COSTING PRINCIPLES TO APPLY TO WESTNET RAIL

DRAFT OF THE DETERMINATION OF

THE WESTERN AUSTRALIAN
INDEPENDENT RAIL ACCESS REGULATOR

IN ACCORDANCE WITH THE REQUIREMENTS OF
SECTION 46 OF THE RAILWAYS (ACCESS) CODE 2000

28 JUNE 2002

Contents

Abbreviations used

Act – Railways (Access) Act 1998

ARTC – Australian Rail Track Corporation

ATC - Australian Transport Council

Code – Railways (Access) Code 2000

CPI – Consumer Price Index

DORC – Depreciated Optimised Replacement Cost

GRV – Gross Replacement Value

GTK – Gross Tonne Kilometres

IPART – Independent Pricing and Regulatory Tribunal (NSW)

KPI – Key Performance Indicator

MEA – Modern Equivalent Asset

MPM – Major Periodic Maintenance

ORAR – Office of the Rail Access Regulator

QCA – Queensland Competition Authority

QR – Queensland Rail

ORC – Optimised Replacement Cost

RIC – Rail Infrastructure Corporation (NSW)

WACC – Weighted Average Cost of Capital

WNR – WestNet Rail

Opportunities for further comment

Interested parties are invited to examine the draft of this Determination and provide comments to the Regulator by 26 July 2002.

The Regulator will consider the comments received in finalising the Determination. It is anticipated that the Determination will be finalised by 9 August 2002.

When finalised, this Determination is the mechanism by which the Regulator intends to give effect to Section 46 of the *Railways (Access) Code 2000* ("the Code").

The Determination requires WestNet Rail (WNR) to address a number of issues and implement changes to its Costing Principles to the satisfaction of the Regulator. If WNR is not willing to do so, the Regulator may determine what are to constitute the Costing Principles under Section 46(2) of the Code.

In subsequent discussions, WNR has already agreed to implement a number of the suggested changes. Even so, all of the required amendments have been fully documented in the Determination so that stakeholders can gauge the changes that are being required of WNR on its Costing Principles submission as lodged with the Regulator in November 2001.

As soon as they are approved, the Costing Principles will be made publicly available on the Office of the Rail Access Regulator's website. Section 9(1)(c)(iii) of the Code also requires WNR to provide an access seeker with a copy of the Costing Principles within seven days after a proposal for access is received.

The Regulator will be developing a set of key performance indicators in consultation with WNR to assess and monitor the effectiveness of the Costing Principles, and invites suggestions on the composition of these indicators.

As soon as the Costing Principles Determination is finalised, the Regulator will commence the determination of the floor and ceiling costs of four nominated routes as required under Clause 9, Schedule 4 of the Code - Midland to Kalgoorlie, Kwinana to Bunbury, Leonora to Kalgoorlie and Kalgoorlie to Esperance.

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1. Introduction

WestNet Rail (WNR) is the principal provider of "below" rail freight infrastructure in Western Australia, covering approximately 5,000 kilometres of track in the State's southwestern corner of Western Australia. WNR is a subsidiary of the Australian Railroad Group (ARG), a company owned 50:50 by Wesfarmers and Genesee Wyoming. ARG also has another subsidiary company, Australian Western Railroads (AWR), which provides above rail services in Western Australia.

Section 3 of the WA *Railways (Access) Act 1998* ("the Act") defines a "railway owner" to mean the person having the management and control of the use of the railway infrastructure. Within this context, WNR is considered to be the railway owner for the Western Australian non-urban railway infrastructure.

Under Section 46 of the *Railways (Access) Code 2000* ("the Code"), WNR is required to obtain the Regulator's approval for the Costing Principles it is proposing to implement. Costing Principles as defined in Section 46 of the Code refer to a statement of principles, rules and practices that are applied:

- to determine the floor and ceiling price tests; and
- to keep and present the railway owner's accounts and financial records pertaining to the determination of costs for the floor and ceiling price tests.

In early November 2001, WNR submitted its draft Costing Principles arrangements to the Regulator. It should be noted that the Act and the Code do not require the Regulator to publicly consult on the determination of Costing Principles, other than in the following two related areas:

- The calculation of the Weighted Average Cost of Capital (WACC) for the railway infrastructure at certain intervals – Clause 3, Schedule 4 of the Code;
- The calculation of the floor and ceiling costs of routes for which a proposal is likely to be made to the railway owner – Clause 9, Schedule 4 of the Code.

Even though the determination of the Costing Principles does not include a calculation of the WACC or the floor and ceiling costs, the Regulator has decided to invite submissions on the WNR's Costing Principles proposal prior to approving or amending it. On 17 November 2001, the Regulator published in *The West Australian* and *The Australian* newspapers a notice describing the relevant Costing Principles issues, with details on where further information can be obtained and inviting submissions on these issues. After granting an extension in the submission deadline, the closing date for submissions was 11 January 2002.

Twelve public submissions were received on WNR's Costing Principles arrangement (refer to Appendix 1 for the list of respondents). Two respondents also provided further additional information. The submissions are available on the Office of the

Rail Access Regulator's website (www.railaccess.wa.gov.au) along with WNR's response to the submissions.

The Costing Principles Determination focuses on the establishment of principles, rules and practices that are applied to determine the floor and ceiling price tests, and to keep and present the railway owner's accounts and financial records pertaining to the determination of these costs. Quantification of the floor and ceiling costs and assessment of whether WNR's costs are appropriate are not a part of this Determination but will be addressed by the Regulator's upcoming Determination under Clause 9, Schedule 4 of the Code, which will be made publicly available for comment.

In preparation for the Clause 9 of Schedule 4 Determination, the Regular has commissioned PricewaterhouseCoopers to audit the WNR Costing Model. A summary of the audit report is available for information on the Office of the Rail Access Regulator's website (www.railaccess.wa.gov.au).

The Regulator has also noted the number of comments from the public submissions on pricing-related matters, including access charges and revenue allocation. While these are important issues, they are considered to be outside the scope of this Determination. Pricing Principles in the WA Railways Access Regime are detailed in Schedule 4 of the Code, and in particular under Clause 13 of that Schedule. Nevertheless, the Regulator is prepared to consider specific Pricing Principles issues if they are brought directly to the Regulator's attention.

A number of submissions have suggested that the Over-payment Rules be incorporated as an attachment to the Costing Principles Determination and released for public comment. Interested parties should be advised that the Over-payment Rules Determination has been released concurrently with the Costing Principles Determination and it is available for public comment.

As a final point of clarification, under Section 7 of the Act, access agreements executed prior to 1 September 2001 are not affected by the Code unless the parties agree to have the agreement covered by the Code. Furthermore, third party operators and WNR can at any time agree to negotiate "outside" the Code. In these instances, the Costing Principles may not necessarily apply to the individual operators concerned. However, their costs will be included in setting the Regime's floor and ceiling levels and their revenue in the Over-payment Rules.

2. The WA Legislative Costing Principles Requirements

The key legislative requirements in relation to Costing Principles are summarised as follows:

Costing Principles (Section 46 of the Code)

The Railway Owner is to submit the Costing Principles to the Regulator for approval as soon as possible. Section 46(5) specifies that the Costing Principles must be consistent with the Corporations Law relating to financial administration.

Transitional Provisions (Section 52 of the Code)

For the railway infrastructure associated with the non-urban network as listed in Clauses 1 to 19, Schedule 1 of the Code, the WACC is 8.2 percent. This WACC is to apply until revised by the Regulator by no later than 30 June 2002 and every year thereafter. Although not specified in the Code, the WACC, which is derived from the 1999 Macquarie Bank review, is expressed as a real pre-tax value[1].

Until the Costing Principles are in force, the railway owner will, after receiving a proposal for access, provide the access seeker with a statement showing the principles that have been applied in determining the costs for each route section on which the floor and ceiling price for the proposed access have been calculated.

Definition of costs (Clauses 1 and 2, Schedule 4 of the Code)

All costs referred to under the Code are those that would be incurred by adopting efficient practices in the provision and management of railway infrastructure including the practice of operating a particular route in combination with other routes for the achievement of efficiencies.

Incremental costs are the operating costs and, where applicable, capital costs and overheads that the owner would be able to avoid in respect of the 12 months following the proposed access.

Operating costs are the train control, signalling and communications, infrastructure maintenance, train scheduling, emergency management and information reporting costs. The cost of maintaining the railway infrastructure is to be calculated on the basis that cyclical maintenance costs are evenly spread over the maintenance cycle. All cost items are to be based on the costs that would be incurred if the infrastructure were replaced using modern equivalent assets (MEA).

[1] Western Australia Rail Access Regime Independent Assessment of Maximum Rate of Return on Rail Infrastructure, Macquarie Bank Limited, 23 August 1999, p 3.

Capital Costs are the costs comprising both the depreciation and risk-adjusted return on the relevant railway infrastructure. It is to be determined using an annuity formula by applying the Gross Replacement Value (GRV) of the infrastructure as the principal, the WACC, and the economic life in years. The GRV of the railway infrastructure is calculated as the lowest current cost to replace existing assets with assets that have the capacity to provide the level of service that meets the actual and reasonable projected demand and are if appropriate, MEA.

Total Costs include the total of all operating and capital costs and overheads attributable to the performance of the access-related functions of the owner.

Determination of WACC (Clause 3, Schedule 4 of the Code)

The Regulator is required to determine, as at 30 June in each year, the WACC for the railway infrastructure associated with the non-urban network. In 2003 and every five years thereafter, the Regulator is to publicly consult when determining the WACC.

Nature of costs (Clause 4, Schedule 4 of the Code)

All costs are to be those that would be incurred by adopting efficient practices for the provision of railway infrastructure, including the practice of operating a particular route in combination with other routes to achieve efficiencies.

Allocation of costs to determine the floor (Clause 7, Schedule 4 of the Code)

The floor price of a route and associated railway infrastructure is the incremental costs resulting from the combined operations of all operators and other entities on that route and use of that infrastructure.

Allocation of costs to determine the ceiling (Clause 8, Schedule 4 of the Code)

The ceiling price of a route and associated railway infrastructure is the total costs attributable to that route and that infrastructure.

Determination of the floor and ceiling costs on routes for which access proposals are likely to be made (Clause 9, Schedule 4 of the Code)

The Regulator will be required to nominate the routes which the Regulator considers that proposals for access are likely to be made, and ask the railway owner to make an initial determination of the floor and ceiling costs of these routes. The Regulator will need to make a determination on these costs and will seek public comment before making the determination.

Determination of the floor and ceiling costs on routes which have not been assessed under Clause 9 (Clause 10, Schedule 4 of the Code)

When a proposal is made on a route where the floor and ceiling costs have not previously been determined by the Regulator, the railway owner will be required to

notify the Regulator of its costs. The Regulator will either approve the railway owner's determination or make an appropriate determination of the costs. In both instances, the Regulator may seek public comment on the determination, as long as the time limit imposed on the railway owner to present to the operator a draft access agreement for consideration is not breached. This time constraint can be waived by the operator who is seeking access.

