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Mr Hans Nailor  
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20 September 2002

Dear Mr Nailor

Financial Reporting Exposure Draft 29 — Property Plant and Equipment

This letter sets out Ofwat's comments on the above Exposure Draft, in the context of the water industry. Our comments relate specifically to the issue of renewals accounting raised in paragraph 38 ASB (iii) in the section on Questions for respondents.

The water industry currently applies the provisions in FRS15 Tangible fixed assets (paragraphs 97 to 99) which allow in certain circumstances the use of renewals accounting as a basis for the calculation of depreciation on infrastructure assets.

These provisions were introduced in FRS1 5 following detailed discussions with the industry on its treatment of infrastructure assets and in particular the use of the infrastructure renewals accounting. The arguments which lead to the inclusion of these provisions in the standard are still relevant. I attach a copy of our response to FRED 14 — Provision and contingencies which covered these in detail.


Infrastructure renewals accounting was adopted by the water industry in 1989. Prior to this the industry depreciated its infrastructure assets. This had however become very problematic and was open to manipulation. Infrastructure renewals accounting was introduced to remedy this.

-220 September 20002 Mr Hans Nailor

The current provisions of FRS1 5 therefore provide a practical solution to the issue of 'depreciation' on infrastructure assets for statutory accounting purposes. They have worked well and ensure consistency in the charges made to the profit and loss account with the regulatory accounts that we require the water companies to submit and which continue to use infrastructure renewals accounting. We continue to have reservations about the differing presentations in the balance sheet. The issue of consistency is particularly important in a regulated environment where such information is of wide interest. Any difference in treatment between statutory and regulatory accounts would undoubtedly make interpretation more difficult for users of accounts and significantly reduce transparency to the information available.

We strongly believe that the inclusion of the provisions on the treatment of infrastructure assets form a key component part of the application of the standard to the water industry. We ask that these are retained. The absence of guidance in FRS15 could be interpreted as a change in view by the Accounting Standard Board on the appropriateness of such an approach. It is therefore conceivable that it would prevent the industry from using renewals accounting as a method of estimating depreciation.

Yours sincerely

  
pp **Keith Mason**  
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17 October 1997

Dear Ms Callaway

#### **Financial Reporting Exposure Draft 14 - Provisions and Contingencies**

The following letter sets out Ofwat's comments on the above Exposure Draft, in particular in the context of the water industry.

You may not be aware that the water industry uses a long range normative charge when accounting for its infrastructure renewals expenditure. The attached paper 'The Long Range Normative Charge for Infrastructure Renewals' sets out the principles underlying renewals accounting and its application to the water industry.

Under this method, the infrastructure asset network is considered as a single system to be maintained in perpetuity rather than a collection of individual assets each with its own life and maintenance requirements. Capital expenditure on infrastructure renewals is not capitalised and depreciated, rather an infrastructure renewals charge is made to the profit and loss account. It is calculated as the average (over a number of years) of the forecast renewal expenditure required by the entire system of infrastructure assets to maintain serviceability to customers.

This charge takes the place of both depreciation and expenditure on repairs and is calculated so as to maintain the system of infrastructure assets in perpetuity with no loss of value or serviceability to customers. There is therefore no necessity for a depreciation charge for infrastructure assets. Any difference between the infrastructure renewals charge and the expenditure in any year is reflected in the balance sheet as a provision.

This method of accounting for infrastructure renewals expenditure was adopted by the water industry in 1989. Prior to this the industry conventionally depreciated its infrastructure assets. This had however, become very problematic and was open to manipulation infrastructure renewals accounting was introduced to remedy this.

## OFFICE OF WATER SERVICES

### THE LONG RANGE NORMATIVE CHARGE FOR INFRASTRUCTURE RENEWALS

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The LRNC is one way of making this estimate, but not the commonest way. However, it is intended to give the same answer in principle as the more usual methods of estimating. Let us look at the ordinary method first.

