

# **COSTING MANUAL**

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## **1. PURPOSE OF COSTING MANUAL**

### **1.1 Background**

- (a) QR has developed an Undertaking that provides the framework for negotiations with Third Party Operators for Access to Rail Infrastructure for the purpose of operating Train Services.
- (b) The intent of the Undertaking is *inter alia* to ensure that Access negotiations are conducted expeditiously on a commercial basis, and in a competitively neutral environment. The Undertaking seeks to ensure that there will be no Cross Subsidy between individual Train Services or between combinations of Train Services. It also outlines pricing principles to be employed in determining applicable Access Charges.
- (c) QR is an integrated railway provider, in that it provides both Below Rail Services as a Railway Manager and Above Rail Services as a Railway Operator. QR is obligated, under the Act, to keep accounting records for Below Rail Services separate from its accounting records for its other operations. Consistent with this obligation, the Undertaking contains a requirement for the production of separate financial accounts for Below Rail Services provided by Network Access. These financial accounts will take the form of a statement of assets (a partial balance sheet) and a statement of earnings before interest and tax (a partial profit and loss statement). Given that Network Access is not responsible for providing all Below Rail Services, in order to ensure that it complies with the provisions of the Act, QR will also separately identify the costs and assets associated with Below Rail services provided by business groups within QR other than Network Access.
- (d) In order to assist in its compliance with the Act and the Undertaking, QR has developed this Costing Manual (referred to as the “Manual”).

### **1.2 Legislative Context**

The Undertaking is a voluntary undertaking as provided for in the Act. This Manual has been prepared in accordance with the requirements of the Undertaking.

### **1.3 Purpose**

- (a) The principal purpose of the Manual is to provide guidance in the Identification, Attribution and Allocation of costs and assets as Above Rail Costs, Below Rail Costs and Other Activities Costs and a methodological basis for identifying the cost components of the pricing limits for Access Charges to apply to a Train Service or combination of Train Services (as appropriate).

- (b) The Manual is to provide a point of reference in negotiating Access Charges for Railway Operators, and if necessary, for an expert or the QCA in investigating QR's application of the pricing principles set out in the Undertaking.
- (c) The Manual is designed to assist in the ringfencing of QR's costs and assets to Below Rail Services and, where applicable, to geographic locations.
- (d) The Manual establishes a methodology for the Identification, Attribution and Allocation of costs based on the accounting information available and methodologies applicable at the time of its development. Where, in the future, costs or assets are identified for which the Identification, Attribution or Allocation methodology has not been explicitly defined within this Manual, QR will, as far as reasonably possible, Identify, Attribute or Allocate these costs and assets in a manner consistent with the methodology and principles defined within the Manual.

## **2. SCOPE AND ADMINISTRATION OF COSTING MANUAL**

### **2.1 *Scope of Costing Manual***

The Manual sets out:

- (a) The process for identifying the cost base for Below Rail Services provided by QR separate from other services provided by QR.
- (b) Within the cost base for Below Rail Services, the process for identifying:
  - (i) costs and assets attributable to specified Line Sections;
  - (ii) costs and assets not attributable to specified Line Sections but attributable to specified Geographic Regions; and
  - (iii) costs and assets not attributable to specified Line Sections or any specified Geographic Region;
- (c) The process for identifying the cost components of the pricing limits for Access Charges, in accordance with the principles set out in the Undertaking, and in particular:
  - (i) costs (including capital charges) to be included in the Incremental Cost for the provision of Access to a Train Service or combination of Train Services (which is then used in determining the price floor);
  - (ii) costs (including capital charges) to be included in the Stand Alone Cost for the provision of Access to a Train Service or combination of Train Services (which is then used in determining the price ceiling); and
- (d) The Geographic Systems referred to in the Undertaking.

### **2.2 *Duration of Costing Manual***

- (a) The Manual will take effect on the date that it is approved by the QCA in accordance with the provisions of the Undertaking (herein referred to as the “Commencing Date”) and any Identification, Attribution or Allocation of costs made after the Commencing Date must be in accordance with this Manual.
- (b) The Manual will apply for a period of three (3) years from the Commencing Date.
- (c) If, at any time during the term of the Manual, QR does not have an approved Undertaking, QR may withdraw the Manual.

- (d) Apart from in the circumstances identified in Paragraph (c), QR may withdraw the Manual at any time, provided it has received the written agreement to such withdrawal by the QCA.

### **2.3 *Review of Costing Manual***

- (a) If it is necessary to change the Manual in order to ensure that it remains consistent with the Undertaking, QR will submit amendments to the Manual to the QCA within one (1) month of the QCA's approval of the relevant changes to the Undertaking.
- (b) If, at any time during the term of the Manual, QR is of the view that changes to the Manual are desirable, QR may submit amendments to Manual to the QCA.
- (c) Where amendments to the Manual are submitted to the QCA, the QCA must consider the amendments to the Manual, and approve, or not approve the amendments to the Manual. If the QCA does not approve the amendments to the Manual, the previously approved Manual will continue to apply. If the QCA does approve the amendments to the Manual, the amended Manual will apply from the date of the QCA's approval of the amendments.

### **2.4 *Audit of Compliance with Costing Manual***

- (a) The QCA may require QR's performance in complying with the Costing Manual to be audited on an annual basis.
- (b) Any audit undertaken in accordance with Paragraph (a) will be separate to the audit of QR's Financial Statements.
- (c) In the event that the QCA requires an audit as provided for in Paragraph (a), the audit will be undertaken by a person who has sufficient expertise and experience in the area of costing of railway activities. The auditor will be appointed by QR, provided that the identity of the auditor is reasonably acceptable to the QCA.

### **3. COSTING FRAMEWORK**

#### **3.1 *Organisational Structure***

- (a) QR has established its organisational structure to facilitate a level of separation of the management of Rail Infrastructure from the operation of Train Services, while recognising the need to share some resources.
- (b) Network Access has been established as a business group of QR, separate from those business groups within QR that operate Train Services. Apart from as set out in Paragraph (c) below, Network Access is responsible for the provision of Below Rail Services. In addition, there are service groups whose purpose is to provide support activities for both Network Access and the business groups operating Train Services.
- (c) The business groups that operate Train Services are responsible for the provision of certain Below Rail Services, being the management of stations and platforms and the provision or procurement of appropriate levels of maintenance and investment in those stations and platforms.
- (d) In addition, the business groups that operate Train Services perform certain Below Rail Services on behalf of Network Access, either directly or indirectly through QR's service groups, as follows:
  - (i) provision and management of train scheduling, train control and associated safeworking and incident management services in accordance with the Scheduling and Train Control Protocols specified by Network Access; and
  - (ii) operation and management of Train Services (including shunting) required for maintenance and enhancement of Rail Infrastructure.
- (e) The principles of cost Identification, Attribution and Allocation recognise that QR's organisational structure may change over time. Therefore, the Identification, Attribution and Allocation of costs and assets are based on functions regardless of the area within QR that provides them. The principles in the Manual have been developed on this basis, however at any point in time costing information will be drawn from responsibility-based accounts reflecting QR's current organisational structure.



### **3.2 Costing Principles**

- (a) The fundamental principle underlying QR's approach to costing is that, wherever possible, costs and assets are directly Identified or Attributed to a function, and functions are directly Identified or Attributed as a Below Rail Service, Above Rail Service or Other Activities. Costs and assets are only Allocated to a function/service where it is not possible or practical to disaggregate those costs and assets in a manner that allows for them to be directly Identified or Attributed to a function/service. This principle precludes the application of general rules of allocation that apply in all circumstances. Rather, it requires a detailed process to be put in place to analyse the assets owned, and the costs incurred, by QR.
- (b) The costing mechanisms described in the Manual are based on the following methodology:
  - (i) Where costs are directly incurred, or assets directly used, in the performance of Below Rail Services, those costs and assets are directly Identified as Below Rail Costs;
  - (ii) Where costs are incurred, or assets are used, in common for the provision of Above Rail Services, Below Rail Services and/or Other Activities, and where there is a causal relationship between the resources used and Above Rail Services, Below Rail Services or Other Activities, these costs are Attributed on a reasonable basis of cost causality; and
  - (iii) Where costs or assets are used jointly for the provision of above Rail Services, Below Rail Services and/or Other Activities, and where there is no direct causal relationship between the resources used and Above Rail Services, Below Rail Services or Other Activities, these costs are Allocated on a reasonable basis.
- (c) In order to achieve the requirements under the Act whilst operating within the fundamental principle identified in Paragraph (a), QR applies this costing methodology so that:
  - (i) All costs and assets must be Identified, Attributed or Allocated as Above Rail Costs, Below Rail Costs or Other Activities Costs;
  - (ii) Within each of these overarching categories, Allocation of costs and assets is minimised. Rather, costs and assets are Identified or Attributed to the functions and, hence, the type of activity, for which they are incurred. For example, costs that are incurred in providing train control services are Identified as relating to the region across which those train control services are provided –

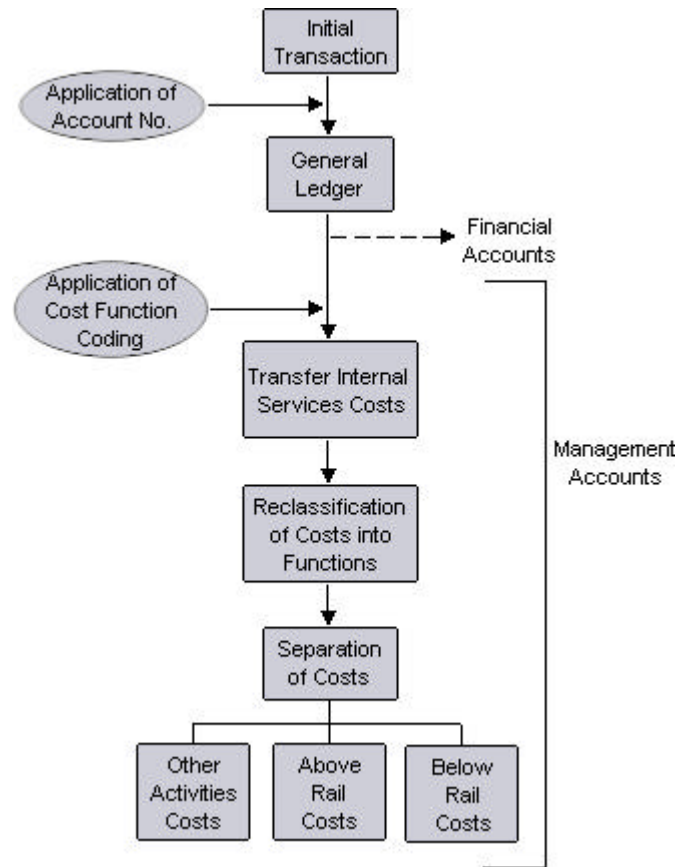
they are not Allocated to the provision of the individual line sections within that region. Any Allocation of Below Rail Costs to a more detailed geographical level than at which they are incurred is essentially arbitrary in nature and could be misleading in the context of assessing the Incremental Cost for a Train Service or combination of Train Services in accordance with Clause 6.2.