Review and re-determination of costs (Clause 12, Schedule 4 of the Code)

If it is considered that there is a material change in the circumstances that existed when the floor and ceiling costs were determined, the Regulator may review the costs and make a fresh determination. The Regulator may also give public notification of such a review and seek public comment on the determination.

Competition Principles (Section 20(4) of the Act)

The Act also provides a framework within which the Regulator's determination required under Section 46 of the Code is to be made.

Subsection 20(4) states:

> *In performing functions under this Act or Code, the Regulator is to take into account –*
>
> *(a) the railway owner's legitimate business interests and investment in railway infrastructure;*
>
> *(b) the railway owner's costs of providing access, including any costs of extending or expanding the railway infrastructure, but not including costs associated with losses arising from increased competition in upstream or downstream markets;*
>
> *(c) the economic value to the railway owner of any additional investment that a person seeking access or the railway owner has agreed to undertake;*
>
> *(d) the interests of all persons holding contracts for the use of the railway infrastructure;*
>
> *(e) firm and binding contractual obligations of the railway owner and any other person already using the railway infrastructure;*
>
> *(f) the operational and technical requirements necessary for the safe and reliable use of the railway infrastructure;*
>
> *(g) the economically efficient use of the railway infrastructure; and*
>
> *(h) the benefits to the public from having competitive markets.*

The nature of the decision-making power given to the Regulator under Section 46 is such that it is mandatory in so far as the Regulator must exercise it by taking into account all the factors listed in Section 20(4). However, under Section 46 its

application is discretionary in so far as the Regulator may allocate such weight to each of the factors listed in Section 20(4) as the Regulator considers appropriate for the particular case.

3. Costing Model In The WA Railways Access Regime

The railway owner is required to negotiate access prices between a floor and a ceiling as specified in Clauses 7 and 8, Schedule 4 of the Code. The floor and ceiling approach attempts to prevent a railway owner from extracting monopoly profits, and ensures that prices are not set so low or so high that some rail operators cross-subsidise the services provided to others.

The floor is determined by the incremental costs resulting from the operations on the section of a route and use of the infrastructure. "Incremental costs" is defined in Clause 1, Schedule 4 of the Code as the sum of the operating costs and, where applicable, the capital costs and the overheads resulting from the access seeker's operation that the railway owner would be able to avoid in respect of the 12 months following the commencement of access.

Similarly, the ceiling is derived from the total costs attributable to the section of a route and the use of the infrastructure. Total costs is defined in Clause 1, Schedule 4 of the Code as the total of all operating, capital and overhead costs resulting from the provision of access-related functions by the railway owner.

A unique approach in the WA Rail Access Regime ("the Regime") is its definition of "capital costs". Clause 2, Schedule 4 of the Code defines "capital costs" as costs:

- Comprising both the depreciation and risk adjusted return on the relevant infrastructure not including land.
- To be determined as the equivalent annual cost or annuity for the provision of the railway infrastructure, and by applying the GRV as the principal, the WACC as the interest rate and the economic life as the number of periods.

The GRV is to be calculated as the lowest current cost to replace existing assets with assets that have the capacity to provide the level of service that meets the actual and reasonably projected demand and are, if appropriate, MEA.

A GRV that is a MEA may be considered similar to the optimised replacement cost (ORC) value of a conventional depreciated optimised replacement cost (DORC) valuation. In other words, a GRV assuming MEA could have the same as a DORC value less accumulated depreciation.

The components of the floor and ceiling prices and the approach to estimating these prices are not based on actual costs or the actual network but rather the hypothetical GRV of a MEA, assuming efficient practices. There is no obligation for the railway owner to provide a network that is MEA or to adopt the specific maintenance practices assumed in the regime as its actual practices. However, Clause 13(c)(i), Schedule 4 of the Code requires the prices for access to reflect the standard of the

infrastructure concerned and the operations proposed to be carried on by those using the network.

Schedule 2 of the Code defines a “route section” as a section of the railway network that has been divided for management and costing purposes. WNR has defined the railway network into the following route sections based on differences in track characteristics and traffic densities. Each route section contains its own derived ceiling and floor costs and it is between these costs that access prices will be negotiated. It should be noted that a negotiated route could equate to a route section (or part thereof) or be a combination of several route sections.

Midland to Kalgoorlie (seven route sections)

- Midland - Millendon Junction
- Millendon Junction - Toodyay West
- Toodyay West - Avon Yard
- Avon Yard - West Merredin
- West Merredin - Koolyanobbing
- Koolyanobbing - West Kalgoorlie
- West Kalgoorlie - Kalgoorlie

Kalgoorlie to Esperance (four route sections)

- West Kalgoorlie - Hampton
- Hampton - Kambalda
- Kambalda - Salmon Gums
- Salmon Gums - Esperance

Kalgoorlie to Leonora (two route sections)

- Kalgoorlie - Malcolm
- Malcolm - Leonora

Kwinana to Bunbury Inner Harbour (nine route sections)

- Kwinana - Mundijong Junction
- Mundijong Junction - Mundijong
- Mundijong - Pinjarra
- Pinjarra - Alumina Junction
- Pinjarra East - Pinjarra South
- Pinjarra - Wagerup
- Wagerup - Brunswick Junction

- Brunswick Junction - Picton Junction
- Picton Junction - Bunbury Inner Harbour

The Regulator agrees to the above division of the Network (on the condition that there are no compelling objections to WNR's definition from public submissions).

The above route sections may be refined over time as required.

4. Discussion Of Issues

4.0 Introduction

Issues raised in public submissions regarding WNR's draft Costing Principles that were considered significant are discussed under the following headings:

- General Principles & Preamble
- Operating Costs
  - ◊ Definition and application of efficient costs
  - ◊ Economic life, major periodic maintenance and cyclical maintenance costs
- Asset Valuation
  - ◊ Gross Replacement Value for Modern Equivalent Assets
  - ◊ Inclusion of design, construction and project management fees
  - ◊ Inclusion of interest costs during construction
- Total Costs
  - ◊ Annuity formula for calculation of capital costs
  - ◊ Weighted average cost of capital
  - ◊ Allocation of costs for determining floor and ceiling costs
  - ◊ Escalation of ceiling costs
  - ◊ Defining minimum service quality for floor and ceiling costs

The following discussion commences with a summary of WNR's position under each of the above headings and the comments received from the public consultation process. WNR's response to the public comments is then provided, followed by the Regulator's views and comments.

4.1 General Principles & Preamble

i) *Summary of WNR's Proposal*

- In the preamble to its submission, WNR recognises its legislative responsibilities to adopt appropriate Costing Principles.
- WNR states that its primary role is in access related functions and it does not operate in the above rail market.

ii) *Comments received in the public consultation process*

- The Costing Principles require an objective and a purpose.

- The Costing Principles need to provide far greater detail on the rules and practices of floor and ceiling cost calculation.

- Third party operators and end customers seek an access pricing system that prevents monopoly profits and encourages a fair above rail price and service competition that will aid economic growth and development. Balanced against this is the need of WNR to obtain adequate revenue to ensure business viability, enable self-funding of prudent new investments, ensure the ability to operate safely, and provide a track of sufficient quality.

iii) *WNR's response to the public submissions*

- No further information has been provided.

iv) *Regulator's views and comments*

- The Costing Principles as submitted by WNR require an objective and a purpose and that greater details as outlined in subsequent sections are needed for the purposes of calculating the floor and ceiling costs.

4.2 Operating Costs

4.2.1 Definition and application of efficient costs

i) *WNR's position*

- WNR believes that as it is tendering out a substantial volume of its maintenance work that it is operating at efficient costs.

ii) *Comments received in the public consultation process*

- All submissions have suggested that WNR's actual costs are irrelevant. Costs for access pricing need to be based on the efficient costs that would be incurred for a MEA network and these would be significantly different from the existing network. WNR has relied on current actual costs that are not efficient, are not reduced to reflect a new network, and are not based on the MEA network.

- Outsourcing alone is an insufficient demonstration of cost efficiency, especially as several of the contracts (and the associated practices) were originally established under the previous Government ownership.

- All costs including the outsourced costs, internal operating (signals and communications maintenance) and the overheads (for both ARG and WNR) require an independent engineering review of efficiency and benchmarking against comparable entities. This Determination should also set the assumptions for the hypothetical MEA network. Where WNR has a cost

structure above best practice, the best practice unit rates should be the basis of calculation for the purpose of access pricing.

- One submission proposed an interpretation that efficient costs be calculated on the basis that the network is permanently new (rather than starts as new) and hence MPM is never required. This interpretation narrows any gap between a DORC approach and GRV and precludes over recovery of MPM.

iii) *WNR's response to the public submissions*

- WNR has advised the Regulator that its maintenance costs are based on a new asset and MPM is set at zero.

iv) *Regulator's views and comments*

- Clause 4, Schedule 4 of the Code states that the costs referred to in Schedule 4 are intended to be:

  The costs that would be incurred by a body managing the railways network and adopting efficient practices applicable to the provision of railway infrastructure, including the practice of operating a particular route in combination with other routes for the achievement of efficiencies.

- In this Determination, the Regulator will refer to these costs as "efficient costs".

- Under the Code, both the floor and ceiling costs will need to be calculated on the efficient costs of providing the MEA network.

- The efficient costs that are included in access prices will have to be set based on the efficient cost of maintaining the MEA network rather than the existing network. There may be parts of the existing WNR network that the Regulator will consider to be MEA, and these will be determined in the Clause 9 of Schedule 4 Determination.

- Determining whether WNR is operating at efficient levels will require the need to:

  ◊ Determine the key cost components and associated KPIs for measurement of efficiency;

  ◊ Identify, define and incorporate best practice performance and processes into the Costing Principles, which are then periodically updated;

  ◊ Develop and update annually an efficient cost model, based on operating the GRV network, that has the functional capacity to provide concise KPI benchmarking reports, so as to compare results against those achieved by other track owners;

  ◊ Complete a gap analysis to reconcile differences in results.

- For the parts of the network that WNR is able to demonstrate are MEA, common proxies for estimating efficient costs could be the unit cost levels quoted in competitive tenders for providing comparable services. However, unit rates will need to be assessed against the number of units consumed to ensure operating (productivity of inputs) and technical (type and combination of inputs) efficiency. Benchmark unit rates will also require adjustment for environmental factors as well as for factors such as the scope of the contract and the time elapsed since it was awarded.

- For the parts of the WNR network that are not considered MEA, the Regulator will benchmark their costs against other comparable assets.

- The following have been suggested by the Regulator's independent railway engineer as areas that could be considered in assessing whether WNR is operating at efficient costs:

  ◊ Inventory minimisation strategies;

  ◊ Cascading materials to low volume routes;

  ◊ Strategies to reduce contamination of ballast and sleepers;

  ◊ Strategies to maximise track machine utilisation (eg. extended or double shifts);

  ◊ Multi-skilling, particularly in the trackside systems workforce to permit interchangeability of work function;

  ◊ Maintenance planning for at least 5 years into the future so that expenditure programs are optimised;

  ◊ Progressively increase ballast depth to a standard of 300 mm;

  ◊ Reduce overhead costs to less than 10 percent of total costs;

  ◊ Outsourcing contract arrangements that provide incentives for improvement to asset condition;

  ◊ Customer consultation to extract their views on areas where maintenance efficiencies are possible.

