Issue 161, March 4, 2005

Simple Ways to Improve Depreciation Measures

For Councils and Others

“Get A Life!”

Here John Howard provides a simple, step-by-step, approach to calculating asset lives that represent the type of asset and condition of usage experienced in your portfolio, laid out in a clear template form for easy presentation to, and adoption by, your council.

Having gone this far to make your strategic information more reliable, the next step is to ensure that these lives are applied to the appropriate asset value. pp 882-885

“ Depreciating only what wears out”

Here John suggests a simple method to ensure that your depreciation measures are not over-stated.

Application of his methods to your road asset portfolio ensures that the figures claimed for depreciation represent the truth. p 886

“Living with the Regulator”

Asset Managers frequently have a love/hate relationship with their regulator. On the one hand, they appreciate that he gives them more strength to their bow with their own executives but then, on the other, it is they who are being held accountable!

The World Class Asset Manager, says Dave Openshaw in part 3 of his series on “Understanding the Business Environment” will welcome the new challenges that the regulatory environment provides. pp 880-881

He gives you some guidance in how you may shape the environment itself!

Something for everyone.

Enjoy.

Penny

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Continuing our series on World Class Asset Management

Understanding the Business Environment

Dave Openshaw, Head of Network Development, EDF Energy.

Part 3: Regulatory / Statutory

Regulator as Customer

Economic regulation exists, amongst other things, to create a pseudo-competitive market where none naturally exists. It therefore lends itself to regulation of 'natural' monopolies such as utilities and infrastructure providers (albeit that there is certainly scope for competition in provision of new infrastructure). The Regulator is effectively the customer of the monopoly infrastructure and utility businesses by proxy, with powers to mimic the impact that a customer base would have in a truly competitive market.

As in any business, utility and infrastructure companies need to keep their customers satisfied in order to achieve their financial goals. Therefore, as well as understanding statutory and licence obligations, an asset manager needs to understand the quality metrics that the Regulator regards as representative of customer service, so that the functional performance required of the network can be specified.

Regulator Risk

Decisions by the Regulator carry risk in that ultimately he will decide how much money a company is able to earn and retain, and the levels of performance they must achieve. The decisions with the biggest impact are generally made during formal 'price' reviews, typically every five years.

The longer-term regulatory risks (i.e. beyond five years) are less easy to evaluate. For example, the cost of capital that the Regulator may in future regard as appropriate for a 'low-risk' business, and/ or the relative weighting that the Regulator applies to what he believes to be the various 'cost-drivers', may vary. To create a pseudo-competitive environment, the Regulator may increasingly seek to incorporate output measures in his benchmarking of company performance, and hence penalise companies that fall below a given (normalised) performance band or target. In a truly competitive market, customers would simply switch brands, and poorly performing companies would lose market share.

Statutory and legal obligations arise in the form of Government primary and secondary legislation, and of course in the form of a 'common law' duty of care. For example, in the UK, primary legislation that impacts significantly on the electricity transmission and distribution businesses includes the Electricity Act, The Health and Safety at Work Act, and the New Roads and Street Works Act.

Examples of relevant secondary legislation include the Electricity Safety, Quality, and Continuity Regulations, The Construction (Design and Management) Regulations, and the Electricity at Work Regulations.

These statutory instruments set the framework for the operation of the industry, including the basis for deriving safety risk assessments, safety rules, and documented safe working practices.

What the World Class Asset Manager will do

- A good asset manager will understand the regulatory drivers and be able to interpret what needs to be done in terms of network management and investment in order to achieve regulatory performance targets as cost-effectively as possible. Performance targets are not always simple to specify, and this will become especially true as Regulators increasingly adopt inter-company benchmarking as a method for determining target setting.

- Increasingly, a world class asset manager will need to know how the assets of other companies are performing to identify his performance targets.

- A world class asset manager will take an active role in the process through which new regulations or licence requirements are formed (including regulatory impact assessments) to ensure that the impacts are understood, and that the risks are assessed, by Regulator and regulated alike.

- However, understanding the legislation and licence obligations, and translating this into new or revised policies and procedures, is only the beginning of the process. Implementation will involve many different parts of the company, and these will need support if they are to implement change effectively.