### **Route 1 - Ordinary depreciation**

The standard method for assessing depreciation involves first forecasting the life of the asset. Although actual physical life is important, the asset's useful economic life may be shorter than that and that is the life over which the fall in the value of the asset, from cost to any scrap **value**, must be charged against profits.

In economic terms, that loss in value (expressed in real terms) must be recovered out of income before the entity has made a profit. Recovery should be made period by period, according to how much of the value is lost in each period, and a second estimate is necessary to decide that.

Mostly, for all practical purposes it can be assumed that the loss occurs evenly over the life and so the expected loss of value is divided up evenly over the life and each period charged with a similar amount of the cost, i.e. depreciation for each period equals cost less residual value divided by total years of life.

What happens if the life is likely to be very long and there is great uncertainty about how long? Is there a better Way of arriving at this estimate of the annual charge to the Profit and Loss Account in such circumstances?

The use of infrastructure renewals accounting and the LRNC is an attempt to formulate a better way. It is important to understand that it is not an attempt to avoid charging depreciation. It is a different method of determining an appropriate annual charge for the phenomenon known as depreciation.

### **Route 2 Infrastructure renewals accounting**

A simple example serves to illustrate the principle.

Imagine a fleet of taxis. The owner runs five identical vehicles, one purchased in each succeeding year, each of which has a useful economic life of five years and (for simplicity only) a nil residual value.

In real terms, i.e. doing our calculations in £s of current value, not £s of the varying values at the time each vehicle was purchased, each year the owner will provide in his accounts for one-fifth of the cost of each vehicle. Each year, one vehicle will reach the end of its useful life and will be retired, to be replaced by a new successor.

**EXAMPLE 1 - STEADY STATE - assuming unchanged prices**

A taxi fleet consists of five vehicles, each lasting five years, one purchased each year. Cost each time = 100.

Year of Purchase	Cost @ Year 5	Cum Dep'n @ Year 5	Net @ Year 5	Annual Dep'n for Year 6	Cum Dep'n @ Year 6	Net @ Yr 6
Year 1	100	80	20	20	100	-
Year 2	100	60	40	20	80	20
Year 3	100	40	60	20	60	40
Year 4	100	20	80	20	40	60
Year 5	100	-	100	20	20	80
	500	200	300	100*	300	200
Year 6	100*					100
						300

**EXAMPLE 2 - STEADY STATE - assuming rising prices**

Fleet of vehicles as in Example 1, but costs over 5 years of ( say ) 100, 120, 130, 160 and 170 respectively. Cost in Year 6 has risen to 180. Shown in current cost terms for Year 6.

Year of Purchase	Repl. Cost Year 5@ Year 6 prices	Cum Dep'n Year 5 @ Year 6 prices	Net Year 5@ Year 6 prices	Annual Dep'n for Year 6	Cum Dep'n @ Year 6	Net @ Yr 6
Year 1	180	144	36	36	180	-
Year 2	180	108	72	36	144	36
Year 3	180	72	108	36	108	72
Year 4	180	36	144	36	72	108
Year 5	180	-	180	36	36	144
	900	360	540	180*	540	360
Year 6	180*					180
						540



# PILKINGTON

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Date: 22nd October 1997  
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Dear Ms Callaway,

## **FRED 14**

I realise that I am somewhat late responding to FRED 14, however, following discussions with technical people from some of the major accounting firms, there does seem to be a variety of opinions on the transitional requirements arising on the implementation of FRED 14.

It would be most helpful if the resultant standard had a section addressing transitional arrangements covering, specifically, the treatment of pre FRS X provisions no longer permitted.

The options would appear to be:

1. Treat as change in accounting policy. A purist approach which could mean that the profit and loss account s charged twice for the same transaction.
2. Credit 'disallowed' provisions to the profit and loss account.
3. Retain existing provisions until utilised to covet the transaction for which they were originally established. A pragmatic (and preferred approach).

Yours sincerely, - . . .