  In addition, the key operating cost drivers should include:

  ◊ The frequency of services, eg. track used for daily passenger services typically requires daily inspection whereas grain lines are often only used for a small part of the year and receive far fewer inspections;

  ◊ Traffic density, eg. GTK;

  ◊ Average speed for freight and passenger services;

  ◊ Actual average axles load relative to maximum axle load;

  ◊ Climate related factors, eg. higher costs can be caused by extreme heat causing rail buckling or higher rainfall increasing the rate of degradation;

- ◊ The safety, quality and reliability requirements of customers and other stakeholders.

- It should be noted that efficient costs is a dynamic concept with organisations at best practice continuing to make further efficiency gains through implementing further innovations and productivity enhancements. Accordingly, trends in efficient costs will need to be monitored over time, and this process should take into account past productivity improvements, and any industry changes likely to influence future operating costs.

4.2.2 Economic life, major periodic maintenance and cyclical maintenance costs

i) *WNR's position*

- WNR has evaluated the economic lives of its infrastructure based on the application of MEA with new components and key determinates such as environmental factors. It has identified the economic lives of the assets to be adopted.

- WNR's maintenance regime has been set to allow the assets to reach its economic life. WNR has assumed that the asset is life expired at the end of the period and has no salvage value.

- Maintenance costs, which have been assessed by route section, are divided by the individual economic lives to determine an annual maintenance cost. Unit rates are based on WNR's outsourced maintenance contracts, and WNR's in-house signalling and communication costs have been applied.

ii) *Comments received in the public consultation process*

- Most submissions view the proposed economic lives as too low and have not been adequately increased to reflect the life extension effects of MPM.

- A common concern is that recovery of both depreciation as a component of "capital cost" annuity and MPM is double counting as MPM enables the network to be retained in fit for purpose condition in perpetuity.

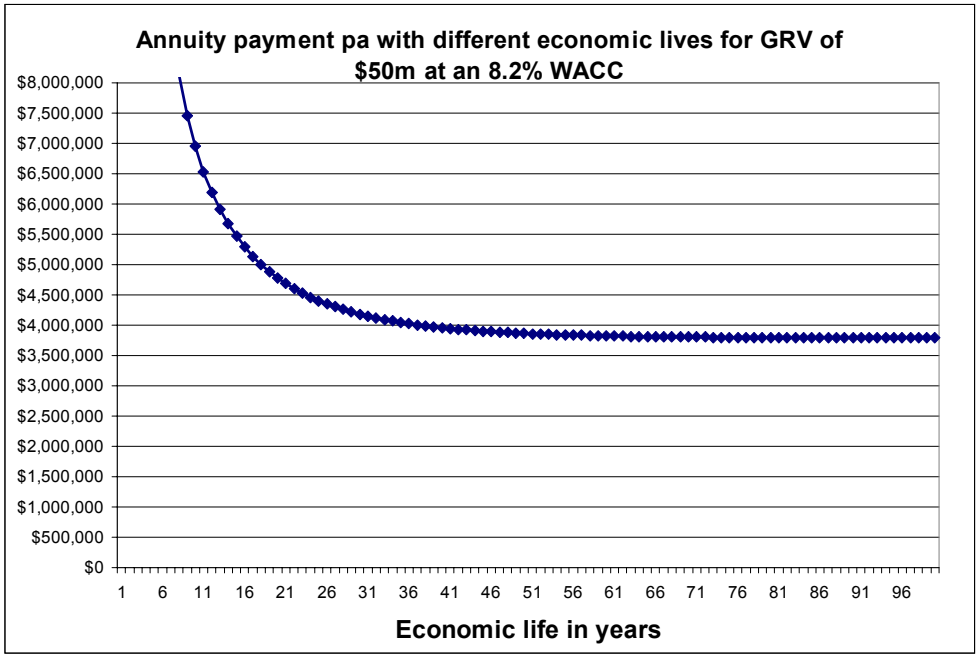
- There were also concerns that MPM cycles (and costs) are based more on the existing network and do not reflect the new status of the network or the MEA nature of the network. These factors would reduce the extent of MPM and delay the need to commence most MPM programs until between years 5 and 10.

iii) *WNR's response to the public submissions*

- Following the concerns raised in public submissions, WNR has advised the Regulator that its maintenance costs are based on a new asset and MPM is set at zero.

iv) *Regulator's views and comments*

- The Code requires the use of an annuity for calculating the capital cost component of the ceiling. The graph below illustrates that after around 30 years of life for a given GRV the impact is small.



- An examination of the economic lives presented in WNR's submission indicate that they are broadly consistent with those used by, for example, the Independent Pricing and Regulatory Tribunal (IPART) for the Rail Infrastructure Corporation (RIC)[2] and by the Queensland Competition Authority (QCA) for Queensland Rail (QR)[3]. On the whole, the Regulator considers WNR's economic life assumptions to be reasonable with some further analysis and discussion required for only a few asset classes (refer to Section 5 of the Determination).

- How regularly and how effectively an asset is maintained will have a strong influence on its economic life. Accordingly, it is important to ensure that the economic lives are set based on an assumed maintenance program. A complexity in establishing this link is that the Code requires maintenance costs to be based on MEA, which are significantly less than a mid-life asset. Hence, the maintenance costs will have to be based on activity frequencies required for a new asset, and the asset's life will be based on conventional maintenance frequencies.

[2] IPART, Aspects of the NSW Access Regime, Final Report, 1999, p 44.
[3] QCA, Draft Decision on QR's Draft Undertaking, Volume 3, December 2000, p 166.

- The Regulator has noted the concern that the inclusion of both MPM and depreciation (when MPM can provide track in perpetuity) unfairly inflates ceiling prices, and WNR's subsequent advice that it has agreed to set MPM at zero.

- The term MPM is not actually used in the Code. However, it is widely utilised within the rail industry and the Regulator intends to use the following definition:

  Major programmed activities which renovate the railway infrastructure to retain it in a functional condition and are completed on route sections at intervals of more than one year. Certain MPM is required due to usage volume such as large scale re-railing, rail grinding and re-surfacing (replacing the top layer of ballast and then tamping to restore the alignment). Other MPM is required due to time such as re-signalling, communications upgrades, renovating structures, ballast cleaning and re-sleepering.

- If an asset is defined as being at a MEA standard, it is considered to be a new asset and does not need MPM. Therefore, MPM should not be included as an operating cost, as within the capital cost annuity is compensation for depreciation to enable network renewal. In this instance, to permit recovery of MPM as an operating cost would be an over-recovery.

- The term Routine Maintenance is also not used in the Code other than it permits the inclusion of "the cost of maintenance of railway infrastructure" which as a broader description would include all routine maintenance activities.

- The definition of routine maintenance, as suggested by the Regulator's independent railway engineer, is:

  The regular and on-going maintenance activities, which are required to meet specific levels of defined safety and services as required by users. Routine maintenance commences from day one of operation and is generally continuous for the life of the operation. It includes:

  - ◊ *track patrolling;*
  - ◊ *weed spraying and scrub slashing;*
  - ◊ *general fettling, eg broken sleeper replacement;*
  - ◊ *bridge inspections;*
  - ◊ *drainage and culvert inspections;*
  - ◊ *signal, communication and gate systems inspections, testing and minor parts replacements.*

- Cyclical Maintenance is referred to in the Code, but is not defined. The Code permits the inclusion of cyclical maintenance costs within operating costs but requires that such costs be "evenly spread over the maintenance cycle".

- The Regulator's independent railway engineer has also proposed the following definition for Cyclical Maintenance for rail:

  Maintenance tasks undertaken at regular intervals (eg. quarterly, annually, bi-annually) to meet safety and operational standards, to achieve expected average asset life and to provide adequate service quality to users. Cyclical Maintenance will include:

  - ◊ *drainage and culvert clearing;*
  - ◊ *firebreak road maintenance;*
  - ◊ *access road maintenance.*

- Cyclical maintenance is required for a MEA with some cycles commencing from the start of the operation of the network. However, cyclical maintenance costs for a MEA would be less than for a mid-life network as it is assumed, for example, that new drains do not immediately require clearing and that fire breaks are established as part of the construction process.

- The Regulator understands that recent benchmark cost levels for routine and cyclical maintenance for networks similar to WNR have varied between $5,000 to $16,000/km.

- WNR is required to provide in the Costing Principles a detailed methodology, including key assumptions, on how routine and cyclical maintenance costs are calculated on different sections of its network. Importantly, this calculation must factor in the maintenance savings of the assumption that the network is a MEA network.

4.3 Asset Valuation

4.3.1 Gross replacement value for modern equivalent assets

i) *Summary of WNR's Proposal*

- WNR considers that the majority of the existing track configuration can be adopted as the MEA, and has assumed that the track configuration is new in accordance with the Code.

- WNR has identified two exceptions.

  - ◊ Concrete sleepers have been adopted for the 75 kilometres of timber sleepers between Kwinana and Kalgoorlie.

- ◊ Fibre optic cable and processor based interlocking are assumed for the signalling and communication infrastructure.

ii) *Comments received in the public consultation process*

- There is a need for greater detail on how the GRV is calculated and specifically the detailed unit rate assumptions to ascertain prudence and cost efficiency.
- Object to the inclusion of earthworks in the GRV as such costs are land related and therefore excluded from the definition of railway infrastructure.
- Dispute the assertion that the existing network is a MEA. Several examples of the types of significant adjustments to the existing network which are required to approach a MEA network were identified (eg. train control, signalling systems and track configuration from Avon to Midland).
- The Regulator should obtain an independent engineering review to specify the inclusions and assumptions for a MEA network.

iii) *WNR's response to the public submissions*

- WNR interprets Clause 2(2), Schedule 4 of the Code as implying that a greenfields approach be adopted in the GRV calculation, and believes formation works should be included.
- Regarding whether its network is optimised, WNR suggests that the Regulator obtain advice from an engineering expert.

iv) *Regulator's views and comments*

- Railway infrastructure is generally made up of long life assets, most of which are renewed with a view to further extending their life. The Code specifies the use of a current cost asset base (ie. GRV) with compensation for capital costs (rate of return and depreciation) by way of an annuity.
- Section 3 of the Code defines Railway Infrastructure as:
  - ◊ Railway track, associated structures & supports;
  - ◊ Tunnels & bridges;
  - ◊ Stations & platforms;
  - ◊ Train control, signalling & communication systems;
  - ◊ Electric traction infrastructure;
  - ◊ Buildings and workshops;
  - ◊ Associated plant & equipment.

- GRV is defined in Clause 2(4)(c), Schedule 4 of the Code. The Code describes GRV as the lowest current cost to replace existing assets with a MEA, if appropriate, which has the capacity to provide the level of service to satisfy actual and reasonably projected demand.