- A world class asset manager will understand and support change, and not simply hand over a 'plan' to a different part of the organisation.

Current Practice

Current regulatory and statutory requirements are generally well understood by asset management teams, but this is often not true of other parts of the organisation.

There is evidence that this can lead to a sub-optimal way of operating, and confusion between different departments as to the company's business obligations and objectives.

Learning Points

The links between devising a strategy and delivering it are becoming stronger in many organisations, but there is still room for improvement, particularly as the process gets closer to delivery in the field.

Whilst resource issues are now taken more seriously, the continuous process (or 'virtuous circle') from strategic planning to delivery - and post investment appraisal to strategic planning - does not always operate as effectively as it should.

A common understanding of strategy and clear lines of responsibility are needed between asset managers and asset owners, and between asset managers and service providers.

A thorough understanding throughout the organisation of the regulations and licence obligations, and of their relevance to the business, will facilitate the identification of opportunities that others will miss.

One support mechanism that can help achieve this alignment is that of Balanced Score Cards.

However, this depends critically on the process being properly cascaded throughout the organisation such that the targets that are being aimed for (say) in the field, are complementary to the high-level business targets that the company executive aspires to.

GET A LIFE!

John Howard (Jeff Roorda & Associates)
presents a template for

Assessing & Reporting
Asset Condition and Economic Life for Sealed Road Assets

REPORT TO COUNCIL

Objective

To assess the condition and economic life of sealed road assets using a representative sample of road assets.

Scope

This report covers the assessment of the condition and economic life of Council's sealed road assets of pavements and sealed surfacing for urban local, urban collectors, rural local and rural collector roads.

Background

Council's road asset stock comprises. *(Fill in with your own figures, these and others provided here are for illustration only)*

40 km of urban sealed local roads,
10 km of urban sealed collector roads,
250 km of rural sealed local roads
150 km of rural sealed collector roads
10 km of urban unsealed local roads
300 km of urban unsealed local roads
300 km of rural unsealed collector roads

Note:
Collector roads are those with traffic volumes greater than 500 v.p.d
Unsealed roads are not included in this condition and economic life assessment

Council's financial statements report the road asset class as at 30 June 20xx.

Current replacement cost	$xx,xxx,xx
Accumulated depreciation	$xx,xxx,xx
Written Down Value	$xx,xxx,xx

The depreciation expense for the period ending 30 June 2099 is $xx,xxx,xx

The asset class was recognised in council's accounts/revalued as at 30 June xxxx.

Council's accounting policy requires revaluation of infrastructure assets on a XX year cycle.

This condition and economic assessment is undertaken to provide data on the condition and remaining life of the asset class for revaluation in accordance with Council's accounting policy.

Current Economic Lives

Council currently uses the following economic life estimates

Sealed road pavements - 50 years
Sealed surfaces – 15 years

The economic life estimate was sourced from the IMEA National Asset Management Manual when the asset class was recognised. (*or your own source*)

Methodology

A sample of assets was selected to represent the asset stock. The sample was selected to represent asset condition and economic life variables of age and climate applying across the Council area. Details are shown in **Table 1** below.

Variable	Range
Age – records shown that council's assets range from 0 – 55 years	40 – 45 years 45 – 50 years 50 – 55 years
Climate – The council area has two distinct climatic regions.	**Wet** – rainfall over 500 mm per annum **Dry** – rainfall less than 500 mm per anum

A sample of roads aged over 40 years was selected to provide at least two road component lengths within each road class and variable. Council has a limited number of roads that are over 40 years of age and these may not cover all variable ranges.

The assessment samples are provided in Tables 2 and 3

The condition assessment for sealed road pavement and sealed surfaces was assessed by a panel of Council staff experienced in the maintenance, construction and renewal of pavements and sealed surfaces in xxxx District for over 30 years. Members of the assessment panel were:

(name, title, years and type of experience of your panel)

Condition assessment

The panel assessed the condition of sealed road pavements and sealed surfaces and by consensus estimated the remaining life for each of the pavements and sealed surfaces in the sample.