- (d) In assessing how costs and assets are to be Identified, Attributed and Allocated as Above Rail Costs, Below Rail Costs and Other Activities Costs, QR will only Attribute or Allocate costs and assets if, in aggregate, the impact of such Attribution or Allocation will be material to the assessment of Above Rail Costs, Below Rail Costs and Other Activities Costs.
- (e) Where it is not possible to Identify or Attribute a cost or asset as an Above Rail Cost, a Below Rail Cost or an Other Activities Cost, QR Allocates that cost or asset to Above Rail Costs, Below Rail Costs and Other Activities Costs on the principle that the costs should be Allocated in a balanced manner. As a result, any cost savings achieved by QR due to its nature as an integrated railway are shared between Above Rail Services and Below Rail Services.
- (f) The Identification, Attribution and Allocation of costs and assets in accordance with the Manual shall be performed by an area within QR with sufficient expertise and which is not directly involved in the provision of either Above Rail Services or Below Rail Services.

### **3.3 *Management Accounts***

- (a) QR produces internal management accounts on an annual basis. They interpret QR's financial accounts to provide detailed information on the costs of various functions carried out and reconcile to QR's audited financial statements.
- (b) The management accounts associate costs and assets to functional activities, and from this, separate costs and assets into Above Rail Costs, Below Rail Costs and Other Activities Costs. The resulting information forms the basis for the statement of assets and the statement of earnings before interest and tax for Below Rail Services provided by Network Access.
- (c) The process of generating the management accounts is outlined in Figure 3.1.

**Figure 3.1: Process for Production of Management Accounts and Cost Separation**



- (d) For financial accounting purposes all transactions are booked to an appropriate account code. The account code is constructed to allow identification of:
- (i) the nature of the activity requiring the transaction;
  - (ii) the element of activity (eg labour, materials); and
  - (iii) the responsible cost centre and manager.
- (e) This financial account coding is designed primarily around the requirements for construction of QR's general ledger based on the objectives of responsibility management. The network nature of a railway operation, where assets and activities serve more than one business or geographic sector, prevents responsibility-based accounting from providing direct identification of all costs and assets to functions and, hence, to Above Rail Costs, Below Rail Costs and Other Activities Costs. However, the financial account coding and underlying information is collected and arranged such that it is suitable for functional cost analysis through the management accounts process.
- (f) For maintenance of Rollingstock and Rail Infrastructure, a standard costing system using work orders underlies and balances to the general

ledger. The work order system allows for the identification of costing information at an activity level, which then permits a functional analysis of such costs. Work orders typically incorporate the following information:

- (i) in relation to maintenance of Rail Infrastructure, a description of the nature of the activity undertaken and the location, eg Line Section code, station code, etc; and
  - (ii) in relation to maintenance of Rollingstock, a description of the nature of the activity undertaken and the class of Rollingstock, eg type of ballast wagon, type of coal wagon, etc.
- (g) For activities other than maintenance of Rollingstock and Rail Infrastructure, information is drawn from the account code (primarily the responsible cost centre and manager) and supporting information, such as supporting transaction explanations, traffic statistics and staff pay locations, in order to undertake a functional analysis of these costs. Where supporting information does not provide sufficiently detailed information regarding the functions undertaken at a particular location, QR may undertake surveys in order to gain such detailed information.
- (h) The functional cost analysis process re-presents the financial accounts to reflect the functional activities that give rise to the costs and assets, using physical resource and empirical measures to Attribute and Allocate those costs and assets that cannot be directly Identified to a function. As part of this process, Corporate Services costs recorded in the general ledger in corporate cost centres are transferred out to the appropriate cost function, in order to leave a residual of true Corporate Overhead costs.
- (i) The management accounts involve some minor reclassification of certain administrative and corporate costs and assets in order to ensure that functional costs are accurately identified.
- (j) The costs and assets associated with each function are then separated into Above Rail Costs, Below Rail Costs and Other Activities Costs in accordance with the process set out in Section 4 of the Manual.

## **4. IDENTIFICATION OF BELOW RAIL COST BASE**

### **4.1 Introduction**

This section outlines the process for identifying the cost base for Below Rail Services separate from other services provided by QR. In particular the section outlines:

- (a) The general principles for separation of functional costs into Below Rail Costs separate from Above Rail Costs and Other Activities Costs;
- (b) The specific treatment of assets and corresponding depreciation/amortisation charges in accordance with these general principles; and
- (c) The specific treatment of operating expenses in accordance with these general principles.

### **4.2 Identification of Below Rail Functions**

- (a) Costs and assets are identified as Above Rail Costs, Below Rail Costs or Other Activities Costs based on an identification of the function that they are physically associated with and the purpose for which that function is provided. Many of the functions provided by QR can be clearly Identified as relating to Above Rail Services, Below Rail Services or Other Activities. Where such separation is not entirely clear from the function, the organisational separation of QR further facilitates separation of costs and assets into Above Rail Costs, Below Rail Costs and Other Activities Costs. However, there remain some costs and assets associated with functions and activities not clearly identified as Above Rail Services, Below Rail Services or Other Activities.
- (b) The key functions provided by QR, and identification of whether they are associated with Above Rail Services, Below Rail Services or Other Activities is shown in Figure 4.1. Figure 4.1 also indicates those functions that are either jointly used in the provision of Above Rail Services, Below Rail Services and Other Activities.
- (c) Items to note in relation to particular key functions include:
  - (i) Train running, station services and terminal costs and assets almost entirely relate to the provision of Above Rail Services, whereas a large part of the corridor elements relate to the provision of Below Rail Services. Thus for a large part of the cost structure the creation of separate financial accounts directly Identifies the costs and assets appropriately at this level.

- (ii) Stations and platforms are managed by business groups that operate Train Services (rather than by Network Access). These facilities are included in the definition of Rail Infrastructure and are declared available for Access under the Act. Costs and assets associated with the provision and maintenance of these facilities (i.e. the costs that a “landlord” owner of the facilities would incur) are treated as Below Rail Costs, but are identified separately from other Below Rail Costs, because, unlike other Below Rail Costs, they are not the responsibility of Network Access.
- (iii) Costs related to yards are Attributed as Above Rail Costs and Below Rail Costs based on the extent to which the yard is designated a common use yard (Below Rail Services) or Railway Operator specific (Above Rail Services).

**Figure 4.1 Key Function Categories**

Key Function	Above Rail Function	Below Rail Function	Other Activity	Joint Function
<b>Train Running</b>				
Revenue trains	***			
Non revenue above rail trains (driver training etc)	***			
Non revenue below rail trains (infrastructure maintenance etc)		***		
<b>Station and Terminal Costs</b>				
Yard shunt for QR below rail trains		***		
Yard shunt for all other trains	***			
Provision of terminal facilities/terminal services	***			
Provision of station facilities		***		
Station services	***			
<b>Corridor Costs</b>				
Train control and safeworking		***		
Mainline and common user yards		***		
Railway Operator specific yards and terminals	***			
Private sidings	***			
<b>Business Management</b>	***	***	***	***
<b>Corporate Overhead</b>				***

### 4.3 Treatment of Assets

#### 4.3.1 Classification of Assets

- (a) Assets are classified as Above Rail Costs, Below Rail Costs or Other Activities Costs by determining the function for which the assets are required. In some instances, Attribution or Allocation of assets may be required in order to align with the identified functions. QR’s major asset categories are shown in Figure 4.2.

- (b) Figure 4.2 identifies the asset categories required for the purpose of Above Rail Services, Below Rail Services and Other Activities. In addition, Figure 4.2 identifies assets that are used jointly to provide Above Rail Services, Below Rail Services and Other Activities. This Manual sets out how assets that are not exclusively used for Above Rail Services, Below Rail Services or Other Activities (i.e. those assets that are marked in Figure 4.2 either as both Above Rail Resource and Below Rail Resource or as Joint Resource) are Attributed or Allocated to Above Rail Costs, Below Rail Costs or Other Activities Costs.

**Figure 4.2 Asset Categories**

Asset Category	Above Rail Resource	Below Rail Resource	Other Activity Resource	Joint Resource
<b>Fixed Assets</b>				
Corridor land sublease		***		
Rollingstock	*** (P)	***		***
Trackwork & civil works	***	*** (P)		
Facilities	***	***		***
Control systems	***	***		***
Field signals	***	*** (P)		
Telecommunications				***
Traction power distribution equipment	***	*** (P)		
Traction power supply equipment		***		
Plant and equipment	***	***		***
Land	***	***		***
Motor vehicles	***	***	***	***
Computers & miscellaneous office equipment	***	***	***	***
Construction in progress	***	***	***	
<b>Other Assets</b>				
Receivables	***	***	***	
Inventories	***	***		
Prepayments	***	***	***	
Treasury assets (cash, future income tax benefit, deferred leases)			***	

(P): identifies the predominant use of the asset

### 4.3.2 Fixed Assets

#### 4.3.2.1 Rollingstock

- (c) All locomotives, with the exception of those classes of locomotives that may be used for the purpose of non revenue below rail Trains, are Identified as Above Rail Costs. The remaining locomotive assets are Attributed as Above Rail Costs or Below Rail Costs in accordance with the extent of their usage for Above Rail Services compared to the extent of their usage for Below Rail Services (primarily the transportation of QR's infrastructure maintenance supplies).

- (d) All wagons, with the exception of those classes of wagons that may be used for the purpose of non revenue below rail Trains (i.e. service wagons), are Identified as Above Rail Costs. Service wagon assets are Identified to areas within QR through analysis of the cost centre and responsible manager for each service wagon. Once service wagons are Identified to areas within QR, these assets become associated with the functions provided by those areas within QR. The service wagons are then Identified, Attributed or Allocated as Above Rail Costs or Below Rail Costs in a manner consistent with how that function is Identified, Attributed or Allocated to Above Rail Services or Below Rail Services.

#### 4.3.2.2 Assets Associated with the Provision of Track

- (a) Assets directly associated with the provision of Track are Identified to individual Line Sections and include:
  - (i) Corridor land, being QR's sublease from Queensland Transport in relation to the corridor land, which will be treated as a leased asset;
  - (ii) Civil Works, including bridges, culverts and pipes (major), cuttings, embankments, fences, overbridges, retaining walls, subways, tunnels, minor drainage and access roads;
  - (iii) Track, including ballast, sleepers, rails, fasteners, turnouts and diamond crossings;
  - (iv) Field signals, including electrical signal interlocking, train order/DTC (field componentry), level crossing protection and tramway crossings;
  - (v) Traction power distribution equipment, including contact wire and the overhead support structure.
- (b) The rail infrastructure is identified according to Line Section codes. Major yards are generally assigned a separate Line Section code. Therefore, all assets that can be Identified to a Line Section that solely forms part of the mainline are Identified as Below Rail Costs.
- (c) Where a Line Section code relates solely to a yard, or to a section of mainline and a yard, assets are Attributed as Below Rail Costs or Above Rail Costs based on the extent to which the Line Section is designated as mainline, common user yard (both part of Below Rail Services) or Railway Operator specific (Above Rail Services). In particular, assets are Attributed as follows:
  - (i) All corridor land is Identified as a Below Rail Cost, as the element that is involved in the provision of Above Rail Services is immaterial.