- There are a number of approaches to calculate the GRV. These include:
  - ◊ Using best practice capital cost unit rates per track kilometre for an average unit cost including rail, track, bridges, signals and communications.
  - ◊ Using best practice capital cost unit rates per kilometre for basic formation, rail, ballast and sleepers. Adding to this a value for items such as bridges, culverts, level crossings, cross overs on a population basis (ie. a count of the number and length of each type of asset for each line sector) plus a capital cost estimate of an efficient signalling and communication system for the network; this is then allocated back to line sectors;
  - ◊ Requiring a detailed independent valuation on a route section by route section basis, which includes specific, rather than average build costs.

- The Regulator believes that for those routes with potential to breach the ceiling there is merit in having WNR's GRV independently reviewed by a railway engineering expert. For others, benchmarking costs against best practice capital cost unit rates is appropriate.

- Clause 2(4)(c)(i), Schedule 4 of the Code allows for optimisation of the network, as it requires the MEA to meet the actual and reasonably projected demand for any route section of the railway infrastructure. Optimisation refers to whether the current configuration of the route or route sections is suitable for meeting its projected demand. WNR has asserted its network is already optimised. On this point, almost all submissions suggested that some components of the network would not be required or could be more cost effectively configured under a MEA approach to GRV.

- The term MEA is not defined in the Code, it is referenced as part of the GRV definition. The Regulator proposes to define a MEA for rail as:

  An optimised network that is reconfigured using current modern technology serving the current load with some allowances for reasonably projected demand growth for up to five years into the future. The MEA excludes any unused or under utilised assets and allows for potential cost savings that may have resulted from technological improvement.

- The track configuration for the WNR mainlines in the MEA network should be broadly consistent with the Australian Transport Council (ATC) target standard for new tracks, tailored to relevant traffic classification and train

types. For branch, feeder and grain lines, lower service standards, which meet customer needs would be reasonable.

- Application of the MEA concept in estimating the GRV is on an "if appropriate" basis, providing the Regulator with a degree of discretion to not apply MEA. For regulatory valuation purposes, adjustments to the GRV in applying a MEA should only be permitted where they lead to reductions in the replacement cost of the network or where they are necessary to meet customer needs. WNR would need to convince the Regulator of its reasons and intent to increase the GRV as providing a higher capacity or quality not sought by customers would result in inefficient outcomes.

- The value of the MEA is the current capital cost to provide that asset including all infrastructure, communications, signalling and associated project management, design and contractor's margin costs to meet the current and future level of service required. The MEA concept is an asset that can provide the level of service as required by the users of that asset at current modern standards.

- Producing a fully optimised network would require extensive analysis of demand and train path requirements as well as simulation of the network operation. In considering whether the network is MEA, a more practical approach would be to apply a simpler assessment of the adequacy of crossing loops, the elimination of any excess capacity, the use of current cost effective track components, the assumed use of modern network control and communications systems, plus reviewing the track structure required for present and future demand.

- The key steps to completing a GRV estimate based on MEA are:
  - ◊ Review asset databases;
  - ◊ Establish existing network capacity, and current and expected future demand on the network;
  - ◊ Complete an analysis of each asset class to optimise the network to a MEA;
  - ◊ Assess the current replacement cost (GRV) of the MEA; and
  - ◊ Confirm GRV is at efficient costs.

- The Regulator's independent railway engineer has suggested that the key capital cost drivers could include:
  - ◊ The track standard adopted, eg. axle load and speed;
  - ◊ The level of usage, eg. GTKs;
  - ◊ The topography the infrastructure covers, eg. extent of bridges, curves and gradients;

- ◊ The quality and stability of the track formation, which is often dependent on age and soil type;
- ◊ The safety, quality and reliability requirements of customers and other stakeholders.

- WNR would need to provide a set of assumptions that it intends to adopt when calculating a GRV on a MEA for a mainline asset, and for branch, feeder and grain lines. These are to include assumptions on rail weight, ballast depth, sleeper types (and spacing), fastener type, signalling type, passing loop lengths, manner in which bridges are to be designed, network construction rate, turnouts and formation costs.

- In the course of calculating the floor and ceiling costs of routes under Clause 9, Schedule 4 of the Code, the Regulator will ask WNR to:
  - ◊ Justify the reasoning for assuming four train control centres as against the potential of one to service all requirements, and if one is adopted, what are the cost savings on a route section by route section basis;
  - ◊ Demonstrate why WNR consider the signalling, communication and dual gauge system between Midland and Avon as being optimised.

- Under Clause 2(4)(c), Schedule 4 of the Code, the GRV can only include facilities defined as "Railway Infrastructure" and hence land cannot be included in the GRV. However, if the definition of "Railway Infrastructure" includes "associated track structures, over or under track structures, supports", earthworks may be required as part of maintenance programs and the Regulator is of the view that inclusion of such costs, in these instances, in the GRV may be reasonable.

  It is not only the above embankment rail assets together with bridges, communications, signals, etc. that have a value. The embankment earthworks, land and drainage components also have a value and accordingly compensation is potentially warranted. It is noted that earthworks have been included in most Australian rail DORC valuations, eg. the Australian Rail Track Corporation (ARTC) and QR[4]. The exception is NSW where the NSW Rail Access Regime does not permit RIC to earn a rate of return on the "existing corridor formation" which is defined as "land as well as cuttings, embankments and tunnels"[5].

[4] ARTC, Standard Gauge Rail Network DORC, February 2001, pp 12 and 23; and QCA, Draft Decision on QR's Draft Undertaking, Volume 3, December 2000, pp 158 and 166.
[5] NSW Rail Access Regime, Schedule 1, Table 1.

- Also, consideration has to be given as to whether the GRV is calculated on a "greenfields" or "brownfields" site. A "brownfields" calculation assumes construction occurs around the existing community infrastructure and with existing rail traffic compared with "greenfields" which assumes construction over an area without any development or rail traffic. Typically, "brownfields" valuations include the costs of surface restoration and other surface diversions. The "brownfields" assumption that construction occurs around rail traffic will add significantly to the cost due to the need to build diversions and because of the impact on labour and equipment productivity.

  For most of the WNR network, the impact of community development on replacement cost is largely irrelevant. The urban areas will be the exception. In the recent assessment of NSW Hunter Valley coal network, earthworks, tunnels and culverts were excluded from the valuation and a no rail traffic assumption was made[6]. Hence in NSW, any distinction therefore between "brownfields" and "greenfields" largely disappeared. In Queensland, where the major network sections are outside metropolitan areas, and where the network has been developed along long established corridors, similar to that of Western Australia, in effect the "greenfields" approach has been accepted (as QR is allowed to be compensated for the current cost of the alterations it was actually required to perform throughout the course of the development of its network)[7].

  The issues discussed above indicate that a "greenfields" scenario is appropriate for the calculation of a MEA for the WA regulatory and operating environment. Hence, a "greenfields" assumption should be utilised for estimating a GRV on a MEA basis for WNR.

- Access seekers have sought clarifications from the Regulator regarding operator contributed assets and wanted these to be excluded from the GRV calculation. The Regulator is of the view that all operator and Government contributed assets are to be included in calculating the floor and ceiling. An amount of the contribution determined as the equivalent annual cost or an annuity will be credited to the operator and the route section(s) concerned in the calculation of the over-payment in the ceiling price test. In this way, WNR would not be able to obtain higher access revenue from operators on the route section(s) that now has a higher ceiling as a result of the contribution.

- There is a range of complexities to estimating a fair and reasonable GRV and WNR will be required to demonstrate the reasoning and assumptions used for its estimation on a route section by route section basis. In this regard the

[6] IPART, Rail Infrastructure Corporation Valuation Of Certain Assets, June 2001, p 7.
[7] QCA, Draft Decision on QR's Draft Undertaking, Volume 3, December 2000, p 148.

Regulator's Determination under Clause 9, Schedule 4 of the Code of the costs utilised by WNR in deriving ceiling and floor costs for Midland to Kalgoorlie, Kwinana to Bunbury, Leonora to Kalgoorlie and Kalgoorlie to Esperance route sections will be undertaken as soon as the Costing Principles Determination is finalised.

- GRV will require periodic review to ensure that it continues to reflect a MEA network for the current and projected volume. The Regulator intends to set the GRV review period to every three years but the review frequency will likely increase or decrease depending on the changes required.

4.3.2 Inclusion of design, construction and project management fees

i) *Summary of WNR's Proposal*

- WNR proposes design, construction and project management fees of 34 percent comprising 12.5 percent for contractor's overhead, 16.5 percent for engineering and design and 5 percent as a profit and risk margin.

ii) *Comments received in the public consultation process*

- Some suggested that engineering and design overheads were not a valid part of GRV.

- The general view is that the proposed margins for design and project management are excessive. Most submissions suggested a lower total margin in the range of 7.5 to 20 percent.

iii) *WNR's response to the public submissions*

- WNR believes that design, construction and project management fees are valid costs of capital. WNR states that these fees are consistent with a "greenfields GRV assumption".

iv) *Regulator's views and comments*

- The following comments were provided by the Regulator's independent railway engineer:
  - ◊ The proposed 34 percent for design, construction and project management fees may be excessive. A total margin of between 18 percent and 21 percent is acceptable for heavy civil engineering and railway construction of this type, including associated electrical and communication systems.
  - ◊ Due to the availability of railway standards worldwide, standard for most major design aspects (eg. typical formation details, turnouts, structures and bridges, yards, communication and signalling systems) are available which means that only minor location specific design tailoring (if any) is

required. Individual designs are required for route location, drainage and bridge abutments, but these are addressed in the normal planning and design fees.

- ◊ Project management is an item that is either undertaken by the owner or contracted out. Due to the standardisation issues in construction and the economies of scale on the purchase of materials and efficient costs, the figure of 12.5 percent for project management is not considered best practice and is overstated.
- ◊ Contractor's risk margins are normally 5 percent. It is normal practice for contractors to recover their overheads within their unit rates for labour and materials and not to place this as an additional item for construction.
- ◊ The recommended allowance for planning and design is 7 percent, for contractor's risk margin is 5 percent and for project management is 8 percent providing a total margin of 20 percent.

- As a point of reference, a rate of 20 percent would be broadly consistent with the rate accorded by IPART for the Hunter Coal Network in NSW, which also assumed a greenfields site[8].

- WNR will need to re-assess its proposed design, construction and project management fee of 34 percent and advise the Regulator of a rate that is closer to 20 percent.

- As efficient cost requires that individual cost items are to be benchmarked, WNR will also be required to demonstrate to the Regulator that the benchmarked rates do not include design, construction and project management fees. If such fees are already included in the benchmarked rates then WNR will not be allowed to add further margins.

4.3.3 Inclusion of interest costs during construction

i) *Summary of WNR's Proposal*

- WNR has proposed interest on construction at 11 percent, with a construction rate of 0.5 kilometre per day.

ii) *Comments received in the public consultation process*

- The general view is that interest on construction should be based on the WACC with a construction rate of 1.5 to 2 kilometre per day.