The age of each pavement and seal was added to the estimated remaining life to determine an estimate of economic life for each. The results are summarised in Tables 4 and 5 over the page.

Conclusions

The conclusions of the condition assessment and estimation of remaining life and economic life are.

1. The assessment panel concluded that the sample of sealed road pavements and sealed surfaces, although small in number was generally representative of the condition of the district road network.

2. The estimated economic life of the sample of sealed road pavements, based on the sample of pavements is

a. Urban sealed local roads 55 years
b. Urban sealed collector roads 55 years
c. Rural sealed collector roads 50 years
d. Rural sealed rural roads (dry climate) 60 years
e. Rural sealed rural roads (wet climate) 50 years

Table 2:
The assessment sample for pavements

Road Name	Local	Collector	Age (yrs)	Climate
Urban sealed				
Smith Street, Jones – White Sts, Bordertown	Ö		51	Dry
Jones Street, Smith – White Sts, Bordertown	Ö		43	Dry
White Street, Brown – Blue Sts, Keith		Ö	48	Dry
White Street, Blue – Green Sts, Keith		Ö	50	Dry
Rural sealed				
Silo Rd 2.4 – 3.5 km		Ö	45	Dry
Silo Rd 3.5 – 5.5 km		Ö	43	Dry
Tower Rd 1.5 – 3.1 km	Ö		52	Dry
Tower Rd, 3.1 – 6.3 km	Ö		51	Dry
Tower Rd 6.3 – 9.5 km	Ö		49	Dry
Tower Rd, 9.5 – 12.7 km	Ö		47	Dry
River Rd 1.5 – 3.1 km	Ö		48	Wet
River Rd, 3.1 – 6.3 km	Ö		46	Wet

Table 3: The assessment sample for sealed surfaces

Road Name	Local	Collector	Age (yrs)	Climate
Urban sealed				
Smith Street, Jones – White Sts, Bordertown	Ö		15	Dry
Jones Street, Smith – White Sts, Bordertown	Ö		12	Dry
White Street, Brown – Blue Sts, Keith		Ö	14	Dry
White Street, Blue – Green Sts, Keith		Ö	10	Dry
Rural sealed				
Silo Rd 2.4 – 3.5 km		Ö	13	Dry
Silo Rd 3.5 – 5.5 km		Ö	13	Dry
Tower Rd 1.5 – 3.1 km	Ö		16	Dry
Tower Rd, 3.1 – 6.3 km	Ö		17	Dry
Tower Rd 6.3 – 9.5 km	Ö		18	Dry
Tower Rd, 9.5 – 12.7 km	Ö		12	Dry
River Rd 1.5 – 3.1 km	Ö		17	Wet
River Rd, 3.1 – 6.3 km	Ö		16	Wet

Table 4: Condition, estimated remaining life and economic life—Pavements

Road Name	Local	Collector	Age (yrs)	Climate		Condition	Est rem. life	Est Ec. Life
Urban sealed								
Smith Street, Jones – White Sts, Bordertown	√		51	Dry		Good	10+	51+
Jones Street, Smith – White Sts, Bordertown	√		43	Dry		V Good	15+	58+
White Street, Brown – Blue Sts, Keith		√	48	Dry		Good	10+	58+
White Street, Blue – Green Sts, Keith		√	50	Dry		Fair	5	55
Rural sealed								
Silo Rd 2.4 – 3.5 km		√	45	Dry		Fair	5	50
Silo Rd 3.5 – 5.5 km		√	43	Dry		Fair	5	48
Tower Rd 1.5 – 3.1 km	√		52	Dry		Good	10+	62+
Tower Rd, 3.1 – 6.3 km	√		51	Dry		Good	15+	66+
Tower Rd 6.3 – 9.5 km	√		49	Dry		Good	10+	59+
Tower Rd, 9.5 – 12.7 km	√		47	Dry		Good	10+	57+
River Rd 1.5 – 3.1 km	√		48	Wet		Fair	5	53
River Rd, 3.1 – 6.3 km	√		46	Wet		Poor	2	48

