

ACCOUNTING FOR TRANSPORT INFRASTRUCTURE ASSETS IN THE UK

LOCAL GOVERNMENT

Infrastructure assets recognised

The CIPFA local authority SORP does not define which assets should be considered as infrastructure assets. Experience from the project fieldwork indicates that transport infrastructure assets held by local authorities generally include:

- Highways, including road pavement, structures and associated elements such as footways, embankments and retaining walls
- Urban transport systems such as sub-surface railways, Light Rail and Tramways

Measurement

The Local Authority SORP does not permit the use of current values for infrastructure assets, and requires instead that they be measured on the basis of depreciated historical cost. However, in practice the historic cost used as the starting point is an aggregate of two different measures, depending on whether the infrastructure assets were acquired before or after the introduction of the current capital accounting arrangements in 1994/95:

- For assets acquired before 1 April 1994, the depreciated historical cost was crystallised as the carrying amount at 31 March 1994. That value represented the 'net capital outlay' under the capital finance regime and was effectively the value of outstanding loans used to finance the assets. This value was unrelated to the either the gross historic cost of the assets or the cumulative consumption of the assets.
- For assets acquired on or after 1 April 1994, the gross historic cost is simply the capital expenditure incurred on the assets.

Accounting

The SORP states that definable major assets or components within an infrastructure system should be separated out and depreciated over their useful economic lives.

For the remaining assets within the system, renewals accounting can be used to estimate depreciation as follows:

- The infrastructure asset is a system or network that as a whole is intended to be maintained at a specified level of service potential by the continuing replacement and refurbishment of its components; and
- the level of annual expenditure required to maintain the operating capacity (or service capability) of the infrastructure asset is calculated from the asset management plan that is certified by a person who is appropriately qualified; and
- the system is in a mature or steady state.

CENTRAL GOVERNMENT BODIES

The Treasury's Government Financial Reporting Manual (FReM) prescribes the accounting for Government and other public bodies to which it applies. As discussed elsewhere in the main report, the current UK GAAP-based treatment of roads assets is being changed from the start of 2009/10 to make it IFRS compliant. The following describes the approach adopted at present:

'Renewals accounting as currently applied to roads is an adaptation of FRS15. The relevant authorities have determined that renewals accounting as set out in FRS15 shall be used as a method of estimating depreciation for infrastructure assets, even where entities do not calculate the level of annual maintenance expenditure by reference to an asset management plan.

The road network is carried on the balance sheet at current replacement cost, adjusted to reflect the condition of the network. A full valuation of the network shall be undertaken at least every five years, supplemented by annual condition surveys. The condition surveys must be undertaken on a consistent basis and cover a significant and representative proportion of the road network. All renewals expenditure should be charged to the operating cost statement. If a condition survey reveals that the network has been maintained in a steady state since the previous survey, then no depreciation charge is required. However, if the condition of the network has deteriorated/improved between condition surveys, the value of the deterioration/improvement, if material, should be charged/credited to the operating cost statement and the carrying value of the assets adjusted accordingly.

In the years between the full valuations, the value of the network should be adjusted to reflect:

- a) movements in prices using appropriate published indices;
- b) any expenditure on new schemes or enhancements which increase the capacity of the network;
- c) detrunkings.'

Despite the standard approach set out in the FReM, each of the central government highways agencies in the UK has adopted slightly different approaches to valuing and accounting for their roads assets.

HIGHWAYS AGENCY (ENGLAND)

Infrastructure assets recognised

The infrastructure network assets that are recognised comprise carriageways, including earthworks, tunnelling and road pavements, roadside communications, bridges and other structures and land and buildings within the highway's perimeter.

Measurement

The network infrastructure is valued at depreciated replacement cost, derived by a full valuation every 5 years. The most recent was performed in 2004/05 by external consultants but using the Agency's unit costings and asset records.

Between valuations, indexation is applied to roads and structures using the Resource Cost Index of Road Construction (ROCOS) published by DTI.

Land within the highway perimeter is valued using standard carriageway widths. A distinction is made between urban and rural land. Between the five-yearly valuations, land values are indexed in accordance with Valuation Office indices.

Certain large structures are valued on the basis of indexed historic cost or insurance valuations.

Accounting

A combination of FReM renewals accounting and conventional depreciation is used for network assets.

Renewals accounting is applied to:

- the surface layer of flexible pavements
- sub-pavement layers of determinate life pavements
- Rigid concrete pavements
- Fencing
- Drainage
- Lighting
- Signage
- Kerbs
- Footways
- Road markings and studs

These assets are not depreciated, but an assertion of steady state is made. The actual expenditure on these assets is charged to the revenue account.

Conventional depreciation is applied to the following assets, with economic lives of between 20 and 120 years.