[8] The Booz Allen Final Report on (DORC) Valuing Rail Access Corp Assets in NSW, May 2001, p. 45 (recommended a total margin of 21 percent); and IPART, Rail Infrastructure Corporation Valuation Of Certain Assets, June 2001, pp 9 to 10.

iii) *WNR's response to the public submissions*

- WNR has agreed that the proposed interest on construction be set at the WACC, but believes that the construction rate should be reviewed by the Regulator's engineering expert.

iv) *Regulator's views and comments*

- The Regulator supports WNR's assessment that the Code allows for interest on construction costs in the GRV. However, comments provided by the Regulator's independent railway engineer suggest that the construction rate used by WNR is not efficient. As a comparison, the construction rate on the Darwin to Alice Spring line is 1.3 kilometre per day according to the National Rail Corporation[9].

- The Regulator believes that the appropriate construction rate should be set at an average of 1 kilometre per day, and that there will be sections of the network that the Regulator may consider a higher or lower rate to be more appropriate.

- As for the interest rate, the Regulator agrees that the WACC is to be used for assessing the capital costs incurred during the construction period as a component of the GRV.

4.4 Total Costs

4.4.1 Annuity formula for calculation of capital costs

i) *Summary of WNR's Proposal*

- The annuity calculation used by WNR is based on the Microsoft Excel PMT formula, with the payment set at the end of the period. Salvage value is set at zero.

ii) *Comments received in the public consultation process*

- There is a general view that the annuity formula be specified and be based on the beginning of the period.

iii) *WNR's response to the public submissions*

- WNR has stated that it is prepared to change the time step over which the annuity calculation is made, as long as it is allowed to account for the cost of

[9] NRC supplementary submission to the WA Rail Access Regulator, p 8.

working capital. This is because access-related payments to WNR are typically made monthly in arrears.

iv) *Regulator's views and comments*

- Clause 2(4), Schedule 4 of the Code specifies that, in relation to calculating the capital charge in the ceiling (and, if applicable, floor), an annuity formula is to be used to provide for the depreciation of the asset value and for payment of returns on capital through a capital cost that is held constant over time.

- The Regulator supports WNR's use of the standard Microsoft Excel PMT function to calculate the maximum capital cost. This approach is preferred as it is simpler than using algebraic formulas, is widely available, is currently the approach being used by WNR and its automation should minimise the risk of calculation errors.

- To calculate the capital cost component of the ceiling test using the Microsoft Excel PMT function requires the following inputs:

  ◊ **Rate of interest**: in this case the Code specifies, unless changed by the Regulator, a maximum WACC of 8.2 percent for the non-urban network.

  ◊ **Nper**: or the total number of periods for the annuity, which in this case is the assumed economic life. The Code stipulates that economic life should be expressed in years.

  ◊ **Pv**: is the present value of the asset or in this instance the GRV of the relevant track sectors.

  ◊ **Fv**: is the future value at the end of the economic life or in this case the salvage value, if any, which remains. The Regulator agrees to setting this value at zero, thus assuming that the salvage value for the rail asset is equal or less than the cost of recovery.

  ◊ **Type**: either set for annuity payments at the start (1) or end of each period (0). The Regulator believes that the annuity payment should be set at the start of the period.

- The Regulator recognises that the conventional annuity formula assumes end of period payments and this assumption is required to ensure a full recovery of the principal. This would be applicable if access seekers are paying for access at the end of the period. However, as most payments for rail access are made monthly in arrears, it would be inappropriate to set the annuity formula for at the end of the period payment as it would over-estimate the annuity for WNR. On the other hand, a beginning of period assumption may prevent WNR from being able to fully recover the principal.

- A solution would be to calculate the annuity on a monthly basis with an end of period assumption. However, the Code is clear in specifying that the economic life is to be expressed in years.

- The recovery stream for WNR with an end of period assumption is higher than with a beginning of period assumption. If WNR is able to demonstrate to the Regulator that its net working capital relating to third party access is negative, the Regulator may consider one of the following two approaches to redress this issue:

  ◊ Increase the first year's annuity calculation of the capital cost by half the CPI as a one-off adjustment for each regulatory reset; or

  ◊ Allow the net working capital as an operating expense each year.

- Under the Code, the WACC is used as the interest rate in the annuity formula to derive the capital cost component of the ceiling and, where applicable, the floor. Any change in the WACC could mean a regulatory reset of the ceiling and floor prices for the railway infrastructure. In re-calculating the annuity formula, the opening value of the assets will be the GRV set at the beginning of the regulatory period as the network is considered to be permanently new under a GRV for MEA and no MPM.

4.4.2 Weighted average cost of capital

i) *Summary of WNR's Proposal*

- Under the Code, the WACC is determined by the Regulator with the public process requirements completed separately to those required as part of the Costing Principles.

ii) *Comments received in the public consultation process*

- A revision of the WACC is overdue following the establishment of the Code. A revised WACC reflecting lower interest and tax rates should be released for comment with the Costing Principles and the revised WACC should apply from 1 July 2002.

iii) *WNR's response to the public submissions*

- No further information has been provided.

iv) *Regulator's views and comments*

- Section 52(4) of the Code provides for a WACC of 8.2 percent for WNR. It should be noted that the WACC is calculated on a real pre-tax basis.

- Under the Code the Regulator is required to determine the WACC for the freight infrastructure network *"as at 30 June in each year".* In line with

Clauses 3(3), 3(4) and 3(5), Schedule 4 of the Code, a full public consultation process is required for prior to the Regulator's determination of the WACC in 2003. With regard to the 2003 review, it is the Regulator's intention to revisit the CAPM and WACC methodology and assumptions used in the 1999 Macquarie Bank review.

- Given the Code's requirement for a full public review of the WACC to take place in 2003, the Regulator's intention is to undertake an internal review in late June 2002 in relation to the 2002 review of the WACC.

4.4.3 Allocation of costs for determining the floor and ceiling costs

i) *WNR's position*

- The route section will have one ceiling, which is applicable to all access seekers, and a combinatorial floor.

ii) *Comments received in the public consultation process*

- There were mixed views on the merit of a single floor and ceiling price. While some stakeholders recognised the simplicity benefits, other stakeholders preferred the "stand-alone interpretation" which gives rise to multiple floor and ceiling prices as each price is tailored to the GRV and maintenance needs of specific customers.

- A universal request for greater detail on the rules, practices and methodologies for calculating the floor and ceiling prices. Submissions also sought detailed definitions of all operating and maintenance costs, unit rates assumptions, and allocation rules for these.

iii) *WNR's response to public comments*

  ◊ No further information has been provided.

iv) *Regulator's views and comments*

- The Code is specific in that the operator's floor and the railway routes ceiling costs must be allocated on a route section basis.

- There has been some confusion among access seekers as to the meaning of Clause 8, Schedule 4 of the Code. One interpretation is that different ceiling levels can exist between different operators. Another is that the route section has only one ceiling and that it applies to all operators regardless of their access needs.

- The Regulator understands that the intent of the Regime is for only one ceiling to apply to all operators for each route section and for each operator's

differences to be reflected in the price being negotiated (refer to Clause 13(c), Schedule 4 of the Code).

- The Regulator has received legal advice that Clause 8, Schedule 4 of the Code does not provide for multiple ceilings for each route section. However, to remove the potential for any possible mis-interpretation, an amendment to Clause 8 has been drafted and will be introduced as a change to the Code.

- In relation to the floor, each operator will have a different floor due to the avoidable costs associated with their requirements, but when these are added together, they must be no less than the floor for the route section.

- WNR should detail as to when it considers capital costs are avoidable and needs to be included in the floor.

4.4.4 Escalation of ceiling costs

i) *WNR's position*

- WNR believes that the ceiling should be indexed by CPI.

ii) *Comments received in the public consultation process*

- Submissions universally considered full CPI indexation as unwarranted, lacking incentives and a non-rail cost reflective index.

- Views on alternatives ranged from frozen nominal prices to permitting indexation at two third of CPI.

iii) *WNR's response to the public submissions*

- WNR has informed the Regulator that not allowing an escalation of the ceiling will adversely impact upon it, particularly on those routes near the ceiling where escalation clauses are contained in the access agreements.

- WNR has also pointed out that because the ceiling is largely based on hypothetical efficient costs, the potential for further productivity gains over the regulatory period are low and any X factor should reflect this.

iv) *Regulator's views and comments*

- The debate over whether indexation is reasonable is covered in two other Australian jurisdictions.
  - ◊ The ARTC has an option to raise its published indicative charges annually by the greater of CPI less 2 percent or 2/3 thirds of CPI.
  - ◊ The current NSW Rail Access Regime is silent on this issue. The commonly negotiated outcome between RIC and train operators is for

either frozen nominal dollar prices (ie. no indexation), CPI minus 1 or CPI minus 2. This negotiated approach is generally viewed as giving RIC the incentive to pursue efficiency gains while sharing a sizeable portion of these efficiency gains with train operators.

- In relation to the WA Regime one view, as raised in the public submissions process, is that ceiling costs should not be indexed. Given that the Regime is based on efficient costs and MEA, it is possible that a rise in operating costs caused by, for example, a uniform wage rise across Australia could be offset by a fall in the MEA in that year. The issue on where to set the ceiling cost, and any indexation thereof, may be best determined when the GRV is reviewed every 3 years.

- Another view is that CPI is an appropriate escalation factor to the ceiling but that some form of discount from the index may be warranted to provide WNR with some added incentives to further increase operational efficiency in network management and overheads, and technological improvements in maintenance that could result in lower unit costs.

- A third view that has been expressed to the Regulator is that there is no room for X as a productivity index adjustment. If the railway infrastructure is to be calculated as the lowest current cost to its replacement and all costs are based on adopting efficient practices, then the adjustment (if any) should be made directly to the MEA rather than as an annual productivity factor. This would the correct approach if the Regulator was to review the MEA network each year.

- The Regulator has agreed for WNR to apply a CPI-X factor to the ceilings of its route sections. Given that the MEA network has yet to be defined, there is currently insufficient information to allow the Regulator to calculate an appropriate X factor for the first three-year period. Nevertheless, the Regulator believes that effective costs is a dynamic concept and has decided to set X at one quarter of CPI. The Regulator intends to assess and monitor WNR's MEA network over the three years to determine an appropriate X factor for the second three-year period.

- The revised ceiling will apply on 1 July of each year. When calculating the ceiling, the CPI-X factor is to be applied as the last adjustment, ie. after changes are made to the WACC. The CPI-X adjustment is to be applied to the real (rather than the nominal) ceiling cost.

- The Australian Bureau of Statistics Weighted Average of Eight Capital Cities All Groups CPI Index will be used. The annual change in CPI is calculated as the percentage change in the average of the four quarters to March of each year from the average of the previous four quarters.

- CPI-X will not apply in the years that the GRV and operating costs are revised.