Table 5: Condition, estimated remaining life and economic life—Surfaces

Road Name	Local	Collector	Age (yrs)	Climate		Condition	Est rem. life	Est Ec. Life
Urban sealed								
Smith Street, Jones – White Sts, Bordertown	√		15	Dry		Worn	2	17
Jones Street, Smith – White Sts, Bordertown	√		12	Dry		Good	5+	17
White Street, Brown – Blue Sts, Keith		√	14	Dry		Good	5	19
White Street, Blue – Green Sts, Keith		√	10	Dry		Good	5+	15
Rural sealed								
Silo Rd 2.4 – 3.5 km		√	13	Dry		Good	5	18
Silo Rd 3.5 – 5.5 km		√	13	Dry		Good	5	18
Tower Rd 1.5 – 3.1 km	√		16	Dry		Fair	2	18
Tower Rd, 3.1 – 6.3 km	√		17	Dry		Fair	2	19
Tower Rd 6.3 – 9.5 km	√		18	Dry		Poor	0	18
Tower Rd, 9.5 – 12.7 km	√		12	Dry		Good	5+	17+
River Rd 1.5 – 3.1 km	√		17	Wet		Poor	0	17
River Rd, 3.1 – 6.3 km	√		16	Wet		Fair	2	18

3. The estimated economic life of the sample of sealed surfaces, based on the sample of pavements is

a. Urban sealed local roads	17 years
b. Urban sealed collector roads	17 years
c. Rural sealed collector roads	18 years
d. Rural sealed rural roads (dry climate)	18 years
e. Rural sealed rural roads (wet climate)	17 years

4. The assessment panel concluded that the estimated economic lives for sealed road pavements and road surfaces more accurately represent the actual performance of sealed than the estimates of economic lives for these asset categories currently used by Council in financial reporting.

Recommendation

It is recommended that the following economic lifes be adopted by Council for sealed road pavements and sealed surfacings as at 30 June 2004.

A. Sealed road pavements

Urban sealed local roads	55 years
Urban sealed collector roads	55 years
Rural sealed collector roads	50 years
Rural sealed rural roads (dry climate)	60 years
Rural sealed rural roads (wet climate)	50 years

B. Sealed surfaces

Urban sealed local roads	17 years
Urban sealed collector roads	17 years
Rural sealed collector roads	18 years
Rural sealed rural roads (dry climate)	18 years
Rural sealed rural roads (wet climate)	17 years

(your name)
(your title)
(date)

.

Note the important elements of this methodology:

(1) A sample of roads only was chosen

(2) Good age data was available for the sample

(3) Sample was restricted to roads over 40 years where remaining life assessments can be reasonably accurate

(4) A panel of experienced council assessors (not just one, and not consultants who may not have a good understanding of local conditions). Council assessors are named and their qualifications given.

(5) Remaining life was determined by consensus of qualified people with experience in local operating conditions

(6) The report to council clearly steps out the methodology so that the answers finally arrived at are seen to be both logical and accurate and not arrived at by magic!

In the example given

Asset lives were extended from the generic lives previously used. This is not automatically the case but because generics tend to cautiously err on the short side of the range of possible lives, it is a very likely outcome.

Having got more accurate, council-relevant lives, the next step is to apply these lives to the **correct amount**, which is not necessarily the total replacement value.

See over page.

Are you overstating your depreciation?

Depreciating Only What Wears Out

(adapted from a presentation by John Howard, JRA)

Earthworks don't wear out so they are not depreciated.

Seal and Pavement do wear out and so they are.

The accounting principle is that only the elements that wear out are depreciated.

Simple.

So we depreciate Seal over its life (20 years in the example opposite) and Pavement over its life. (60 years in this example.) (Chart 1)

BUT WAIT!

What if the cost to renew—I.e. the 'Cost to Restore Service Level' at the 60 year mark is less than the TRV?

In this case we have a 'residual value'.

On the accounting principle of depreciating only what wears out, we should be depreciating to the residual level mark, as shown in Chart 2.