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For example, it seems illogical that under the proposed standard the cost of a relocation would not be recognised but the cost of a related lease termination would be. I

In conclusion, we have serious concerns that this proposed standard undermines the fundamental accounting concept of prudence.

Yours sincerely

  
P K Wood  
Deputy Finance Director



With the development of the regulatory regime and the Asset Management Plan, it was necessary to develop a more far-sighted view of future renewals expenditure anyway. While clearly that process is subject to all the uncertainties of any process of estimation, it is a process that takes full account of current knowledge and experience and one with which engineers are familiar and in which they have some confidence. The attractions of satisfying both reporting requirements and the industry's concerns over estimates with no grounding in real experience proved sufficient reason to encourage the adoption of the alternative of renewals accounting.

What remained was the need to codify and systematise the measurement of the necessary charge to the Profit & Loss Account, i.e. the depreciation substitute. Although some work has been done on this, the wide diversity of the charges that have emerged suggests that not everyone understands the basis on which the charge needs to be determined, or perhaps the criteria which it needs to meet, in order to be credible and satisfy the requirements of a renewals accounting system (assuming that there is no strong wish to return to trying to estimate depreciation by the adoption of arbitrary asset lives).

The charge for each period is not intended to be precisely what is actually spent. The actual timing of spend can be unpredictable, not least because the point at which any individual part of the segment fails and requires replacing is generally reckoned to be random. Over an entire system, the number of such random incidences of breakdown in any period is a more predictable figure, but still subject to external vagaries, for example extreme weather conditions. Any difference between actual spend and the long range charge, over or under, is included in the balance sheet as either a prepayment or an accrual.

#### **4. BACKLOG**

Some confusion tends to arise because of similarities between the LRNC and what is known throughout the industry as Initial Backlog.

The process of regulating the industry has been complicated by certain of the mechanisms inherited as a result of the privatisation process. One of these was the determination of an amount entitled Initial Backlog as at the start of the first period of regulation. It has proved a source of confusion, complicating the understanding of the LRNC - with good reason, because the expenditure involved in reducing Initial Backlog may be identical in kind to that involved in the LRNC. It is worth spending a moment on explaining the difference and how it works.

There are two reasons why this is important: first, because the continuing size of Initial Backlog remains an uncomfortable reminder of the original heroic assumption and a potential political stick with which to beat members of the industry for demonstrably not having their infrastructure assets up to new standards; and secondly, because any confusion between the two will distort the size of any LRNC accrual (or prepayment) and risk creating confusion when attempting to review forecasts of the necessary level of the LRNC at each Periodic Review.

## **5. PRACTICAL IMPLICATIONS FOR MEASURING LRNC**

We have looked at the underlying theory of renewals accounting and the focal role played by the LRNC in that theory. This section looks at what this means for the industry in practical terms when accounting for the LRNC, based both on the requirements of the theory and on the experience of the industry to date in operating renewals accounting.

### **5.1 Practical requirements for a credible LRNC**

The basic requirements for a credible renewals charge, the LRNC, may at this point be summarised as follows:

- i) it must be at broadly the same level of cost each successive year, in real terms; or, if there has been any material change in the size of the system from year to year, the renewals charge for subsequent years should continue to be broadly the same proportion of the carrying value of the system (in current cost terms). \*

Other possible reasons for variation would include technological change and the imposition of new standards of service. The former may presently be discounted, because technological change is not predicted to have any noticeable impact on the infrastructure assets of this industry in the foreseeable future. The latter, new standards of service, will impose new levels of maintenance from time to time, and the charge for maintaining them will need to be forecast separately as a discrete element of the renewals charge and, like the basic charge, might be expected to remain a constant in real terms, for the same reasons.

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\* Conceptually, there might also be an expectation that proportions would be broadly similar across the industry, but it is possible that differences of approach to planning renewals might be capable of accounting for consistent differences between companies.