4.4.5 Defining minimum service quality for floor and ceiling costs

i) *Summary of WNR's Proposal*

- WNR's view is that defining minimum service quality for floor and ceiling prices in addition to key performance indicators (KPIs) should form part of the overall access agreement and that they should not be embodied in the Costing Principles Determination.

ii) *Comments received in the public consultation process*

- Railway Owners need incentives to operate more efficiently and to provide users with an acceptable service quality. A system of regularly published KPI benchmarks measuring cost efficiency and service quality can improve transparency and provide incentives.

- Major customers should be consulted on the price/quality trade-off for the parts of the network they use. The Costing Principles need a provision that requires WNR to respond to customer views on the investment/maintenance strategy and mix.

- Operators should pay for the track quality they require and if another user has higher quality requirements (eg. a high-speed passenger train) they should fully fund the additional cost.

iii) *WNR's response to the public submissions*

- No further information has been provided.

iv) *Regulator's views and comments*

- In relation to service quality the key sections of the Code are:
  - ◊ Schedule 3 of the Code requires specification of the performance standards to be met by the railway owner and the operators (Clause 11), and for access agreements to specify the standards for rollingstock (Clause 10).
  - ◊ Clause 13(c)(i), Schedule 4 of the Code states that prices should as far as possible reflect the standard of the infrastructure.

- The Regulator notes that in other regulatory jurisdictions there are requirements for below rail operators to specify the indicative minimum service quality standards to be provided at the floor and ceiling price. Additionally, railway owners typically require some commitments to specific quality standards from train operators.

- As service and price are inextricably linked, the Regulator intends monitoring WNR's service quality standards. Section 21 of the Act allows the Regulator to obtain information from railway owners. It is the Regulator's intention to seek information which would allow the effectiveness of the State's Rail Access Regime to be assessed. Wherever possible, this information will be released on the Regulator's website (www.railaccess.wa.gov.au). Further details on the performance indicators that the Regulator will use are stated in a separate report.

- The Regulator will be developing a KPI reporting system in consultation with WNR. For the purpose of this Determination it is suffice to note the following KPIs that the Regulator may use to assess the effectiveness of the Costing Principles.

  ◊ The percentage of infrastructure maintenance expenditure that is outsourced;

  ◊ Total operating cost per GTK;

  ◊ Number of determinations made by the Regulator under Clause 10, Schedule 4 of the Code;

  ◊ Number of Access Agreements negotiated "inside" the Regime;

  ◊ Number of Access Agreements negotiated "outside" the Regime where initial negotiations commenced "inside" the Regime;

  ◊ Number of pricing disputes resolved by arbitration;

  ◊ Number of ceiling or floor price disputes referred to the Regulator.

- The Regulator has a number of powers to monitor compliance by WNR with the Costing Principles. Annual audit programs will be the key monitoring tool for assessing compliance.

  The annual independent external audit required for WNR's segregation and other access arrangements will include an assessment of WNR's compliance with the Costing Principles. As mentioned in previous Determinations, WNR will need to advise the Regulator who it intends to engage for the purpose of conducting the annual audit at the appropriate time. The Regulator may select and manage the auditor. At the minimum, the Regulator's approval of the scope of the annual audit will be required and the final audit report will be made available to the Regulator and the public.

- The annual independent external audit may be supplemented by special audits, which would be commissioned following the identification of a material complaint.

- The Code allows the Regulator to determine a GRV using MEA on each route section. If at anytime it can be demonstrated that WNR is consistently not

providing the expected standards and services on a particular route section as agreed to in access agreements, the Regulator can adjust the GRV downwards to bring about a lower price ceiling for that route section. In this instance the Regulator may determine that the standard of service provided is not commensurate with the accorded MEA status and should therefore be recognised in the GRV assessment.

- The Regulator also notes that access agreements are likely to have provisions related to the standard of services to be delivered by WNR and where those standards are not being met that provisions exist within those agreements for the access charge to be reduced.

5. Required Amendments

This section of the report reviews WNR's proposed "Costing Principles" dated 15 November 2001 and provides recommended refinements and additions to the appropriate sections.

The main request in the submissions is for far greater detail on the rules and practices that WNR will utilise to calculate floor and ceiling costs. However, there is also merit in keeping the Costing Principles clear and concise as well as being relatively "timeless" to avoid the need for the Regulator to review and approve frequent updates.

In subsequent discussions with WNR, WNR has agreed to implement a number of the suggested changes detailed below. Even so, these directions are provided in full in the following table so that stakeholders can gauge the changes that are being required of WNR on its Costing Principles submission as lodged with the Regulator in November 2001.

It is the view of the Regulator that the directions below appropriately address the differing needs and interests of the community, access seekers and WNR as required under Section 20(4) of the Act.

WestNet's proposed Costing Principles	Changes required
1 Introduction **1.1 Background** WestNet Rail Pty Limited ("WestNet"), a wholly owned subsidiary of the Australian Railroad Group Pty Limited ("ARG"), is the manager of the leases of the freight rail infrastructure network in Western Australia, previously operated by the State Government owned Westrail. The Railways (Access) Code 2000 ("the Code") requires certain parts of the rail network managed by WestNet to be made available for access by third party rail operators. Schedule 1 of the Code lists the sections of the WestNet rail network covered by the Code. With the appointment of an Acting Rail Access Regulator with effect from 1 September 2001 and the proclamation of the Code, the Code is now effective in all respects. Consequently, WestNet has prepared this statement of Costing Principles in accordance with its obligations under the Code. The Costing Principles should be read in conjunction with the Code, as WestNet has not included detailed cross-references to the relevant sections in the Code in this document.	Prior to "Background" (relocate to 1.3) insert a new section 1.1 to provide: ◊ The purpose of the Act and Code of which the Costing Principles is the main facet to ensure that the correct risk return balance is struck between WNR and third party train operators. ◊ The objectives of Costing Principles which is to determine the floor and ceiling price tests, and to keep and present the railway owner's accounts and financial records pertaining to the determination of costs for the floor and ceiling price tests. ◊ A reference to key Code definitions including incremental costs, operating costs, capital costs and total costs. Provide definitions where they are not defined in Code including MEA, efficient costs, MPM, routine maintenance, cyclical maintenance and route section. Specifically mention the other parts of the Code that are linked to the Costing Principles including the Over-payment Rules and Pricing Principles. Refer to the Over-payment Rules Determination in the determination of the Ceiling test.

WestNet's proposed Costing Principles	Changes required
1.2 Relevance of the Costing Principles The Costing Principles are a statement of the principles, rules and practices WestNet will apply to determine the costs relevant to a particular access application. The Code allows WestNet to apply market-based pricing to below rail services and as such costs are only one input to pricing decisions. The Costing Principles will be used to develop floor and ceiling prices between which negotiations (and if necessary arbitration) for access will occur. WestNet is prepared to discuss access with interested parties either within the requirements of the Code or separate to the Code. Therefore access seekers should contact WestNet to discuss their requirements and the terms and conditions of access to the WestNet Network.	Change second sentence to "The Code allows WNR to negotiate prices between the floor and ceiling prices and as such the costs within the floor and ceiling only provide the lower and upper bound to potential final prices." Following second last sentence add additional sentence stating that the rights and protections of the Code are not extended to negotiations and agreements undertaken outside the Code.
1.3 Origin and Destination and Route Sections WestNet will calculate the relevant floor and ceiling prices where required for access seekers based on the origin and destination of the product or group of products on its Network, together with any other available railway infrastructure to support the access application. Access seekers are encouraged to review Schedule 1 of the Code which defines the railway infrastructure which is available for access under the Code. The route sections are based on how WestNet has divided the Network for its costing purposes as provided by the Code. The distances for route sections vary in general with differences in track characteristics and traffic densities. One or more route sections will be combined to provide the total costs as defined by the Code from origin to destination of the product and any related railway infrastructure required by the access seeker dealt with by Schedule 1.	This section becomes Section 1.4. State that WNR will provide ceiling and floor costs with breakdown into sections which then aggregate to the total costs of the route. State that the costs by route section together with the volumes by route section provided as part of Section 7 of the Code will allow access seekers to assess price consistency and accuracy. Include a reference to the information available to access seekers, as listed in Schedule 2 of the Code. A list of the route sections as approved by the Regulator to be included as an appendix.
	1.5 Service Quality Commitment A new section outlining a: ◊ General service quality commitment from WNR to adopt industry best practice and to provide an efficient network; ◊ Commitment to report specific service quality KPIs for key parts of the network; and ◊ Commitment to negotiate specific KPIs (covering both WNR and operator performance) within the access agreement which may be linked to a system of financial incentives/penalties.

WestNet's proposed Costing Principles	Changes required
1.4 Structure of this Document This statement of Costing Principles is four further sections: ◊ Section 2 – Determination of capital costs ◊ Section 3 – Determination of operating costs ◊ Section 4 – Determination of overhead costs ◊ Section 5 – Other relevant issues	Becomes Section 1.6. Retain concept of section and revise for any re-structuring. Add titles of Sections 6 and 7.
2. Determination Of Capital Costs **2.1 Introduction** The ceiling price, and in certain circumstances the floor price, will include a capital charge which is intended to reflect the cost to WestNet of establishing and replacing infrastructure capacity. The Code sets out the basis for determining the capital charge based on an annuity formula, calculated having regard to the gross replacement cost of the infrastructure, its economic life and an allowable rate of return. There are five key issues which underpin the determination of the appropriate capital charge: ◊ The infrastructure to be included in the calculations; ◊ Its gross replacement value; ◊ Its relevant economic life; ◊ The allowable return; and ◊ The annuity calculation. Each of the issues is discussed below.	Detail the circumstances when the floor includes a capital charge and how this will be calculated. State that the capital charge, using the annuity formula, compensates WNR for both the return on capital and for capital depreciation, as well as for WNR to renew the network.
2.2 What infrastructure is included The assets included in the capital calculations includes only the assets directly engaged in providing the rail infrastructure services, eg.: ◊ Rail ◊ Sleepers ◊ Ballast ◊ Structures ◊ Formation ◊ Signalling and communications Assets which support operating functions will be included in the operating cost or overhead cost calculations as appropriate. WestNet has reviewed the existing Network infrastructure and determined that it meets the current and reasonably projected demand for all users taken together. The required infrastructure includes the extension of eight crossing loops recently completed on the Kwinana to Kalgoorlie line which has enhanced the capacity at peak times for traffic using this line.	Detail and give examples of the types of assets which support operating functions to be included in the GRV. Include a brief discussion on how operator contributed assets will be included in the GRV calculation. For the purposes of calculating the GRV, the replacement cost calculations are to assume a greenfields site and hence costs related to constructing around rail traffic, surface restoration and other surface diversions are excluded from the GRV. Amend final paragraph to state that the principles and assumptions applied to derive a GRV will be based on a hypothetical MEA network which assumes, for example, a single train control centre (rather than 4) and the signalling system uses electronic authority for mainlines and a train order working for branches (rather than the current centralised train control system).