- (ii) Civil works and Track are grouped together and Attributed as Above Rail Costs and Below Rail Costs based on an assessment of:
  - the proportion of Track kilometres in the Line Section that are designated as being for the purpose of Above Rail Services and Below Rail Services; and
  - the standard of Track that is required in those parts of the Line Section that are designated as being for the purpose of Above Rail Services and Below Rail Services.
- (iii) In most cases, the extent of field signal assets in the area of yards designated for Above Rail Services will be immaterial, as the signal assets will be concentrated in those areas with the highest traffic. In these cases, all field signal assets in the relevant Line Section are Identified as Below Rail Costs. However, where material, field signal assets are Attributed as Above Rail Costs and Below Rail Costs based on an assessment of the extent and type of signals in the Line Section that are designated as being for the purpose of Above Rail Services and Below Rail Services.
- (iv) Traction power distribution assets are Attributed as Above Rail Costs and Below Rail Costs based on an assessment of the electrified Track kilometres in the relevant Line Section that are designated as being for the purpose of Above Rail Services and Below Rail Services.

#### 4.3.2.3 Traction Power Supply Equipment

- (a) Traction power supply equipment is used to supply electric energy for traction over the overhead traction power distribution system. Traction power supply equipment includes traction substation switchboards and transformers, power distribution assets and earthing and bonding equipment. Traction power supply equipment is Identified separately to any power supply assets that are used to provide electricity to facilities and buildings.
- (b) Given that energy is taken from QR's electric overhead system by all electric trains in common, all traction power supply equipment is Identified as Below Rail Costs.

#### 4.3.2.4 Facilities and Buildings

- (a) Each facility/building is described in QR's asset register according to the type of facility/building and its location. Based on an analysis of this information, an assessment is made of the function/s associated with each facility/building. To the extent that more than one function

is associated with a facility/building, that facility/building is Attributed between those functions.

- (b) Facilities/buildings, or portions thereof, are then Attributed or Allocated to Above Rail Costs, Below Rail Costs or Other Activities Costs in a manner consistent with how the relevant function is Attributed or Allocated to Above Rail Services, Below Rail Services or Other Activities.

#### 4.3.2.5 Plant and Equipment

- (a) Track maintenance equipment is used for the purpose of maintaining the Track assets. Track maintenance equipment includes, for example, tamping machines, ballast cleaners, rail grinders and Track recording vehicles.
- (b) QR separately identifies Track maintenance equipment from other plant and equipment. As a result, all Track maintenance equipment is Identified as Below Rail Costs.
- (c) Plant and equipment assets (excluding Track maintenance equipment) are Identified to areas within QR through analysis of the responsible cost centre and manager for each piece of equipment. Once plant and equipment assets are Identified to areas within QR, these assets become associated with the functions provided by those areas within QR. The plant and equipment assets are then Identified, Attributed or Allocated as Above Rail Costs or Below Rail Costs in a manner consistent with how that function is Identified, Attributed or Allocated to Above Rail Services or Below Rail Services.

#### 4.3.2.6 Control Systems

- (a) Control systems include real time information systems, signal control systems, traction power control systems and Train/Track monitoring systems.
- (b) Control systems are assessed according to the function of the individual systems. The control systems are then Identified, Attributed or Allocated as Above Rail Costs or Below Rail Costs consistent with how that function is Identified, Attributed or Allocated as Above Rail Services or Below Rail Services. For example, where that function relates to the provision of Below Rail Services, eg signal control systems and traction power control systems, these assets are Identified as Below Rail Costs.

#### 4.3.2.7 Telecommunications

- (a) Telecommunications assets can be identified as those required for the “backbone” telecommunication systems and those required for customer premises. In addition, both backbone and customer premises

assets can be categorised by type of asset, eg cable, hand held radios, microwave.

- (b) Whilst the primary purpose for QR owning a backbone telecommunications system is for the purposes of providing train control services as part of Below Rail Services, the system is also used for other telecommunications and data requirements of QR's overall business. It is considered that the nature of telecommunications assets and the variety of uses for those assets means that it is not possible to usefully categorise the assets as being required for the provision of Above Rail Services or Below Rail Services. Therefore, QR will Allocate telecommunications assets on the basis of 60% being Below Rail Costs and 40% being Above Rail Costs. The impact of Other Activities on telecommunication assets is considered to be immaterial.

#### 4.3.2.8 Land

- (a) Land assets include any parcels of land owned by QR. Land assets exclude corridor land, as QR subleases the corridor land from Queensland Transport and, hence, QR does not own the corridor land.
- (b) Land assets are Identified to areas within QR through analysis of the cost centre and responsible manager for each parcel of land.
- (a) Once land assets are Identified to areas within QR, these assets become associated with the functions provided by those areas within QR. The land is then Attributed or Allocated as Above Rail Costs, Below Rail Costs or Other Activities Costs in a manner consistent with how that function is Attributed or Allocated to Above Rail Services, Below Rail Services or Other Activities.

#### 4.3.2.9 Motor Vehicles

- (a) The majority of QR's motor vehicle assets are controlled within a central fleet. Motor vehicles that are not controlled within the central fleet are Identified to an area within QR based on an analysis of responsible cost centre and manager for those assets. Motor vehicles that are managed within the central fleet are Attributed to areas within QR in proportion to the manner that motor vehicle expenses are charged to areas within QR. This is assessed through an analysis of responsible cost centre and manager for motor vehicle expenses.
- (b) Once motor vehicles are Identified or Attributed to areas within QR, these assets become associated with the functions provided by those areas within QR. The motor vehicles are then Attributed or Allocated as Above Rail Costs, Below Rail Costs or Other Activities Costs in a manner consistent with how that function is Attributed or Allocated to Above Rail Services, Below Rail Services or Other Activities.

#### 4.3.2.10 Computers and Miscellaneous Office Equipment

- (a) Computers and miscellaneous office equipment assets are Identified to areas within QR through analysis of the cost centre and responsible manager for each piece of equipment.
- (b) Once computers and miscellaneous office equipment are Attributed to areas within QR, these assets become associated with the functions provided by those areas within QR. The equipment is then Attributed or Allocated as Above Rail Costs, Below Rail Costs or Other Activities Costs in a manner consistent with how that function is Attributed or Allocated to Above Rail Services, Below Rail Services or Other Activities.

#### 4.3.2.11 Construction in Progress

- (a) Prior to commencement, projects are assessed in terms of whether, and to what extent, the project is being undertaken for the purpose of providing Above Rail Services, Below Rail Services or Other Activities.
- (b) Construction in progress is Attributed as Above Rail Costs, Below Rail Costs or Other Activities Costs based on an identification of each project that is currently underway and the extent to which the individual projects are related to Above Rail Services, Below Rail Services or Other Activities.

### 4.3.3 Other Assets

- (a) Receivables are assessed and Identified to business areas through an analysis of the customer and the nature of the service that is provided to that customer. Once Identified to business areas, these assets are Attributed or Allocated as Above Rail Costs, Below Rail Costs and Other Activities Costs in a manner consistent with the way in which that function is Attributed or Allocated to Above Rail Services, Below Rail Services or Other Activities.
- (b) Inventories are Identified in terms of the nature of the inventory stock and the business group that holds them. Where possible, inventories are Identified as Above Rail Costs, Below Rail Costs or Other Activities Costs based on the nature of the inventory stock. Where this is not possible, once Identified to business groups, these assets are Attributed or Allocated as Above Rail Costs, Below Rail Costs and Other Activities Costs consistent with the proportion of that business group's total working expenses (excluding fuel and traction electricity) that have been Identified, Attributed or Allocated as Above Rail Costs, Below Rail Costs and Other Activities Costs.
- (c) Prepayments are assessed and Identified to business areas through an analysis of the service provider and the nature of the service that is

received from that service provider. Once Identified to business areas, these assets are Attributed or Allocated as Above Rail Costs, Below Rail Costs and Other Activities Costs in a manner consistent with the way in which that function is Attributed or Allocated to Above Rail Services, Below Rail Services or Other Activities.

- (d) Cash, deferred finance lease expenses and future income tax benefit are all treated as being required for treasury activities and, as a result, are Identified as Other Activities Costs.

#### **4.4 Assessment of Below Rail Depreciation/Amortisation**

- (a) In assessing the depreciation and amortisation for assets that have been Identified, Attributed or Allocated as Below Rail Costs for reporting purposes, QR will utilise the appropriate asset value, economic asset life and method of depreciation/amortisation for each of the assets Identified, Attributed or Allocated as Below Rail Costs in a manner consistent with the method used in QR's Financial Statements.
- (b) To the extent that the asset value, economic asset life or method of depreciation used in QR's Financial Statements is not the same as the asset value, economic asset life or method of depreciation permitted by the QCA for pricing purposes, the depreciation and amortisation identified in accordance with this approach may not be identical to the depreciation and amortisation utilised by QR in developing its Access Charges.

#### **4.5 Treatment of Operating Costs**

- (a) Operating costs are classified as Above Rail Costs, Below Rail Costs or Other Activities Costs by determining the function for which the costs are incurred. In some instances, Attribution or Allocation of operating costs may be required in order to align with the identified functions. QR's major operating cost categories are shown in Figure 4.3.
- (b) Figure 4.3 identifies the operating cost categories directly incurred in the provision of Above Rail Services, Below Rail Services and Other Activities. In addition, Figure 4.3 identifies operating cost categories that are incurred jointly to provide Above Rail Services, Below Rail Services and Other Activities. This Manual sets out how operating costs that are not exclusively incurred for Above Rail Services, Below Rail Services or Other Activities (i.e. those operating costs that are marked in Figure 4.3 either as both Above Rail Cost and Below Rail Cost or as Joint Cost) are Attributed or Allocated to Above Rail Costs, Below Rail Costs or Other Activities Costs.

