards; provide a true and fair current value of the assets, following the established accounting principles of reliability, comparability and materiality; reflect good engineering practice and support the right investment choices for maintenance, renewal and improvement works; support decision making and long term investment planning; be consistent with and contribute to the other asset management processes, including whole life costing; be relatively

straightforward and operate on data that is readily available or can be collected with marginal effort.

- 2 **Compile an asset inventory** that provides the base data for calculating values for all owned assets. These should be appropriately classified and grouped in accordance with the table at the end of this annex.
- 3 **Produce an initial value for the assets.** This involves deriving appropriate Unit Rates for the different asset groups and sub-groups. Then **calculate the Gross Replacement Cost** for each asset within a group or sub-group. Gross Replacement Cost (GRC) is the total admissible cost of replacing an asset as part of the existing highway network. The replacement asset should normally have a potential performance broadly similar to the existing asset but take account of up to date technology, i.e. it should be a Modern Equivalent Asset.
- 4 **Calculate the consumption of the assets.** This involves
 - (a) calculating in-year depreciation; and
 - (b) assessing in year impairment and calculating any loss in value.

Depreciation is defined as the systematic consumption of the economic benefits embodied in an asset over its service life arising from use, ageing, deterioration or obsolescence. Two different approaches can be used. The Conventional Method is used to depreciate individual assets or components over their life, normally using straight line depreciation. It is recommended for highway lighting, street furniture, off-highway drainage, traffic management systems and land. Renewals Accounting is used to depreciate groups of assets. It is recommended for roads, segregated footpaths and cycle routes, and for most structures, because these all form an integrated part of the highway network and meet the requirements set down in the relevant Financial Reporting Standard, FRS15. Under this approach the amount of expenditure required to maintain the level of service for the asset is treated as the depreciation charge. Thus if the authority actually spends this amount there will be no change in the Net Book Value.

Impairment is a reduction in Net Asset Value due to a sudden or unforeseen decrease in the condition and/or performance of an asset that has not already been accounted for through depreciation, e.g. where an asset is damaged by landslide. Impairment should also be calculated using either the Conventional Method or Renewals Accounting depending on whether one is dealing with individual assets or a network.

- 5 **Calculate the Depreciated Replacement Cost (DRC).** This involves:-
 - (a) on the introduction of the asset valuation regime, calculating the DRC by reducing the Gross Replacement Cost to reflect the current age, condition and performance of assets; and
 - (b) annual adjustments to the asset value to account for in-year depreciation and impairment.

The DRC is also referred to in the Guidance Document as the Net Book Value, Net Asset Value and Asset Value. To calculate the initial DRC it is necessary to know the current condition and performance of the assets. The condition and performance data are then used to assess the cost of work required to restore the assets to the full performance or as new condition. Such information is an essential component of asset management; but without asset management to provide consistent data covering all the asset types the calculation cannot be done.

- 6 **Prepare the Valuation Report.** This should be a stand alone document that presents the results of valuation with supporting information. It should act as the key supporting document to the highways infrastructure asset values reported in the Balance Sheet. It is recommended that it is produced annually. The Guidance gives a list of the information that should as a minimum be included in the report.

OTHER MATTERS

The Guidance Document provides more detailed advice on the implementation of the valuation process for each of the main asset types — roads, structures etc, as well as on matters such as heritage assets, assets under construction and the treatment of assets under a PFI scheme. It also provides some sample calculations and advice on the processes for deriving unit rates. It recommends that groups of authorities in an area should work together to develop local unit rates and to share experience and learning.

Finally the Guidance Document provides a model implementation plan which suggests the activities that authorities might undertake. This is spread across a three year period, which in summary involves:

- Year 1 – Interim asset valuation
- Year 2 – Undertake benchmark valuation and calculate the GRC and initial DRC for the end of this financial year.
- Year 3 - calculate in year movements including depreciation, impairment, indexation, additions and produce a Valuation Report for the year end.