WestNet's proposed Costing Principles	Changes required
2.3 Gross Replacement Value **Modern Equivalent Assets** Replacement values are to be assessed on the basis of Modern Equivalent Assets ("MEA"). WestNet considers that the majority of the existing track configuration (that is sleeper type, rail weights etc) can be adopted as the MEA. It is assumed, however, that this track configuration is new in accordance with the Code. Essentially, sections of the Network have over the last 15 years been significantly upgraded or completely replaced. For other sections, the track infrastructure, which exists currently, is the modern equivalent asset as there has been no major technological advances that would change the selection of the major track components given the operating requirements of the Network. The Costing Principles therefore adopt the actual infrastructure configuration which comprises the Network (for example, the number of protected level crossings in a route section). Again, it is assumed that the infrastructure is new. The exception to this analysis for track infrastructure relates to the line between Kwinana and Kalgoorlie where there will be approximately 75 kilometres of track with timber sleepers after the completion of the current capital works. The MEA for this 75 kilometre section would be new concrete sleepers and accordingly this has been adopted. In relation to signalling and communication infrastructure, WestNet is in the process of upgrading the communications system using a fibre optic cable and processor based interlocking. This is considered to be the modern equivalent asset and has been adopted by WestNet for the sections where this infrastructure is required to provide the appropriate level of service.	First sentence should state that MEA is to be used if appropriate. Provide examples of when it may not be appropriate to apply MEA. Outline WNR approach to calculate the GRV which is to have the GRV independently reviewed for those routes potentially breaching the ceiling and benchmarking costs against best practice capital cost unit rates for the others. Detail the key steps to completing a GRV estimate based on MEA. State the guidelines WNR intends to follow to calculate a GRV on a MEA for a mainline asset and for branch, feeder and grain lines. Identify the key capital cost drivers WNR will adopt to ensure a MEA network.
Unit Rates WestNet has an on-going capital program to enhance the track and signalling infrastructure. Accordingly, it regularly tests the market for the cost of materials and construction, project management fees and related items. WestNet has applied this information to determine the unit rates to calculate the capital cost of railway infrastructure as required by the Code. **Design, construction and project management fees** WestNet has reviewed market based fees for the design, construction and project management of major projects. It has determined that these fees are charged on a percentage of project cost and have been applied based on contractor's overhead of 12.5 %, engineering and design of 16.5% and a profit and risk margin for the contractor of 5%.	Provide greater detail on the unit rates for major sub-assets. This section should reference a new appendix with a listing of rates, source and how applied. The efficiency of the rates can be assessed by the Regulator and updated as required. This section should also detail assumptions on the economies of scale and scope assumed in the unit rates as well as whether these unit rates include design, construction and project management fees. WNR will need to re-assess its proposed design, construction and project management fee of 34 percent and advise the Regulator of a rate that is closer to 20 percent Specify that WNR will only apply when the benchmarked rates do not already include such fees.

WestNet's proposed Costing Principles	Changes required
Financing charge during railway infrastructure construction The Code requires that the Gross Replacement Value for railway infrastructure be applied as part of the calculation of the capital charge. Consistent with this approach is that WestNet will include in the capital cost an allowance for its cost of capital and related financing fees and charges during the construction period. It is assumed that the railway infrastructure can be constructed at a rate of half a kilometre per day on the basis of the origin and destination. This construction rate per day includes design and approval periods when significant engineering planning and thus related fees is required. The construction cashflows are assumed to be evenly distributed over the construction period with the cashflows assumed to be monthly. WestNet has applied a pre tax real weighted average cost of capital of 11% per annum to the construction cashflows to reflect the financing charge. This is based on WestNet's assessment of its WACC. Upon completion of construction, the interest calculation ceases.	The interest charge be set at the WNR WACC as updated annually. The assumed construction rate be set at an average of 1 kilometre per day. There will be sections of line that the Regulator may consider the rate to be higher or lower and adjust accordingly.
2.4 Economic Life WestNet has evaluated the economic lives of its infrastructure based on the application of modern equivalent assets with new components and key determinates of asset life such as environmental factors, which will have an impact to extend or reduce the life of the asset. Whilst this will be discussed in the section relating to maintenance in Section 3.4 , the maintenance regime has been set to allow the asset to reach its economic life. It has been assumed that the asset is life expired at the end of that period, has no economic (salvage) value and there are no costs to reclaim or dispose of the life expired assets. The economic lives of the assets adopted by WestNet are set out in Section 7.1.	Expand section to include detail and supporting sources on how it has evaluated economic lives of its infrastructure. Provide sources and evidence to support the key determinates of economic life of each sub-asset for each type of track, eg. main, branch, feeder and grain. Provide information on how WNR intends to treat economic life when limited by, for example, mine life. Explain how WNR will treat this item in the annuity calculation.
2.5 Allowable return The Regulator has determined that the current allowable return (or WACC) for WestNet is 8.2% pre-tax real. In accordance with the Code, the Regulator will review the WACC at 30 June each year.	Insert comment that the return component is provided as part of the capital cost annuity and WACC is included as the interest rate in the annuity calculation.
2.6 The annuity calculation WestNet has adopted the methodology (applying the PMT formula) used in a Microsoft Excel spreadsheet to calculate the annuity required. It	Insert the MS Excel terminology to clarify input: ◊ **Rate of interest:** be set at the relevant WACC as defined by the Code.

WestNet's proposed Costing Principles	Changes required
has assumed that the annual payments are made at the end of the period. As payments must be calculated annually under the Code, this most closely represents the cash flows received from access customers. It is commercially very unlikely that users will make access payments in advance. There is assumed to be no salvage value and no costs of remediation at the end of the assets useful life.	◊ **Nper:** be expressed in years and based on the relevant economic life of the track section(s). ◊ **Pv:** is the GRV of the relevant route section. ◊ **Fv:** is the salvage value, if any, which remains at end of economic life. This be set at zero. ◊ **Type:** set at the start of period by inputting "1" WNR is to provide further information to the Regulator on how this will impact on WNR's cost of working capital.
3 Determination of Operating Costs **3.1 Introduction** WestNet has prepared its operating costs based on the railway infrastructure being replaced with modern equivalent assets which are new and applying efficient practices. WestNet has outsourced its track maintenance function and tests the market to ensure rates are competitive. WestNet conducts its signalling and communications costs in-house due to the immaturity of the market at present to respond to WestNet's specific and demanding customer driven specifications and requirements. WestNet continues to review the market for the provision of these services, however, its market testing to date indicates that retaining this function in-house is the most cost effective option at present. The maintenance regime has been structured to allow the asset to function during its economic life, however, upon expiry it has no value and requires complete replacement. Therefore, the annuity calculation does not apply a salvage value at the end of an asset's useful life, nor any cost of disposal and site remediation. The maintenance regime recognises that costs will be impacted by certain traffic-related matters and any specific factors which would impact on economic life such as tight radius curves for rail.	Efficient operating costs are also to be based on the efficient cost of maintaining the MEA network. List the areas that would be considered in WNR's assessment of efficient costs. Section should note that demonstrating efficient costs is not a one-off requirement or a static concept. WNR will pursue innovations and productivity and efficiency improvements. Redraft to state that all operating cost inclusions will be based on best practice benchmark levels for all activities. The Costing Principles to contain an efficient cost reporting requirement whereby WNR will report annually on its cost performance against a suite of industry accepted cost performance KPIs. Confirm that MPM is zero. **Unit Rates** A new section in Section 3 discussing operating costs, cyclical and routine maintenance unit rate assumptions (as used in Section 2 for capital costs) with a detailed listing of rates and methodologies in appendix be inserted.
3.2 Definition of Operating Costs WestNet has calculated the costs of maintenance by assessing the characteristics which will drive the operating costs by individual route section which forms part of the origin and destination of the access proponent. This results in a charge per kilometre per annum for operating costs per	Re-drafted section to discuss how operating costs are calculated for each sub-asset. Incidents (eg. derailments and natural events) should be costed at the net marginal cost and must not be cost items where recoverable from

WestNet's proposed Costing Principles	Changes required
route section. One or more route sections are then combined to give the relevant operating cost for the access application as required by the Code. The costs of track maintenance are identified as those relating to track inspections by WestNet staff and the outsourced infrastructure contracts, which are charged to WestNet based on hourly rates. Signalling and communications costs are WestNet's direct costs. Maintenance costs also include incidents including derailments and natural events such as fire and floods that are not recoverable from operators.	operators or insured. Identify the key operating cost drivers WNR will adopt to ensure a MEA network.
3.3 Allocation of Operating Costs In relation to the costs of managing the outsourced maintenance contracts by WestNet to ensure appropriate safety and operational outcomes are met, these costs have been included in overheads and allocated as discussed in Section 4.2. WestNet has allocated the costs of managing train control, train scheduling, emergency management and information reporting as overheads. This is because WestNet has an efficient cost base where management will undertake a number of functions during a given time period. To ensure it has efficient costs, management is also structured to provide coverage for individual functions on a short-term basis for annual, sick leave, staff training and development and related matters. In addition, individual timesheets are not kept (as this would be inefficient and increase costs) and thus, devising cost allocation rules which are transparent and simple, is not feasible in these circumstances. Accordingly, WestNet has implemented allocation rules for overheads which result in a strong correlation between the allocation proxy and the cause of the cost. The allocation rules apply GTK or train movement variable and are discussed further in Section 4.2.	State that non-sector specific operating costs include safety costs, train control & scheduling emergency management and information are combined with other usual overhead cost and are allocated by either GTKs or train paths as detailed in Section 4.2. Delete comment on absence of (and lack of value in) timesheets. Delete comment that devising cost allocation rules which are transparent and simple, is not feasible. State that allocation of non-sector specific operating costs via GTK or train movements is common rail industry practice and likely to produce similar results to that obtained under a timesheet system.
3.4 Cyclical maintenance costs As noted in Section 2.4, WestNet has assessed the maintenance costs required to be incurred which relate directly to the relevant categories of railway infrastructure over the economic life of that category of asset. The maintenance costs reflect the MEA of new assets and Gross Replacement Value costs discussed in Section 2. These amounts have been divided by the individual economic lives to determine an annual maintenance cost which reflects the cost evenly spread over the maintenance cycle. Unit rates based on WestNet's outsourced maintenance	Define cyclical maintenance costs and explain how they differ from routine maintenance costs and MPM. Provide a detailed methodology (including key assumptions) on how average maintenance costs per annum are calculated. This methodology must factor in the maintenance savings of the assumption that the network is a MEA network. Provide more details on WNR's approach for rail on curves including the definition of "tight curve".