**Figure 4.3: Operating Cost Categories**

Category/Activity	Above Rail Cost	Below Rail Cost	Other Activities Cost	Joint Cost
<b>Train Running*</b>				
Train crew	*** (P)	***		
Locomotive repairs and maintenance (includes fuelling and sanding)	*** (P)	***		
Wagon repairs and maintenance	*** (P)	***		
Car provisioning and cleaning	***			
On-board services and catering	***			
Contract road services, including passenger alternative travel	***			
Fuel	*** (P)	***		
Traction Electricity		***		
<b>Direct Station and Terminal Costs</b>				
Shunt engines and crew	*** (P)	***		
Shunters and number takers	*** (P)	***		
Freight terminals	***			
Passenger services	***			
Revenue protection and security	***			
Examination of rolling stock	***			
Station catering	***			
<b>Corridor Costs</b>				
Train control and safeworking		***		
Track and bridge maintenance	***	*** (P)		
Signal maintenance	***	*** (P)		
Traction power distribution maintenance	***	*** (P)		
Traction power supply maintenance		***		
Telecommunications maintenance				***
Facilities (including station) maintenance	***	***		***
Derailment and collision costs	***	***		
Private siding maintenance	***			
<b>Business Administration</b>				
Group administration	***	***	***	***
Operations administration				***
Infrastructure administration		***		***
Rollingstock administration	***			
<b>Corporate Costs</b>				***
<b>Loss on Disposal of Assets</b>	***	***	***	

(P): identifies the predominant reason for the expense

#### 4.5.1 Train Running Costs

##### 4.5.1.1 Infrastructure Trains

- (a) Train crew, motive power energy (either diesel or electricity) and Rollingstock maintenance is provided for:
  - (i) revenue Trains;
  - (ii) non revenue above rail Trains (eg inspection, driver training);
  - (iii) non revenue below rail Trains (eg ballast and other infrastructure maintenance trains); and

- (iv) shunting of all of the above Trains within yards.
- (b) The costs associated with shunting of Trains within yards is treated as a station/terminal cost and, therefore, is addressed in Subsection 4.5.2.
- (c) Only the costs of non revenue below rail Trains are Attributed as Below Rail Costs. All other Train running costs are Identified or Attributed as Above Rail Costs. The components of Train running costs Attributed as Below Rail Costs include train crew, fuel (non revenue Trains do not currently use electric locomotives) and Rollingstock repairs and maintenance.
- (d) Train crew costs are analysed by depot and the costs allocated based on work undertaken at each depot. Standard costing practice is for crew costs to be allocated on the basis of crew time. The nature of non revenue Train operations requires that crew time be calculated on the basis of estimated average train speeds for non revenue Trains from recorded Train kilometre statistics.
- (e) Fuel costs are Attributed to non revenue below rail Trains on the basis of consumption patterns by locomotive class by locomotive kilometre.
- (f) Rollingstock maintenance costs are collected on a state wide basis and are analysed by class of Rollingstock. Rollingstock maintenance and servicing expenditure is Attributed to revenue Trains, non revenue above rail Trains, non revenue below rail Trains and shunting within yards based on an assessment of their usage for each of these activities.

#### 4.5.1.2 Traction Electricity

Electricity for traction is treated as a Below Rail Cost because the electricity is taken from QR's electric overhead system by all (electric) Trains in common. Separate invoicing by the electricity distributor to an individual Railway Operator is not currently possible, therefore, it is necessary that the Railway Operator purchase electricity for traction from QR.

#### 4.5.2 Direct Station and Terminal Costs

- (a) Station and terminal costs (with the exception of maintenance which is treated as a form of facilities maintenance as discussed below) are incurred for the purpose of providing Above Rail Services, with the exception of shunting and handling of service wagons for non revenue below rail Trains.
- (b) The costs associated with shunting and handling of service wagons for non revenue below Rail Trains are Attributed based on similar principles as set out in Subsection 4.5.1.1, with the exception that utilisation of yard shunt locomotives and crews is Attributed to Above

Rail Services and Below Rail Services on the basis of surveys of hours of operation of shunt locomotives and the purpose for which they are used.

### **4.5.3 Corridor Costs**

#### **4.5.3.1 Maintenance Identified to Line Sections**

- (a) Work orders are used to identify both the nature of maintenance activities and the location at which maintenance occurs by way of a Line Section code or a station code. Maintenance activities specified to individual Line Sections include:
  - (i) Track maintenance
  - (ii) Bridge maintenance
  - (iii) Signal maintenance
  - (iv) Traction power distribution maintenance
- (b) The corridor is broken up into identified Line Sections. Major yards are generally assigned a separate Line Section code. Therefore, all maintenance activities of the type nominated in Paragraph (a) that can be Identified to a Line Section that solely forms part of the mainline are Identified as Below Rail Costs.
- (c) Where a Line Section code relates solely to a yard, or to a section of mainline and a yard, elements of that Line Section have been identified and designated as mainline, common user yard (both part of Below Rail Services) or Railway Operator specific (Above Rail Services). Where possible work orders will identify the location of the maintenance activity by reference to whether it is part of Below Rail Services or Above Rail Services. Where work orders do not separately identify the location of the maintenance activity within the Line Section, the maintenance costs of the type nominated in Paragraph (a) are Attributed as Below Rail Costs or Above Rail Costs based on the extent to which the yard is designated as being required for Below Rail Services or for Above Rail Services. In particular, these maintenance costs are Attributed as follows:
  - (i) Track and bridge maintenance are grouped together and Attributed as Above Rail Costs and Below Rail Costs based on an assessment of:
    - the proportion of Track kilometres in the Line Section that are designated as being for the purpose of Above Rail Services and Below Rail Services; and



- the standard of Track that is required those parts of the Line Section that are designated as being for the purpose of Above Rail Services and Below Rail Services.
- (ii) Signal maintenance is Identified fully as a Below Rail Cost except where there is a material portion of field signals in an area of the Line Section designated for Above Rail Services. In these circumstances, signal maintenance is Attributed as Above Rail Costs and Below Rail Costs based on an assessment of the extent and type of signals in the Line Section that are designated as being for the purposes of the Railway Operator specific section of the Line Section (Above Rail Services) or the common user section of the Line Section (Below Rail Services).
- (iii) Traction distribution maintenance costs are Attributed as Above Rail Costs and Below Rail Costs consistent with the proportion of electrified Track kilometres in the relevant Line Section that are designated as being for the purposes of Above Rail Services and Below Rail Services.
- (d) Private siding maintenance is often undertaken by QR as part of a rail haulage service. As such, it is treated as an Above Rail Cost and charged to the end customer.

#### 4.5.3.2 Traction Power Supply Maintenance

All maintenance of the traction power supply equipment is Identified as a Below Rail Cost.

#### 4.5.3.3 Derailments and Collisions

- (a) Unless otherwise specified in the relevant Access agreement, where the reason for a derailment or collision is able to be identified and linked to the reported costs, the cost associated with damage (whether to the Rail Infrastructure or to Rollingstock or to other property) resulting from the negligence of the Railway Manager is Identified as a Below Rail Cost. The cost associated with any damage resulting from the negligence of the Railway Operator will be Identified as an Above Rail Cost. If otherwise specified in the relevant Access agreement, the costs will be Identified as Above Rail Costs or Below Rail Costs in accordance with the provisions of that Access agreement.
- (b) Where the reason for a derailment or collision is not identified and/or not linked to the reported costs, the element of derailment and collision costs identified as a Below Rail Cost will be the cost of repairing damage to the Rail Infrastructure. In such cases, the cost of repairing Rollingstock is Identified as an Above Rail Cost.

#### 4.5.3.4 Train Control and Safeworking

- (a) Within QR's Train operations areas, a number of activities are performed. These include Train scheduling, Train crew rostering, Train crew management, locomotive management, wagon management, controlling Train and Track machine movements (i.e. Train control), safeworking, incident management, customer advice (eg in relation to estimated time of arrival), performance reporting, security monitoring and revenue protection and collection.
- (b) The costs associated with Train control (i.e. the salaries of those people who control Train and Track machine movements) are separately Identified from the costs of other activities undertaken within the Train operations areas. These costs are Identified as a Below Rail Cost as the control of Train and Track machine movements is necessarily a common user function, and are therefore provided as a Below Rail Service. In some locations, a small proportion of a train controller's time is directed to the provision of Above Rail Services (eg train crew management), however this is not considered to be material.
- (c) Other costs associated with the Train operations area are dealt with as operations administration costs in Section 4.5.4.

#### 4.5.3.5 Telecommunications Maintenance

- (a) Consistent with the Subclause 4.3.2.7, the nature of telecommunications maintenance costs and the variety of uses for the related assets means that it is not possible to usefully categorise the costs as being incurred for the provision of Above Rail Services or Below Rail Services.
- (b) Therefore, QR will Allocate telecommunications costs on the basis that 60% are Below Rail Costs and 40% are Above Rail Costs. The impact of Other Activities on telecommunication costs is considered to be immaterial.

#### 4.5.3.6 Facilities Maintenance

- (a) The costs associated with maintaining specific facilities that are Identified, Attributed or Allocated as required for the provision of Below Rail Services are Identified, Attributed or Allocated as a Below Rail Cost. Similarly, the costs associated with maintaining specific facilities that are Identified, Attributed or Allocated as relating to the provision of Above Rail Services are Identified, Attributed or Allocated as an Above Rail Cost.
- (b) In performing this analysis, it should be noted that stations and platforms are facilities/buildings that are defined as Rail Infrastructure and are declared available for Access under the Act. Therefore, maintenance of stations and platforms is treated as a Below Rail Cost,

however, given that the assets are owned by business groups that operate Train Services rather than by Network Access, such maintenance costs are identified separately from other Below Rail Costs.

#### **4.5.4 Business Administration Costs**

- (a) Business administration costs can be separated into the following categories:
- (i) Group administration, which is then further categorised as follows:
    - group management and administration, which includes all administration related to group general manager, immediate administration support and finance management, including costs associated with insurance and damages claims;
    - marketing expenses;
    - business unit administration; and
    - capital works expensed;
  - (ii) Operations administration, which includes Train Scheduling, Train crew rostering, Train crew management, locomotive management, wagon management, safeworking, incident management, customer advice, performance reporting, security monitoring, revenue protection and collection and all administration and management related to these activities;
  - (iii) Infrastructure administration, which includes the administration of permanent way maintenance, facilities maintenance and trackside systems (eg signals and telecommunications, traction power equipment, etc) maintenance as well as all administration and management related to these maintenance activities; and
  - (iv) Rollingstock administration, which includes management and administration related to rollingstock maintenance and overhaul.
- (b) The group administration costs are Identified, Attributed or Allocated based on the function being performed:
- (i) Group administration and management costs are treated as follows:
    - For Network Access, the costs are Identified as Below Rail;

- For those groups whose primary purpose is to operate train services, the costs are Allocated as Above Rail Costs and Below Rail Costs *pro rata* on the total expenses of that group that are Identified, Attributed or Allocated as Above Rail Costs and Below Rail Costs;
  - For those groups whose purpose is to provide support activities for Network Access and the business groups operating Train Services, the costs are treated as part of the function being performed, and are Attributed or Allocated as Above Rail Costs, Below Rail Costs and Other Activities Costs in a manner consistent with how that function is Attributed or Allocated as an Above Rail Service, Below Rail Service or Other Activities;
- (ii) Marketing costs are Identified as Above Rail Costs, Below Rail Costs and Other Activities based on the purpose of the marketing. For example if Network Access incurs marketing costs, these are Identified as Below Rail Costs. Similarly all of the marketing costs for groups whose primary purpose is to operate train services are Identified as Above Rail Costs.
- (iii) Business unit administration (excluding marketing) relates to the management of sections of a group's activities that relate to the maintenance and development of relationships between that group and its customers (eg coal, industrial products, Citytrain) and is Identified fully as an Above Rail Cost, with the exception of the costs associated with the business development division of Network Access, which is Identified as a Below Rail Cost.
- (iv) Capital works expensed is Identified as an Above Rail Cost or Below Rail Cost based on the nature of the project undertaken.
- (c) Operations administration includes elements that form part of both Above Rail Services and Below Rail Services. Where possible, the activities performed within operations administration are Identified or Attributed as Above Rail Services or Below Rail Services, and the costs Identified and Attributed accordingly. For example, incident management and safeworking are Identified or Attributed as Below Rail Services and train crew rostering, train crew management and locomotive and wagon management are Identified as Above Rail Services. The remaining operations administration costs that are incurred by each group are Allocated as Above Rail Costs and Below Rail Costs *pro rata* based on the total operations expenses of that group that is Identified, Attributed and Allocated as Above Rail Costs and Below Rail Costs.