There is also advice on IT systems and resource requirements.

CSS/TAG Classification of Highway Assets

Level 1: Asset Type	Level 2: Asset Group	Level 3: Components that Level 2 implicitly covers in valuation
Road	<ul style="list-style-type: none"> • Flexible pavements • Flexible composite pavements • Rigid concrete pavements • Rigid composite pavements 	<ul style="list-style-type: none"> • Pavement layers (formation, roadbase, binder course, surface course) • Other surface types e.g. paved • Hard strip/shoulder • Footway/cycleway attached to road • Central reservation, roundabout, lay-by etc. • Markings • Kerbs • Earthworks (embankments & cuttings) • Vegetation • Drainage • Safety fences • Boundary fences and hedges • Verges
Segregated footpaths and cycle routes	<ul style="list-style-type: none"> • Footpath (including PROW) • Bridleways (including PROW) • Off road cycle routes • Pedestrian areas 	<ul style="list-style-type: none"> • Binder course and surface course • Formation
Structures	<ul style="list-style-type: none"> • Bridges (includes subways) • Culverts (span < 1.5m) • Retaining walls • Sign/signal gantries and cantilever road signs 	All elements identified on the CSS inspection pro forma

Level 1: Asset Type	Level 2: Asset Group	Level 3: Components that Level 2 implicitly covers in valuation
	Other assets included in this group: <ul style="list-style-type: none"> • Tunnels • Structural earthworks, e.g. strengthened/reinforced soils • Fords and causeways • Cattle grids 	Should include all components considered in the maintenance and management of these assets. Smaller water carrying structures are considered as road drainage
Highway lighting and high mast lighting	<ul style="list-style-type: none"> • Lighting columns • Lighting unit attached to wall • High mast lighting 	<ul style="list-style-type: none"> • Column and foundations • Bracket • Luminaire (or other fixtures, e.g. CCTV) • Control gear, switching and internal wiring cabling (may depend on ownership)
Street furniture	<ul style="list-style-type: none"> • Town/city centre street/road • Suburban/village street/road • Rural road 	<ul style="list-style-type: none"> • Bus Shelters • Seating • Bins • Bollards • Marker Posts • Street name plates • Tree protection etc.
Traffic management	<ul style="list-style-type: none"> • Traffic signals • Pedestrian signals • Illuminated traffic signs • Non-illuminated traffic signs • Illuminated pedestrian signs • Non-illuminated pedestrian signs 	<ul style="list-style-type: none"> • Signal, column and foundation • Control equipment and cables • Bulbs • Sign, column and foundation • Control equipment and cables

Level 1: Asset Type	Level 2: Asset Group	Level 3: Components that Level 2 implicitly covers in valuation
	<ul style="list-style-type: none"> • Traffic calming • Communication systems 	<ul style="list-style-type: none"> • Speed bumps • Speed cameras • All components
Off-highway drainage	<ul style="list-style-type: none"> • Sustainable Urban Drainage Systems (SUDS) • Soakaways • Pumping stations 	All components
Land	<ul style="list-style-type: none"> • Freehold land • Rights land 	Features on the land are not taken into account in the valuation

* These assets are only included in highway infrastructure asset valuation where they are maintained as part of the highway infrastructure asset, e.g. surfaced Public Right of Way (PROW)

Level 1: Asset Types — broad categories based on the general function of the assets. They divide the asset base into categories that may be suitable for reporting in the financial statements and provide an appropriate basis for high level management information.

Level 2: Assets Groups — used to distinguish between assets that have a similar function and form. The asset groups should distinguish between assets that are likely to require different Unit Rates and Gross Replacement Cost models. Each asset group may need to be further divided into sub-groups if the Unit Rates are likely to vary significantly between assets in a group.

Level 3: Components — distinguishes between components that are likely to require different depreciation and impairment models, e.g. different service lives and/or rates of deterioration.