Critical to the determination of the LRNC is the categorisation of renewals and maintenance expenditure described in RAG 2, which focuses particularly on the REVENGE classification, distinguishing between the REV (Revenue) element and the ENGE (enhancement, growth and efficiency, i.e. capitalisable) elements. Some points which impact upon the measurement of the LRNC include:

i) operating costs described in RAG 2 as 'routine maintenance expenditure which is not in the AMP and which arises in a reactive way on a day to day basis'. It has tended to be assumed that, because this does not form a part of REV, it does not form part of the LRNC.

This is not logical as it is bound to constitute expenditure intended to restore infrastructure assets to full operational condition. To the extent that provision is made in the Asset Management Plan, and hence in price limits, for a certain quantity of repair work of random incidence (eg bursts), it is planned. To the extent that more of such work has to be undertaken in a period than had been budgeted for, it is unplanned i.e. has occurred Sooner than expected.

By definition, it will therefore have been anticipated in principle as a part of a future year's LRNC. Occurring now, it reflects only a timing difference in the LRNC, a prepayment. In the event that such expenditure happened to vary widely from year to year, failing to include it in the LRNC could either account for the LRNC varying in size or, where the LRNC is correctly provided for as a constant, distorting the accrual or prepayment by effectively double-counting this expenditure.

ii) proportional allocation. Some expenditure designed to enhance the system necessarily involves the early replacement of parts of the existing system, and guidance is given in RAG 2 on how to allocate the overall cost between REV and ENGE, i.e. LRNC and capital cost.

Where this occurs, the REV element is again merely a bringing forward of replacement expenditure anticipated at some future point in the LRNC. This will be a recurring feature every year, and will therefore be a normal element of the LRNC for as far into the future as we can see. Unless this element of REV cost is expected to be quite abnormally large in any year or over several years, it should not distort the constant nature of the LRNC.

There may be practical distortions occurring if there is any doubt over consistent application of proportional allocation between the planning stage and accounting for the actual expenditure. Unless there are safeguards in place in each company's system to check that planned schemes involving proportional allocation are in fact accounted for in the event in the same way as they were included in the LRNC, it is possible that an accumulation of non-reversing differences could build up, which would be a source of concern.

There is no guarantee that twenty years is necessarily long enough for a wholly confident prediction of an LRNC. If engineers' experience of their system leaves them concerned that a twenty-year forecast of renewals and maintenance expenditure is inadequate, particularly if they confidently anticipate a heavy peak of expenditure in subsequent years, then it is necessary to improve the quality of the forecast. This would be achieved by extending the time-frame of forecasting the LRNC.

In extremis, theory would be satisfied by reverting to the more primitive method of predicting a physical life for the system and calculating the size of the arithmetic depreciation charge that would result - but this would be adopted if, but only if, that was the only method in which the engineers felt they could have confidence, the opposite of the view which led to the adoption of renewals accounting in the first place. (Physical life would be the critical determinant because nobody questions the idea that the economic useful life of the water and sewerage systems is indefinite. The physical life that one would be seeking would be the length of the life-cycle over which the major part of the system will need to be replaced.)

#### **5.4 How is indention for price change handled?**

As we have seen, the LRNC should in principle be the same in real terms every period, for an unchanged system and unchanged service standards. In money terms of course it will vary as prices change. In the current cost accounts, opening balances expressed at last year's prices must be re-expressed in terms of this year's prices to be meaningful, hence the indexing forward, using the Retail Price Index (RPI), of all fixed asset gross values and, for non-infrastructure assets, aggregate depreciation brought forward.

Any LRNC accrual (the provision for renewals expenditure not yet spent) or prepayment is similarly re-expressed into  $L$ 's of that year's spending power as it is brought forward each year as part of working capital.

The re-expression of all these items (gross asset values, accumulated depreciation and accrued provisions for both LRNC and Initial Backlog) into  $L$ 's reflecting the current year's price levels using the RPI produces a total increase in net assets which is taken to reserves in the current cost regulatory accounts. No part of it is credited or debited to the Profit & Loss Account because it does not represent any gain or loss to either members or customers. (It is similar to the translation of items from one currency to another, but without any commission on the transaction!).