- (d) Infrastructure administration is incurred in the provision of both Above Rail Services and Below Rail Services. For each group that incurs costs associated with infrastructure administration, the administration of the cost of specific maintenance categories (eg permanent way, facilities, signals and telecommunications, etc) are Attributed to Above Rail Costs and Below Rail Costs based on the extent of expenditure by that group on each of those maintenance categories that has been Identified, Attributed or Allocated as Above Rail Costs or Below Rail Costs. The remaining infrastructure administration costs for each of those groups are Allocated as Above Rail Costs and Below Rail Costs *pro rata* based on the total expenditure on infrastructure maintenance by that group that has been Identified, Attributed or Allocated as Above Rail Costs or Below Rail Costs.
- (e) Rollingstock administration is Identified as an Above Rail Cost. Although a small proportion of Rollingstock assets and Rollingstock maintenance is Attributed as Below Rail Costs, the impact of attributing a consistent proportion of Rollingstock administration as a Below Rail Cost is not material.

#### **4.5.5 Corporate Overheads**

- (a) Corporate costs include both Corporate Services and Corporate Overhead.
- (b) Corporate Services costs are Attributed on a usage basis to specific functions and are Attributed or Allocated as Above Rail Costs, Below Rail Costs and Other Activities Costs in a manner consistent with how that function is Attributed or Allocated to Above Rail Services, Below Rail Services or Other Activities.
- (c) Corporate Overheads are common to the provision of Above Rail Services, Below Rail Services and Other Activities, and across all regions and traffics. These costs are allocated as Above Rail Costs, Below Rail Costs and Other Activities Costs on a percentage mark-up on all other expenses excluding corporate overhead, interest and depreciation.
- (d) Other corporate costs are Identified, Attributed or Allocated as follows:
  - (i) Surplus staff costs are Identified as Above Rail Costs or Below Rail Costs according to the function and location of the surplus staff.
  - (ii) The cost of early retirement payments (VERS) is recorded as a corporate cost as the staff concerned could have worked in different areas within QR during their career. VERS expense is

then Allocated as an Above Rail Cost, Below Rail Cost and Other Activities in the same ratio as the corporate overhead allocation.

- (iii) Bank charges are Identified to Other Activities (i.e. treasury activities).
- (iv) Miscellaneous year end and audit adjustments are Allocated as Above Rail Costs, Below Rail Costs and Other Activities in the same ratio as the corporate overhead allocation.
- (v) Other general items such as year 2000 costs are Allocated as Above Rail Costs, Below Rail Costs and Other Activities Costs in the same ratio as the corporate overhead allocation.
- (vi) QR's share of the net costs related to the Sydney-Brisbane passenger services is Identified as an Above Rail Cost.

#### **4.5.6 Loss on Disposal of Assets**

Any loss on disposal of assets is Identified to an area within QR through an analysis of the cost centre against which the loss is recorded. The loss is then Identified, Attributed or Allocated as an Above Rail Cost, Below Rail Cost or Other Activities Cost in a manner consistent with how that function is Identified, Attributed or Allocated as Above Rail Services, Below Rail Services or Other Activities.

## 5. HEIRARCHY OF BELOW RAIL COSTS

### 5.1 Introduction

- (a) Where consistent with the costing principles upon which this Manual is based, costs and assets are Identified or Attributed to Line Sections and Geographic Regions for the purpose of developing Access Charges that reflect geographic differences in Rail Infrastructure standards, utilisation and costs. Separate financial accounts are not produced on the basis of Line Sections or Geographic Regions.
- (b) Below Rail Costs fall into the following categories:
- (i) Line Section Specific;
  - (ii) Region Specific;
  - (iii) Network Wide;
  - (iv) Electric Traction Energy; and
  - (v) Stations and Platforms.

### 5.2 Treatment of Assets

The identification of assets as Line Section Specific, Region Specific or Network Wide is shown in Figure 5.1

**Figure 5.1 Asset Categories**

Asset Category	Line Section Specific	Region Specific	Network Wide
<b>Non Current Physical Assets</b>			
Corridor land	***		
Rollingstock		***	
Track & civil works	***		
Facilities	***	***	***
Control systems		***	
Field signals	***		
Telecommunications			***
Traction power distribution equipment	***		
Traction power supply equipment		***	
Plant and equipment		***	***
Land	***	***	***
Motor vehicles		***	***
Computers & miscellaneous office equipment		***	***
Construction in progress	***	***	
<b>Other Assets</b>			
Receivables			***
Inventories		***	***
Prepayments			***

### **5.2.1 Line Section Specific**

- (a) Track and associated assets that are required for the provision of the mainline and common user yards are Line Section Specific and Identified to the Line Section on which they are located. These assets include:
  - (i) Corridor land sublease;
  - (ii) Civil Works;
  - (iii) Track;
  - (iv) Field signals; and
  - (v) Traction power distribution equipment.
- (b) Facilities that are required for the provision of Rail Infrastructure in the immediately surrounding location (eg minor infrastructure depots) are Line Section Specific and are Identified to the Line Section on which they are located.
- (c) Any land assets (i.e. not part of the corridor land) upon which facilities that are Identified as Line Section Specific are located are also Line Section Specific and Identified to the Line Section on which they are located.
- (d) Construction in progress that relates to the construction of assets that would, in accordance with Paragraphs (a) or (b), be Identified as Line Section Specific, is also Identified as a Line Section Specific asset and is Identified to the Line Section where the construction occurring.

### **5.2.2 Region Specific**

- (a) Where assets Identified or Attributed as Below Rail Costs and which are used for the purpose of maintaining the Rail Infrastructure (i.e. Track maintenance equipment (a component of plant and equipment) and Rollingstock required for non revenue below rail Trains) are typically used in a particular geographic area (as opposed to a single piece of Track maintenance equipment that is transported throughout the state as required), they are considered to be Region Specific.
- (b) Traction power supply assets are used for the provision of electric traction energy over a geographic area. As a result, these assets are Region Specific. Traction power supply assets are Identified to the Geographic Region in which they are located.
- (c) Where facilities are used for the performance of functions that relate to more than a single Line Section, but are not used for the performance of functions that relate to the network as a whole (eg major infrastructure depots, regional infrastructure and operations



administration buildings, train control facilities), these facilities are Region Specific. Where these Region Specific facilities are used for the performance of functions related solely to a particular Geographic Region, these assets are Identified to that Geographic Region. Where Region Specific facilities are used for the performance of functions that relate to more than one Geographic Region, and the impact is material, the assets are Attributed to the relevant Geographic Regions in accordance with an assessment of usage of that facility for the purpose of provision of Below Rail Services in the relevant Geographic Regions.

- (d) Any land assets (i.e. not part of the corridor land) upon which facilities that are Identified as Region Specific are located are also Region Specific and Identified to the Region in which they are located.
- (e) Control system assets Identified or Attributed as Below Rail Costs are Region Specific assets as they generally relate to the provision of Below Rail Services within a geographic area, rather than over the network as a whole. Control Systems can be Identified to a particular Geographic Regions based on the location and nature of the control system and the type of traffic that is operated in that Geographic Region. Where a Control System relates to more than one Geographic Region, and the impact is material, the assets are Attributed to the relevant Geographic Regions in accordance with an assessment of usage of those Control Systems for the purpose of provision of Below Rail Services in the relevant Geographic Regions.
- (f) Where motor vehicles are used for the performance of functions that relate to the provision of Below Rail Services in a Geographic Region, these motor vehicles are Region Specific and are Identified to the Geographic Region in which that function is performed.
- (g) Where computers and miscellaneous office equipment is used for the performance of functions that relate to the provision of Below Rail Services in a Geographic Region, these assets are Region Specific and are Identified to the Geographic Region in which that function is performed.
- (h) Where plant and equipment (excluding Track maintenance equipment) is used for the performance of functions that relate to the provision of Below Rail Services in an area of the network, rather than for the network as a whole, these assets are Region Specific and are Identified to the Geographic Region in which they are located.
- (i) Inventory assets Identified as Below Rail Costs include inventory held in local infrastructure depots, as well as inventory held corporately for use throughout QR's network. That inventory held in local

infrastructure depots is treated as Region Specific and is Identified to the Geographic Region in which the infrastructure depot is located.

- (j) Construction in progress that relates to the construction of assets that would, in accordance with Paragraphs (a) to (h), be Identified as Region Specific, is also Identified as a Region Specific asset and is Identified to the Region where the construction occurring.

### **5.2.3 Network Wide**

- (a) Where items of Track maintenance equipment are major items used throughout the entire network, (eg Track recording car) these assets are treated as Network Wide.
- (b) Due to the difficulty in accurately Identifying or Attributing telecommunications assets to specific functions, all telecommunications assets that are Allocated as Below Rail Costs are treated as Network Wide.
- (c) Where facilities are used for the performance of functions that relate to the network as a whole (i.e. have not been Identified as Line Section Specific or Region Specific), these facilities are Network Wide (eg group and network wide infrastructure and operations administration buildings).
- (d) Any land assets (i.e. not part of the corridor land) upon which facilities that are Identified as Network Wide are located are also Network Wide.
- (e) Where motor vehicles are used for the performance of functions that relate to the network as a whole, these motor vehicles are Network Wide.
- (f) Where computers and miscellaneous office equipment is used for the performance of functions that relate to the network as a whole, these assets are Network Wide.
- (g) Construction in progress that relates to the construction of assets that would, in accordance with Paragraphs (a) to (e), be Identified as Network Wide, is also Identified as Network Wide.
- (h) All other assets (i.e. receivables, inventory assets not Identified as Region Specific and prepayments) are treated as Network Wide.

## **5.3 Assessment of Below Rail Depreciation/Amortisation**

- (a) In assessing the depreciation and amortisation of assets that have been Identified, Attributed or Allocated to each level of the hierarchy of

Below Rail Costs, for reporting purposes QR will utilise the appropriate asset value, economic asset life and method of depreciation for each of the assets Identified, Attributed or Allocated as Below Rail Costs in a manner consistent with the method used in QR's Financial Statements.

- (b) To the extent that the asset value, economic asset life or method of depreciation used in QR's Financial Statements is not the same as the asset value, economic asset life or method of depreciation permitted by the QCA for pricing purposes, the depreciation and amortisation identified for each level of the hierarchy of Below Rail Costs in accordance with this approach may not be identical to the depreciation and amortisation utilised by QR in developing its Access Charges.

## 5.4 Treatment of Operating Expenses

The identification of operating expenses as Line Section Specific, Region Specific or Network Wide is shown in Figure 5.2.