- Road bridges
- Tunnels
- Underpasses
- Culverts
- Retaining walls
- Gantries

In addition, road communications assets are depreciated over their economic lives of between 15 and 50 years.

Actual expenditure on network structures and road communications is capitalised where it restores the service potential or enhances the asset beyond its original specification. Other expenditure on these assets is charged to the revenue account.

Certain assets are not depreciated as they are considered to have an indefinite life:

- Freehold land;
- The sub-pavement layer of long life pavements; and
- Earthworks.

NORTHERN IRELAND ROADS SERVICE

Infrastructure assets recognised

The assets recognised include the motorway, trunk and non-trunk network, comprising roads, structures, communications, lighting etc.

Measurement

The network is valued on the basis of the 'new build cost' or gross replacement cost, which is then adjusted to take account of the current condition to arrive at a depreciated replacement cost.

The valuation is determined using unit rates which are composite rates taken from previous projects. These past project costs are rebased to current values using the Baxter Formula, which the roads service has determined is the most appropriate approach. Where data from projects is limited, data from Transport Scotland is used to fill the gaps.

The composite rates for particular road types include the cost of:

- road interchanges
- drainage
- fencing
- lighting
- signs
- culverts <2m diameter
- retaining walls <1m in height

For roads classified as motorways or A-roads, the gross value is calculated based on:

- road length
- road width
- number of lanes
- design standard
- construction type

Road length and width is obtained from the Roads Maintenance System. The road width is compared with standard design widths to categorise the roads into sub-types e.g. single carriageway, dual carriageway. Standard unit rates per km for each type are then applied to the road length to determine the gross value.

For other classifications of roads, the actual areas are obtained from the Roads Maintenance System, and the unit rates applied.

Land underlying roads is classified between urban and rural (for Belfast: City Centre, Inner City and Outer City) and separately valued on the basis of adjoining land value.

Accounting

The road network is not depreciated, and instead the Income and Expenditure account is charged each year with the full value of the maintenance expenditure each year required to maintain the network in a steady-state. An exception to this is the A2 Coastal Road, which due to the difficult terrain along which it is constructed is treated as a separate asset for its entire length.

Other infrastructure assets are depreciated over their useful economic lives as follows:

- Bridges 120 years
- Bridges (non-arch) 300 years

- Retaining walls >1m height 120 years
- Gantries 120 years
- Special structures individually assessed
- Communications individually assessed

TRANSPORT SCOTLAND

Infrastructure assets recognised

Transport Scotland are responsible for Trunk roads and motorways, comprising the carriageway and all associated structures.

Measurement

The roads are measured on the basis of depreciated replacement cost. The valuation includes all elements related to the roads e.g. embankments, retaining walls, together with roundabouts and slip roads. The unit costs used are derived using data from a basket of new construction schemes during the last 25 years. These rates are 'all-inclusive', and the asset is then valued based on the length of the roads. The asset value is then adjusted to reflect condition to arrive at a depreciated replacement cost.

Land under the roads is included, valued at alternative use value, reflecting the adjacent land.

Accounting

Expenditure that creates new assets or improves the specification of existing assets is capitalised. Other expenditure on the assets is expensed to revenue.

Annual movements in the DRC due to changes in the road condition are reflected in the revenue account.

Structures and communications equipment are depreciated on a straight line basis of between 120 and 20 years.

WELSH ASSEMBLY GOVERNMENT

Infrastructure assets recognised

The assets recognised include road pavement, footways, structures and the underlying land.

Measurement

The assets are measured on the basis of depreciated replacement cost. WAG has developed a computer model to estimate the value of the roads network using all-inclusive rates. The DRC is calculated from condition data.

Accounting

The annual depreciation credited against the asset carrying value comprises three elements:

- The annual maintenance charge for maintaining the assets
- An estimate of the permanent deterioration in the network's condition, based on the computer modelling and using latest condition data
- Calculated depreciation of the structures

The accounting treatment for the annual maintenance charge element is unusual. The annual maintenance costs are charged (debited) to operating expenses when the costs are incurred. However, the charge is also used as an estimate of depreciation and, as noted above, is included in the depreciation amount credited against the asset carrying value. The corresponding debit entry cannot be taken to operating expenses, as this would double-count the cost in revenue. Consequently, the debit entry is added onto the GRC of the asset as an upward revaluation.

The depreciation charges arising from the estimate of permanent deterioration in the asset and from depreciation of the structures are charged to operating expenses in the normal manner. Structures comprise items such as bridges, culverts, retaining walls etc and are depreciated over the expected lives. A degree of component depreciation is applied, in respect of bridges where the main structure is depreciated over typically 100 years, but the road surface on top of them is depreciated over 20 years.

Expenditure on the assets is capitalised where it represents new assets or an enhancement of the existing assets.'