WestNet's proposed Costing Principles	Changes required
contracts and WestNet's in-house signalling and communications costs have been applied. Maintenance costs have been assessed by route section. Factors that influence the maintenance regime include the traffic density and specific circumstances relating to the relevant section of infrastructure such as tight radius curves. Replacement of rail on tight radius curves has been included as a maintenance item as the rail in these sections of track will be life expired on average within ten years.	
4 Overhead Cost **4.1 Definition of Overhead Cost** The overheads included are all the necessary overheads to conduct WestNet's business. The overheads set out below are the key areas only and are in addition to those included in Section 7.2. i. management accounting and financial accounting staff costs and audit and taxation fees and information technology costs ii. safety and accreditation fees iii. legal fees and other statutory costs such as ASIC lodgement fees iv. training and development costs for management and staff and human resource functions v. building occupancy costs including office equipment vi. communication costs such as telephone, facsimile, data transmission vii. motor vehicle, travel and accommodation costs viii. financial costs including bank fees and charges (excluding interest) ix. Insurance and risk management costs. x. Office stationery and consumables and sundry items WestNet is a separate legal entity and has an efficient overhead structure which relates to its business of access provision. It should be noted that WestNet has no other function than the provision of access. Accordingly, WestNet has included all of its overhead costs. WestNet's parent company, the Australian Railroad Group Pty Limited ("ARG"), provides certain corporate overhead functions which relate to the performance by WestNet of its access related functions. In accordance with the Code, WestNet has included ARG's access related functions in the calculation of its overheads. These ARG functions relate primarily to accounting and financial support, accreditation and safety related issues and human resource matters such as payroll. ARG also has principal conduct for the provision of information technology services. An analysis of ARG's overheads has	Add results and a summary of the analysis of ARG's overheads and the rules used to allocate ARG costs between WNR and other ARG groups is required, ie. how are ARG accounting, financial support, accreditation and safety, human resource, payroll and IT costs shared between WNR and other ARG entities.

WestNet's proposed Costing Principles	Changes required
been conducted and overheads have been allocated based on the usage by WestNet as a proportion of all other users in the ARG group.	
4.2 Allocation of Overhead Cost As noted in Section 3.2 management functions (as compared to direct operating functions) relating to train control, train scheduling, signalling and communications, emergency management costs and the cost of information reporting have been included in the calculation of overheads. This is primarily due to the inability to allocate efficiently and effectively specific management time and costs to this group of functions. Further, devising and implementing an appropriately transparent and simple methodology which is also cost effective is impractical. WestNet has considered the correlation between the allocation proxy and the causality of the cost for categories of overheads. An allocation table is included in 7.2. In general terms, train movements have been linked to train control and related support and management functions and the management of maintenance related functions have been linked to Gross Tonne Kilometres. WestNet is of the view that this will provide the most appropriate allocations between users which are predominantly rail freight customers. Section 33 of the Railways (Access) Act 1998 ("Act") requires that relevant officers must not have regard to the interests of the railway owner which is unfair to access seekers. WestNet confirms that the allocation of overhead cost is in accordance with Section 33 of the Act.	State the allocation method for the corporate overheads listed in 4.1. Provide an example of how a cost, such as train control, is allocated using train movements and how other costs such as maintenance supervision is allocated to line sectors using GTKs.
5 Other Matters **5.1 Ceiling variation** When the Regulatory Ceiling has been determined, WestNet will adopt an approach to subsequently vary the ceiling based on the movement in CPI on an annual basis at the end of each year. This variation will be applied for three years after which the Regulatory Ceiling will be recalculated. The recalculated Regulatory Ceiling will then be varied for the following three year period in accordance with the above and then recalculated thus the cycle will repeat. Whilst there has been much debate in relation to the rate variation method to be adopted in relation to rail access regimes, WestNet will apply the annual movement in the Consumer Price Index as the basis for cost variation. This provides over time the most appropriate measure in the movement of cost. As noted above, the total cost will be reset every three years based on the actual unit costs at that time.	**5.1 Ceiling variation (move to end of section)** Amend section to reflect a CPI-X adjustment to the ceiling, that X will be set at one quarter of CPI in the first three-year period and that the Regulator intends to assess and monitor WNR's MEA network over the period to assess an appropriate X factor.

WestNet's proposed Costing Principles	Changes required
The three-year period will also allow an appropriate review of the actual and reasonably projected demand as it impacts on the Gross Replacement Value in considering capacity. A three year period will also create an appropriate link to the Overpayment Rules as approved or determined by the Regulator from time to time.	
5.2 Calculation of Regulatory Ceiling Section 1 of Schedule 4 of the Code includes a definition of the total costs to be included in the calculation of the Regulatory Ceiling. Total costs are defined as the total of all operating costs, capital costs and the overheads attributable to the performance of WestNet's access related functions whether by WestNet or an associate. WestNet will adopt one Regulatory Ceiling. This approach recognises that it is WestNet's view the binding test on the Regulatory Ceiling will be the total revenue of all users compared to the infrastructure to support that traffic.	State that there is only one regulatory ceiling for all access seekers. Components of the ceiling are the annuity (refer to Section 2.6), operating costs and overhead as defined in Sections 3.2, 3.3, 3.4 and 4.1. Provide indicative ceiling cost calculations for high usage multi-user sections and for low volume lines.
5.3 Calculation of Regulatory Floor WestNet will adopt one Regulatory Floor. It is considered the calculation of the Floor is dependent upon a number of specific circumstances which will vary based on each access application. WestNet will apply the following factors to calculate the Regulatory Floor: i. the percentage that the incremental traffic represents of the total traffic ii. the existing overall level of traffic (that is, high or low density traffic use) iii. the requirements of the service (eg. high speed passenger versus low speed freight) iv. the nature of the infrastructure (which will influence the operating costs) and the specific requirements of the user v. the nature of the train operations and its impact on overhead costs. These factors will influence the derivation of the incremental costs to be avoided and issuing a set of rules which deals with these and other factors either individually or in combination is impractical. Each application will be based on its individual circumstances and will set out the factors that WestNet determines are relevant in calculating the Regulatory Floor. If factors other than (i) to (v) are considered relevant by WestNet it will apply to the Regulator to have these additional factors included.	Explain that each operator can have a different floor and the sum of all operators on a route section will be no less than the floor for that route section. Provide examples as to when WNR considers capital costs are avoidable and need to be included in the floor. Provide indicative floor cost calculations for high usage multi-user sections and for low volume lines.
6 Review And Consultation WestNet will formally consult with the Regulator at the end of the initial two years of operation of the	Explain that WNR's compliance with the Costing Principles will be subjected to an annual

<table>
<tr><th>WestNet's proposed Costing Principles</th><th>Changes required</th></tr>
<tr><td>Costing Principles to determine whether any amendments are required.</td><td>independent external audit. The Regulator may select and manage the auditor with costs paid by WNR. At the minimum, the Regulator's approval of the scope of the audit will be required and the final audit report will be made available to the Regulator and the public.

The Regulator can also commission special audits on any Costing Principles issue or area where additional assurance is sought.

Note that the Regulator will complete a routine revision to process any non-urgent changes to the Costing Principles before September 2004. State that the Regulator has the power under the Code to amend the Costing Principles at any time and access seekers and operators can at any time request the Regulator to consider amendments.</td></tr>
<tr><td>7 Annexures
7.1 Economic Life Table

Earthworks for Track (km) 100

Bridges, Tunnels & Culverts
Bridges (not footbridges) (km) 100
Culverts (km) 50

Level Xings (km) 20

Access Roads (km) 10

Fencing of Track (km) 15

<table><tr><th>Track Material</th><th>Concrete</th><th>1:2 steel</th><th>1.4 steel</th><th>Timber</th></tr><tr><td>Rail Track</td><td>50</td><td>50</td><td>50</td><td>50</td></tr><tr><td>Sleepers</td><td>50</td><td>30</td><td>25</td><td>20</td></tr><tr><td>Ballast</td><td>25</td><td>25</td><td>25</td><td>25</td></tr><tr><td>Jewellery</td><td>25</td><td>25</td><td>25</td><td>25</td></tr><tr><td>Turnouts</td><td>20</td><td>20</td><td>20</td><td>20</td></tr><tr><td>Track
Construction (km)</td><td>50</td><td>50</td><td>50</td><td>50</td></tr></table>
Roads & Shunter's pathway (km) 10

Signalling
Track (km) 20
Flashlights (km) 20
Boomgates (km) 20

Communications (km) 20

Miscellaneous
Track Signs (km) 10

Contractors Margins &
Contribution to Overheads 50

Engineering & Contract
Management 50

Interest on Construction 50</td><td>Retain concept of table and expand detailed provided.
◊ Delete "km" column.
◊ The life drivers for some items are not time. Rail wears considerably faster on track with curvature and track with above average curvature is likely to have a lesser useful life. At a minimum, WNR needs to segment rail lives on a GTK basis by rail weight (30, 41, 50 and 60 kg/metre) and by track curvature (Curves <400 m, 400-800 m &>800 m)</td></tr>
<tr><td>7.2 Overhead Allocation Table

1. Customer Service - by train movements</td><td></td></tr>
</table>

WestNet's proposed Costing Principles	Changes required
2. Access Manager, GM & Safeworking Inspectors – by train movements 3. Planning Operations - by train movements 4. Train Control Merredin - by train movements 5. Train Control Northam - by train movements 6. Train Control Picton - by train movements 7. Train Control Westrail Centre - by train movements 8. C&CS Head Office - as signal maintenance cost 9. Systems Maint Superintendent - as signal maintenance cost 10. RSS East Merredin - as signal maintenance cost 11. RSS South Picton - as signal maintenance cost 12. RSS West Midland - as signal maintenance cost 13. TOS Communications - as signal maintenance cost 14. NG – South West - by GTKs 15. NG – Narngulu - by GTKs 16. NG – Central - by GTKs 17. Structures Picton - by GTKs 18. Per Way South West - by GTKs 19. Regional Manager NG - by GTKs 20. Regional manager SG - by GTKs 21. Admin Perway West SG - by GTKs 22. Admin Structures West SG - by GTKs 23. Admin Perway East SG - by GTKs 24. Admin Structures East SG - by GTKs 25. Commercial - by train movements 26. Property - by train movements 27. Projects - by train movements 28. Corporate Overheads - by train movements	
7.2.1 Notes	
The allocation rules are driven either by train movements or are GTK related. Where a cost centre can be specifically allocated to an area, its costs will be allocated to the access seekers which relate to that specific area. For example, where a train control cost centre is dedicated to only the control of standard gauge trains, the costs will be allocated only to standard gauge traffic.	Reword first sentence to state that two proxies are used to allocate overheads: ◊ GTKs: used to allocate costs which vary more in quantum due to volumes moved ◊ Train movements: used to allocate costs which vary more in quantum due to by the number of train managed.

6. Determination

The proposed Costing Principles submitted by WNR dated November 2001 are not approved. WNR will be required to make the amendments as tabled in section 5 of this Determination and resubmit them for the Regulator's consideration within 30 days of the receipt of the Determination. In the event that WNR is not willing to do so, the Regulator may give directions to effect the necessary changes under Section 46(2) of the Code.

Ken Michael

ACTING INDEPENDENT RAIL ACCESS REGULATOR

28 June 2002

Appendix 1 – Submissions Received On The WNR Proposed Costing Principles

1. Alcoa World Alumina Australia
2. Australian Rail Track Corporation Ltd
3. Australian Western Railroads
4. AWB Limited
5. Chamber of Commerce and Industry Western Australia
6. Freight Corp
7. Grain Pool of Western Australia
8. Portman Iron Ore
9. WMC Resources Limited
10. Worsley Alumina
11. National Rail Corporation
12. Freight Australia