**Figure 5.2: Operating Cost Categories**

Category/Activity	Line Section Specific	Region Specific	Network Wide
<b>Train Running/Direct Station and Terminal Costs</b>			
Costs associated with non revenue below rail trains	***		
<b>Corridor Costs</b>			
Train control and safeworking		***	
Track and bridge maintenance	***		
Signal maintenance	***		
Traction power distribution maintenance	***		
Traction power supply maintenance		***	
Telecommunications maintenance			***
Facilities (including station) maintenance	***	***	***
Derailment and collision costs		***	
<b>Business Administration</b>			
Group administration			***
Operations administration		***	***
Infrastructure administration		***	***
<b>Corporate Overhead</b>			***
<b>Loss on Disposal of Assets</b>	***	***	***

### 5.4.1 Line Section Specific

- (a) Operating expenses relating to the maintenance of Track and associated assets that are required for the provision of the mainline and common user yards are Line Section Specific and Identified to the Line Section on which they are incurred. Line Section Specific maintenance expenses include:

- (i) Track maintenance
- (ii) Bridge maintenance

- (iii) Signal maintenance
  - (iv) Traction power distribution equipment maintenance
- (b) Operating expenses relating to the maintenance of facilities that are Identified as Line Section Specific are Line Section Specific operating costs and are Identified to the Line Section on which they are incurred.
- (c) Non revenue below rail train running expenses are considered to be Line Section Specific as they are incurred in the direct maintenance of the Rail Infrastructure. Where possible, work orders will identify the location of the maintenance activity for which specific Trains are operated, and the relevant non revenue below rail train running expenses will be Identified to that Line Section. Where work orders do not specifically identify the location of the relevant maintenance, non revenue below rail train running expenses will be Attributed to the Line Sections within the relevant Geographic Region based on the expenditure on Track maintenance for the various Line Sections in that Geographic Region.
- (d) Loss on disposal of assets is treated as a Line Section Specific cost where the assets being sold are Line Section Specific assets.

#### **5.4.2 Region Specific**

- (a) Maintenance costs associated with traction power supply assets are Region Specific and are Identified to the Geographic Region in which they are incurred.
- (b) Maintenance costs associated with Region Specific facilities are Region Specific operating costs. Maintenance costs for Region Specific facilities that are used for the performance of functions related solely to a particular Geographic Region are Identified to that Geographic Region. Where material, maintenance costs for Region Specific facilities that are used for the performance of functions that relate to more than one Geographic Region are Attributed to the relevant Geographic Regions in accordance with an assessment of usage of that facility for the purpose of provision of Below Rail Services in the relevant Geographic regions.
- (c) Train control costs are incurred in a small number of locations across Queensland. Although the boundaries for the individual train control centres do not necessarily directly align with the Geographic Regions, train control costs are Identified or Attributed to the Geographic Regions covered by the relevant train control centre, as the function of train control is not considered to be network wide in nature. The costs associated with the provision of train control for those centres that relate to a specific Geographic Region are Identified to that Geographic

Region. The costs associated with the provision of train control for those centres that manage the movement of Trains across a number of Geographic Regions are Attributed to the relevant Geographic Regions on the basis of the Train kilometres operated in each of those Geographic Regions.

- (d) Safeworking costs at stations relate primarily to the provision of safe Train movements across the network. Therefore, although the costs associated with the provision of station facilities can be identified to a specific location, safeworking costs are treated as being Region Specific Costs. The safeworking costs associated with stations that relate to a specific Geographic Region are Identified to that Geographic Region. Where material, the safeworking costs associated with stations that manage the movement of Trains across a number of Geographic Regions are Attributed to the relevant Geographic Regions on the basis of the Train kilometres operated in each of those Geographic Regions.
- (e) The costs associated with derailments and collisions are considered to be a reflection of the risks associated with the Rail Infrastructure in that area and the nature of the Train Services operating on that Rail Infrastructure. These risks tend to be reasonably consistent throughout a Geographic Region. Therefore, although it is possible to identify the Line Section on which a particular derailment or collision occurred, the costs associated with derailments and collisions are more appropriately considered to be Region Specific.
- (f) The element of operations administration Attributed as a Below Rail Cost can be further separated into regional operations administration and network wide operations administration. Regional operations administration is identified as all operations administration related to cost centres where the responsible manager's sphere of control relates to a single Geographic Region or to a small number of Geographic Regions. Where the sphere of control relates to a single Geographic Region, the operations administration cost is Identified to that Geographic Region. Where the sphere of control relates to a small number of Geographic Regions, the operations administration cost is Attributed to the relevant Geographic Region based on the operations administration expenditure able to be Identified to each of those Geographic Regions.
- (g) The element of infrastructure administration Attributed as a Below Rail Cost can be further separated into regional infrastructure administration and network wide infrastructure administration. Regional infrastructure administration is identified as all infrastructure administration related to cost centres where the responsible manager's sphere of control relates to a single Geographic Region or to a small number of Geographic Regions. Where the sphere of control relates to

a single Geographic Region, the infrastructure administration cost is Identified to that Geographic Region. Where the sphere of control relates to a small number of Geographic Regions, the infrastructure administration cost is Attributed to the relevant Geographic Regions based on the relevant category of infrastructure maintenance expenditure able to be Identified to each of those Geographic Regions.

- (h) Loss on disposal of assets is treated as a Region Specific cost where the assets being sold are Region Specific assets.

#### **5.4.3 Network Wide**

- (a) Due to the difficulty in accurately Identifying or Attributing telecommunications costs to specific functions, all telecommunications costs that are Allocated as Below Rail Costs are treated as Network Wide.
- (b) Maintenance costs associated with Network Wide facilities are Network Wide operating costs. .
- (c) The element of operations administration that cannot be Identified as Region Specific is a Network Wide cost.
- (d) The element of infrastructure administration that cannot be Identified as Region Specific is a Network Wide cost.
- (e) Group administration and management costs are Network Wide costs.
- (f) Corporate overheads allocated as Below Rail Costs are Network Wide costs.
- (g) Loss on disposal of assets is treated as a Network Wide cost where the assets being sold are Network Wide assets.

#### **5.5 *Traction Electricity***

- (a) Separate invoicing by the electricity distributor to an individual Railway Operator is not currently possible. Therefore, traction electricity costs are Allocated to individual Train Services on the basis of empirical data.
- (b) Traction electricity costs incorporate both an energy component and a demand component.
- (c) The energy component is Attributed to Train Services on the basis of kilowatt hours. Kilowatt hours are estimated on the basis of a gross tonne kilometre measure that is weighted by Train type according to estimates of the average consumption by each Train type.

- (d) The demand component is Attributed to Train Services based on the number of Train Services operating over the relevant section of Rail Infrastructure, again weighted according to the type of Train.
- (e) This assessment described in Paragraphs (c) and (d) is facilitated by QR's ability to Identify traction electricity consumption costs (including energy and demand) and electrically powered Train activity into four electrification stages:
  - (i) Brisbane suburban area – south of Caboolture;
  - (ii) North coast line – Caboolture to Gladstone (Parana);
  - (iii) Blackwater system – Gladstone (Parana) to Emerald (including branch lines) and Burngrove to German Creek (including branch lines);
  - (iv) Goonyella system – German Creek to Hay Point (including branch lines).

## **6. ACCESS PRICING LIMITS**

### **6.1 Approach to Access Pricing**

- (a) QR's Undertaking provides that, in the determination of Access Charges, price limits will be applied such that there is no Cross Subsidy between individual Train Services or between combinations of Train Services.
- (b) Price limits will apply in respect to Access Charges to be established for each individual Train Service (referred to as "Individual Train Service") such that, over the Evaluation Period, the relevant Access Charge for the Individual Train Service:
  - (i) will not fall below the level that will recover the expected Incremental Cost of providing Access for the Individual Train Service; and
  - (ii) will not exceed the level that will recover the expected Stand Alone Cost of providing Access for the Individual Train Service.
- (c) In addition, price limits will apply in respect of Access Charges to be established for Individual Train Services such that, over the Evaluation Period, the expected Access revenue for any combination of Train Services incorporating the Individual Train Service:
  - (i) will not fall below the level that will recover the expected Incremental Cost of providing Access for that combination of Train Services after giving consideration to the level of contribution provided by Infrastructure Payments towards the relevant Rail Infrastructure; and
  - (ii) will not exceed the level that will recover the expected Stand Alone Cost of providing Access for that combination of Train Services.
- (d) The Undertaking identifies how to assess whether Access Charges are consistent with these limits, however, does not specifically identify how Incremental Cost and Stand Alone Cost are assessed. The purpose of this section is to assist in identifying what costs are incorporated in an assessment of these price limits.

### **6.2 Incremental Cost of Providing Access**

#### **6.2.1 Assessment of Incremental Cost**

- (a) The Incremental Costs for a Train Service or combination of Train Services that are not currently operating on the Rail Infrastructure



(referred to as “New Train Service(s)”) are those additional costs, including capital costs, that would be incurred (including the cost of bringing expenditure forward in time) if that Train Service or combination of Train Services (as appropriate) commenced operation and QR continued to meet all existing obligations to all other parties.

- (b) The Incremental Costs for a Train Service or a combination of Train Services that are currently operating on the Rail Infrastructure (referred to as “Existing Train Service(s)”) are those costs that would not be incurred if that Train Service or combination of Train Services (as appropriate) ceased operation, but where QR continues to meet its existing obligations to all other parties. For example, where an Existing Train Service is the sole user of a Line Section, its Incremental Cost will include all Line Section Specific Below Rail Costs associated with that Line Section, unless QR has an obligation to another party (eg Queensland Transport) to continue to make that Line Section available for the operation of Train Services. In the circumstances where QR has such an obligation, the Incremental Cost of the Existing Train Service would include (but not necessarily be limited to) those additional Line Section Specific Below Rail Costs that QR incurs as a direct result of the operation of that Existing Train Service, compared to the costs of the provision of that Line Section to the required standard in the absence of that Existing Train Service.
- (c) The Incremental Cost for a combination of Train Services that includes both Existing Train Services and New Train Services will be the sum of the Incremental Cost for the Existing Train Service or combination of Existing Train Services (as appropriate) and the Incremental Cost of the New Train Service or combination of New Train Services (as appropriate).
- (d) The Incremental Cost for a Train Service or combination of Train Services (as appropriate) will be the sum of the Incremental operating costs determined in accordance with Subclause 6.2.3 and the Incremental capital charges determined in accordance with Subclause 6.2.4.

### **6.2.2 Incremental Assets**

- (a) For a New Train Service or a combination of New Train Services, the Incremental assets will be any new assets that are required to facilitate the operation of that Train Service or combination of Train Services (as appropriate) while providing for QR to continue to meet all of its existing obligations to all other parties.
- (b) For an Existing Train Service or a combination of Existing Train Services, the Incremental assets will be those existing assets that would

no longer be required and which could be removed if that Train Service or combination of Train Services (as appropriate) ceased to operate but where QR continued to meet all existing obligations to all other parties.

(c) For the purposes of Paragraph (b), the Incremental assets for an Existing Train Service or combination of Existing Train Services (as appropriate) will be assessed by adding together Incremental Line Section Specific assets (if any), the Incremental Region Specific assets (if any) and the Incremental Network Wide assets (if any), determined in accordance with Paragraphs (d) to (f).