Chart 1

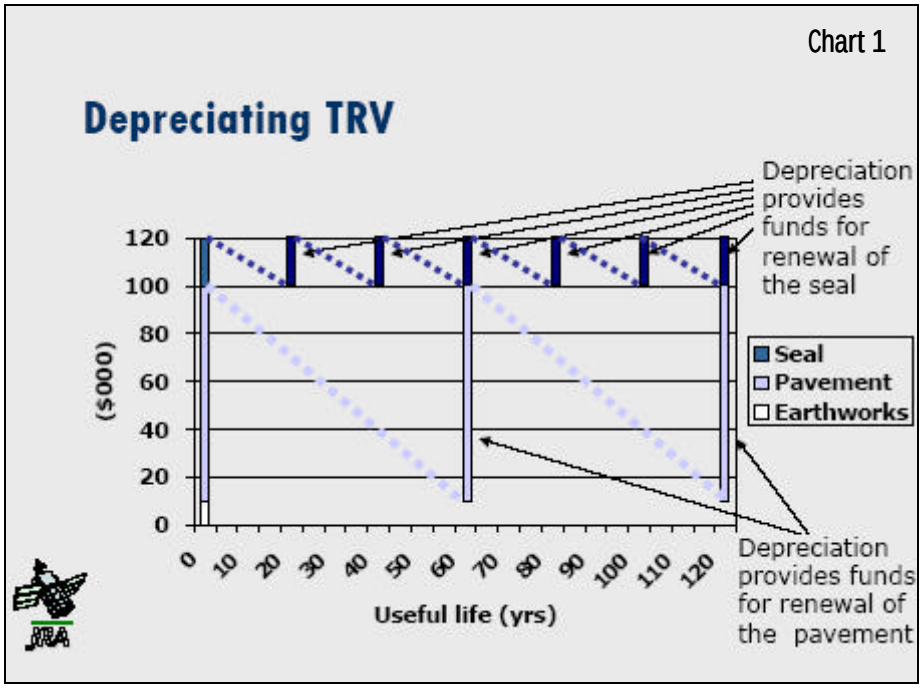
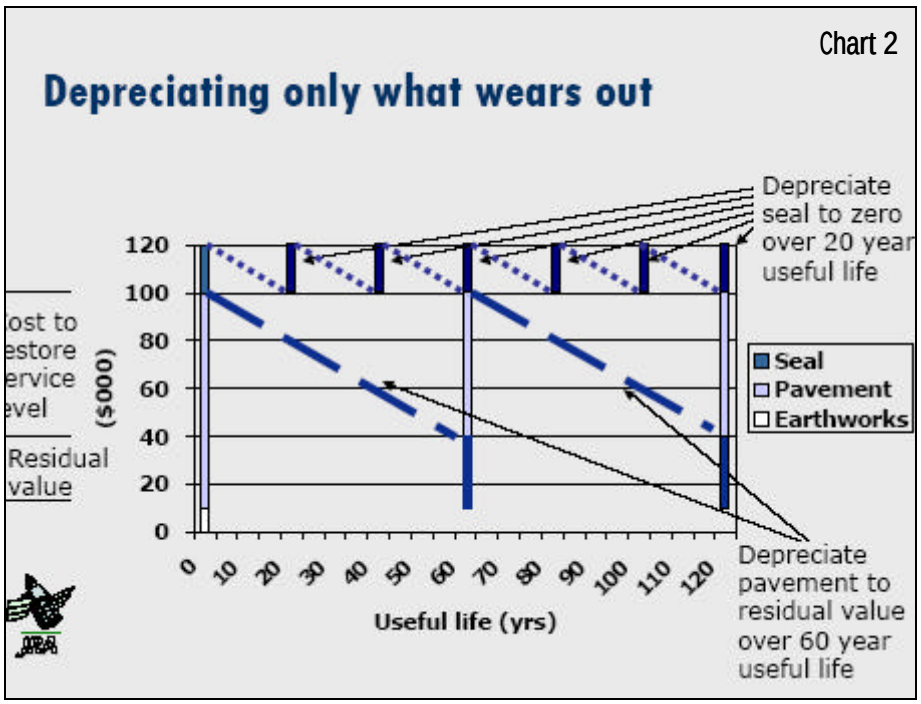


Chart 2



So, calculate your 'cost to restore', deduct from TRV to get 'residual value' and depreciate to there. The result will be a more accurate depreciation assessment—and your 'bottom line' will improve!