(d) For the purpose of assessing Incremental Line Section Specific assets:

(i) Where the Train Service or combination of Train Services (as appropriate):

- reflects a small proportion of the train kilometres or gross tonne kilometres that travel over a Line Section; and
- requires the same or a lower Track standard as other Train Services that travel over a Line Section;

unless there is better information to the contrary, it will be assumed that there are no Incremental Line Section Specific assets related to that Train Service or combination of Train Services (as appropriate).

(ii) Where the Train Service or combination of Train Services (as appropriate):

- reflects a significant proportion of the train kilometres or gross tonne kilometres that travel over a Line Section; or
- requires a higher Track standard than other Train Services that travel over a Line Section;

the Incremental assets for that Train Service or combination of Train Services (as appropriate) include Line Section Specific assets Identified to that Line Section that would not be required and which could be removed if that Train Service or combination of Train Services (as appropriate) ceased to operate. These assets will be assessed on a case by case basis using engineering and operational estimates of the impact of that Train Service or combination of Train Services (as appropriate).

(e) For the purpose of assessing Incremental Region Specific assets:

- (i) Where the Train Service or combination of Train Services (as appropriate) reflects a small proportion of the train kilometres or gross tonne kilometres that travel within a Geographic Region, unless there is better information to the contrary, it will be assumed that there are no Incremental Region Specific assets related to that Train Service or combination of Train Services (as appropriate).
  - (ii) Where the Train Service or combination of Train Services (as appropriate) reflects a significant proportion of the train kilometres or gross tonne kilometres that travel within a Geographic Region, the Incremental assets for that Train Service or combination of Train Services (as appropriate) include Region Specific assets Identified to that Geographic Region that would not be required and which could be removed if that Train Service or combination of Train Services (as appropriate) ceased to operate. These assets will be assessed on a case by case basis using engineering and operational estimates of the impact of that Train Service or combination of Train Services (as appropriate).
- (f) For the purpose of assessing Incremental Network Wide assets:
  - (i) Where the Train Service or combination of Train Services (as appropriate) reflects a small proportion of the train kilometres or gross tonne kilometres that travel over the Rail Infrastructure, unless there is better information to the contrary, it will be assumed that there are no Incremental Network Wide assets related to that Train Service or combination of Train Services (as appropriate).
  - (ii) Where the Train Service or combination of Train Services (as appropriate) reflects a significant proportion of the train kilometres or gross tonne kilometres that travel over the Rail Infrastructure, the Incremental assets for that Train Service or combination of Train Services (as appropriate) include Network Wide assets that would not be required and which could be removed if that Train Service or combination of Train Services (as appropriate) ceased to operate. These assets will be assessed on a case by case basis using engineering and operational estimates of the impact of that Train Service or combination of Train Services (as appropriate).

### 6.2.3 Incremental Operating Costs

- (a) For a New Train Service or a combination of New Train Services, the Incremental operating cost will be any operating costs, in excess of

those currently expected to be incurred in order to meet all of QR's existing obligations to other parties, which are required to facilitate the operation of that Train Service or combination of Train Services (as appropriate) including, but not limited to, the costs of operating and maintaining any Incremental assets for that Train Service or combination of Train Services (as appropriate).

- (b) For an Existing Train Service or a combination of Existing Train Services, the Incremental operating costs will be those operating costs that would not be incurred if that Train Service or combination of Train Services (as appropriate) ceased to operate but assuming that QR continued to meet all other existing obligations to other parties.
- (c) For the purposes of Paragraphs (a) and (b), Incremental operating costs will be assessed based on QR's forecast operating costs developed on the following assumptions:
  - (i) the forecasts costs will reflect QR's actual expectations of the costs that it will incur in the provision of below rail services; and
  - (ii) QR will not include in its forecast a specific forecast of the costs associated with repairing damage caused by unplanned events such as floods, derailments and collisions, or a forecast of external insurance costs. Rather, QR will include in the estimate of forecast costs an estimated cost of risk associated with the forecast operation of Train Services on the Rail Infrastructure. The forecast cost of risk will incorporate the cost of external insurance and the cost of self insurance for those non diversifiable risks that are not, or cannot, be covered by external insurance (including, where external insurance is in place, the likely expenditure on deductibles).
- (d) For the purposes of Paragraph (b), the Incremental operating cost for an Existing Train Service or combination of Existing Train Services (as appropriate) will be assessed by adding together the cost of electric traction energy (if any), the Incremental Line Section Specific operating costs, the Incremental Region Specific operating costs (if any) and the Incremental Network Wide operating costs (if any), determined in accordance with Paragraphs (e) to (i).
- (e) Electric energy required for traction power that is Attributed to a Train Service or a combination of Train Services (as appropriate) will form part of the Incremental Cost of that Train Service or combination of Train Services (as appropriate).
- (f) Where the Train Service or combination of Train Services (as appropriate):

- reflects a small proportion of the train kilometres or gross tonne kilometres that travel over a Line Section; and
- requires the same or lower Track standard as other Train Services that travel over a Line Section;

the operating costs that form part of the Incremental operating cost of that Train Service or combination of Train Services (as appropriate) will include:

- (i) Line Section Specific costs Identified to that Line Section being the variable component of Line Section Specific costs, all measured on a long run avoidable basis. In absence of better information to the contrary, the ratios in Table 6.1 will be used to estimate these costs for all areas of the network with the exception of those Line Sections where, on average, less than 1,000,000 gross tonnes per annum is carried over the Line Section and where QR is obliged to continue to provide that Line Section in accordance with an arrangement with Queensland Transport. In such circumstances, in the absence of information to the contrary, the variable component of the relevant Line Section Specific costs will be assumed to be zero.
- (ii) Region Specific costs identified to that Geographic Region being the estimated cost associated with the additional risk to QR associated with the operation of that Train Service or group of Train Services (as appropriate).

**Table 6.1 Ratios of Variable to Total Cost**

Line Section Specific Cost	Ratio of Variable to Total Costs	Usage Factor
Track Maintenance	40%	Gross tonne km
Traction Power Distribution Maintenance	5%	Pantograph km
Signal Maintenance	5%	Train km
Bridge Maintenance	0%	n/a
Facilities Maintenance	0%	n/a

- (g) Where the Train Service or combination of Train Services (as appropriate):
  - reflects a significant proportion of the train kilometres or gross tonne kilometres that travel over a Line Section; or
  - requires a higher Track standard than all other Train Services that travel over a Line Section;

the Incremental Costs for that Train Service or combination of Train Services (as appropriate) include:

- (i) Line Section Specific costs Identified to that Line Section as follows:
  - Where the Train Service or combination of Train Services (as appropriate) reflects a significant proportion of the train kilometres or gross tonne kilometres that travel over the Line Section, the variable component of Track maintenance, bridge maintenance, signal maintenance and traction power distribution maintenance, all measured on a long run avoidable basis;
  - Where the Train Service or combination of Train Services (as appropriate) requires a higher Track standard than required by other Train Services on the Line Section, the cost of the additional Track maintenance, bridge maintenance and traction power distribution maintenance resulting from differing standard of Rail Infrastructure to suit the requirements of the subject Train Service or combination of Train Services (as appropriate) as compared to the Train Services that would otherwise be operating on the Line Section; and
  - The variable component of Line Section Specific facilities maintenance costs, measured on a long run avoidable basis.

These costs will be assessed on a case by case basis, using engineering estimates of the impact on those cost items; and

- (ii) Region Specific costs identified to that Geographic Region being the estimated cost associated with the additional risk to QR associated with the operation of that Train Service or group of Train Services (as appropriate).
- (h) For the purpose of assessing Incremental Region Specific operating costs in addition to those identified in accordance with Subparagraph (g)(ii) above:
- (i) Where the Train Service or combination of Train Services (as appropriate) reflects a small proportion of the train kilometres or gross tonne kilometres that travel over that Geographic Region, unless there is better information to the contrary, it will be assumed that there are no additional Incremental Region Specific operating costs.

- (ii) Where the Train Service or combination of Train Services (as appropriate) reflects a significant proportion of the train kilometres or gross tonne kilometres that travel over that Geographic Region, the Incremental operating cost will include Region Specific costs identified to that Geographic Region being the variable component of all Region Specific costs (with the exception of the estimated cost of risk), measured on a long run avoidable basis. These costs will be assessed on a case by case basis, using engineering and operational estimates of the impact on those cost items.
- (i) For the purpose of assessing Incremental Network Wide costs:
  - (i) Where the Train Service or combination of Train Services (as appropriate) reflects a small proportion of the train kilometres or gross tonne kilometres that travel over the Rail Infrastructure, unless there is better information to the contrary, it will be assumed that there are no Incremental Network Wide operating costs.
  - (ii) Where the Train Service or combination of Train Services (as appropriate) reflects a significant proportion of the train kilometres or gross tonne kilometres that travel over the Rail Infrastructure, the Incremental operating costs will include the variable component of Network Wide costs, measured on a long run avoidable basis. These costs will be assessed on a case by case basis.

#### **6.2.4 Incremental Capital Charges**

- (a) Incremental capital charges for a Train Service or combination of Train Services (as appropriate) are the sum of:
  - (i) depreciation (if any) on Incremental assets for that Train Service or combination of Train Services (as appropriate) determined in accordance with Paragraph (b);
  - (ii) depreciation (if any) on other Rail Infrastructure assets determined in accordance with Paragraph (d);
  - (iii) a commercial return on Incremental assets for that Train Service or combination of Train Services (as appropriate) determined in accordance with Paragraph (e); and
  - (iv) a commercial return (if any) on other Rail Infrastructure assets determined in accordance with Paragraph (f);

- (b) Depreciation charges will be assessed on Incremental assets on the basis of the asset valuation determined in accordance with Paragraph (c) and the economic life and depreciation methodology permitted by the QCA for pricing purposes rather than on the basis of the depreciation recorded in QR's Financial Statements.
- (c) Incremental assets for a Train Service or combination of Train Services (as appropriate) will be valued as follows:
  - (i) For a New Train Service or a combination of New Train Services (as appropriate) the Incremental assets will be valued at QR's estimated cost of constructing those assets.
  - (ii) For an Existing Train Service or a combination of Existing Train Services (as appropriate) the Incremental assets will be valued at the net amount that QR would expect to receive from the sale of those assets.
- (d) Depreciation charges will be assessed on other Rail Infrastructure assets as follows:
  - (i) Where the life of assets utilised by the Train Service or combination of Train Services (as appropriate) is limited based on the usage of those assets and it is expected that those assets will be replaced at the end of that life, depreciation on those assets will be assessed based on their Incremental usage. For example, in the above circumstances, the Incremental capital charge may include depreciation of Track assets based on gross tonne kilometres, and depreciation of electric distribution assets based on pantograph kilometres; and
  - (ii) Where the construction of Incremental assets for a New Train Service or combination of New Train Services (as appropriate), directly results in the premature replacement of existing Rail Infrastructure assets, the Incremental capital charge will include depreciation on the value of those prematurely replaced assets, where that depreciation is that which would have been determined for those assets if they were not prematurely replaced, based on the asset valuation and depreciation methodology permitted by the QCA for pricing purposes.
- (e) The return on Incremental assets will be determined by applying the rate of return permitted by the QCA for use in the determination of QR's Access Charges to the value of assets that are Incremental assets for that Train Service or combination of Train Services, where the value of those assets is determined in accordance with Paragraph (c).



- (f) A return on other Rail Infrastructure assets will be determined in the circumstances described in Paragraph (d)(ii), by applying the rate of return permitted by the QCA for use in the determination of QR's Access Charges to the value of any prematurely replaced assets, where the value is that which would have been determined for those assets if they were not prematurely replaced, based on the asset valuation and depreciation methodology permitted by the QCA for pricing purposes.

### **6.3 Stand Alone Cost of Providing Access**

#### **6.3.1 Assessment of Stand Alone Cost**

The Stand Alone Cost for a Train Service or combination of Train Services (as appropriate) will be the sum of the Stand Alone operating costs determined in accordance with Subclause 6.3.3 and the Stand Alone capital charges determined in accordance with Subclause 6.3.4.

#### **6.3.2 Stand Alone Assets**

- (a) The Stand Alone assets required for the purpose of a Train Service or combination of Train Services will be all of those assets Identified, Attributed or Allocated as Below Rail Costs that would be required to provide the Below Rail Services necessary for the operation of that Train Service or combination of Train Services (as appropriate) if they were the only services provided by QR.
- (b) For the purposes of Paragraph (a), the Stand Alone assets for a Train Service or combination of Train Services (as appropriate) will be assessed by adding together the Stand Alone Line Section Specific assets, the Stand Alone Region Specific assets and the Stand Alone Network Wide assets, determined, for each group of assets (i.e. Line Section Specific, Region Specific and Network Wide), in accordance with the process identified in Paragraph (c).
- (c) The Stand Alone assets, for the relevant group of assets, required for the purposes of a Train Service or combination of Train Services (as appropriate) will be assessed as follows:
- (i) The Stand Alone assets will include QR's existing assets reviewed for the purpose of identifying and, where necessary excluding, any assets that would not be required (i.e. QR's existing assets will be optimised) to meet the requirements of that Train Service or combination of Train Services (as appropriate). The elements to be addressed in such optimisation are:
- Rail Infrastructure capacity; and

- Rail Infrastructure standard.
- (ii) If such optimisation indicates that QR's existing assets are insufficient to meet the requirements of that Train Service or combination of Train Services (as appropriate), for example because it reflects additional Train Services compared to what is currently operating, the Stand Alone assets will include QR's existing assets, plus those additional assets necessary to meet the requirements of the Train Service or combination of Train Services (as appropriate).
- (iii) If such optimisation indicates that QR's existing assets are sufficient (or excessive) to meet the requirements of that Train Service or combination of Train Services (as appropriate) with respect to only one element of the optimisation framework, for example because the Train Service combination requires less Rail Infrastructure capacity but a higher Rail Infrastructure standard, the Stand Alone assets will be assessed by:
- optimising QR's existing assets in relation to the element of the optimisation framework where QR's existing assets are sufficient (or excessive) to meet the requirements of that Train Service or combination of Train Services (as appropriate); and then
  - adding those additional assets necessary to meet the requirements of the Train Service or combination of Train Services (as appropriate) in respect of the other element of the optimisation framework.
- (d) For the purpose of performing an optimisation of QR's existing assets for the purpose of Paragraph (c), where:
- (i) the Train Service or combination of Train Services (as appropriate):
- reflects all, or all but a small proportion, of the existing train kilometres and gross tonne kilometres that travel on a Line Section; and
  - requires a standard of Rail Infrastructure which is the same as that currently provided on the Line Section;

unless there is better information to the contrary, it will be assumed that there is no need to exclude any of QR's existing Line Section Specific assets and, therefore, the Stand Alone Line Section Specific assets will be all existing Line Section Specific assets for that Line Section;

- (ii) the Train Service or combination of Train Services reflects all, or all but a small proportion, of the existing train kilometres and gross tonne kilometres that travels in a Geographic Region, unless there is better information to the contrary, it will be assumed that there is no need to exclude any of QR's existing Region Specific assets and, therefore, the Stand Alone Region Specific assets will be all existing Region Specific assets for that Geographic Region;
- (iii) the Train Service or combination of Train Services reflects all, or all but a small proportion, of the existing train kilometres and gross tonne kilometres that travels on the Rail Infrastructure, unless there is better information to the contrary, it will be assumed that there is no need to exclude any of QR's existing Network Wide assets and, therefore, the Stand Alone Network Wide assets will be all existing Network Wide assets.

In all circumstances other than those identified in Subparagraphs (i) to (iii), assessments made for the purpose of Paragraph (c) relating to optimising existing assets or assessing additional assets necessary to meet the requirements of the Train Service or combination of Train Services (as appropriate) will be made on a case by case basis using engineering and operational estimates of the assets that would be required to meet the requirements of that Train Service or combination of Train Services (as appropriate).

### **6.3.3 Stand Alone Operating Cost**

- (a) The Stand Alone operating costs required for the purposes of a Train Service or combination of Train Services (as appropriate) will include all operating costs Identified, Attributed or Allocated as Below Rail Costs that would be incurred in the provision of Below Rail Services necessary for the operation of that Train Service or combination of Train Services (as appropriate) if they were the only services provided by QR.
- (b) For the purpose of Paragraph (a), Stand Alone operating costs will be assessed based on QR's forecast operating costs developed on the following assumptions:
  - (i) the forecast costs will reflect those costs that QR would reasonably be expected to incur in the provision of the necessary Below Rail Services, taking into account the reasonably expected improvements in efficiency that QR should achieve over the Evaluation Period; and

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- (ii) QR will not include a forecast of the costs associated with repairing damage caused by unplanned events such as floods, derailments and collisions, or a forecast of external insurance costs. Rather, QR will include in its forecast costs an estimated cost of risk associated with the forecast operation of Train Services on the Rail Infrastructure. The forecast cost of risk will incorporate the cost of external insurance and the cost of self insurance for those non diversifiable risks that are not, or cannot, be covered by external insurance (including, where external insurance is in place, the likely expenditure on deductibles).
- (c) For the purpose of Paragraph (a), the Stand Alone operating cost for a Train Service or combination of Train Services (as appropriate), will be assessed by adding together the cost of electric traction energy (if any) identified in accordance with Paragraph (d), the Stand Alone Line Section Specific operating cost, the Stand Alone Region Specific operating cost and the Stand Alone Network Wide operating costs, determined for each group of costs (i.e. Line Section Specific, Region Specific and Network Wide) in accordance with Paragraph (e).
- (d) Electric energy required for traction power that is Attributed to a Train Service or a combination of Train Services (as appropriate) will form part of the Stand Alone Cost of that Train Service or combination of Train Services (as appropriate).
- (e) For the purpose of estimating the Stand Alone operating costs, where:
- (i) the Train Service or combination of Train Services (as appropriate):
- reflects all, or all but a small proportion, of the existing train kilometres and gross tonne kilometres operated on a Line Section; and
  - requires a standard of Rail Infrastructure which is the same as that currently provided on the Line Section;
- unless there is better information to the contrary, it will be assumed that the Stand Alone Line Section Specific operating costs will be all of the currently forecast Line Section Specific operating costs for that Line Section, less the Incremental Line Section Specific operating costs of the remaining combination of Train Services (assessed in accordance with principles identified in Subclause 6.2.3, but based on a forecast of operating costs determined in accordance with Paragraph (b));
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- (ii) the Train Service or combination of Train Services reflects all, or all but a small proportion, of the existing train kilometres and gross tonne kilometres operated in a Geographic Region, unless there is better information to the contrary, it will be assumed that the Stand Alone Region Specific operating costs will be all currently expected Region Specific operating costs for that Geographic Region, less the Incremental Region Specific operating costs of the remaining combination of Train Services (assessed in accordance with principles identified in Subclause 6.2.3, but based on a forecast of operating costs determined in accordance with Paragraph (b));
- (iii) the Train Service or combination of Train Services (as appropriate) reflects all, or all but a small proportion, of the existing train kilometres and gross tonne kilometres operated on the Rail Infrastructure, unless there is better information to the contrary, it will be assumed that the Stand Alone Network Wide operating cost will be all existing Network Wide operating costs.

In all circumstances other than those identified in Subparagraphs (i) to (iii), assessments made for the purpose of Paragraph (e) relating to the Stand Alone operating costs for a Train Service or combination of Train Services (as appropriate) will be made on a case by case basis using engineering and operational estimates of the costs that will be incurred in managing, to the required standard, the Stand Alone assets required to meet the requirements of that Train Service or combination of Train Services (as appropriate).

#### **6.3.4 Stand Alone Capital Charges**

- (a) Stand Alone capital charges for a Train Service or combination of Train Services (as appropriate) are the sum of:
  - (i) depreciation on the Stand Alone assets for that Train Service or combination of Train Services (as appropriate) determined in accordance with Paragraph (b); and
  - (ii) a commercial return on the Stand Alone assets for that Train Service or combination of Train Services (as appropriate) determined in accordance with Paragraph (d).
- (b) Depreciation charges will be the depreciation on all Stand Alone assets for a Train Service or combination of Train Services (as appropriate) assessed on the basis of valuation of the Stand Alone assets identified in Paragraph (c) and the methodology for depreciation permitted by the QCA for pricing purposes rather than the depreciation recorded in QR's Financial Statements.

- (c) Stand Alone assets for a Train Service or combination of Train Services (as appropriate) will be valued on the basis of the methodology for asset valuation permitted by the QCA for use in the determination of QR's Access Charges rather than the values recorded in QR's Financial Statements.
- (d) The commercial return on Stand Alone assets will be assessed by applying the rate of return permitted by the QCA for use in the determination of QR's Access Charges to the value of assets that are Stand Alone assets for that Train Service or combination of Train Services (as appropriate), where the value of those assets is determined in accordance with Paragraph (c).

## 7. DEFINITIONS

In this Manual, unless inconsistent with the Manual or context, the following words and expressions shall have the meanings identified in this Part 7. Other parts of speech or grammatical forms of a word or phrase defined in this Manual have a corresponding meaning.

**“Above Rail Costs”** means the costs and/or assets (as the context implies) associated with the provision of Above Rail Services;

**“Above Rail Services”** means those activities, other than Below Rail Services, required to provide and operate Train Services including rollingstock provision, rollingstock maintenance, non train control related communications, train crewing, terminal provision and services, freight handling and marketing and administration of those services;

**“Access”** means the non-exclusive utilisation of a specified section of Rail Infrastructure for the purposes of operating Train Services;

**“Access Charge”** means the price paid by a Railway Operator for Access under an Access agreement;

**“Act”** means the Queensland Competition Authority Act 1997 (Qld);

**“Allocation”** means, where costs or assets are jointly used for the provision of a function/service and where there is no direct causal relationship between the resources used and the function/service provided, the sharing of such joint costs between those functions/services;

**“Attribution”** means, where costs or assets are jointly used for the provision of a function/service and where there is a causal relationship between the resources used and function/service provided, the sharing of costs between those functions/services on a basis of cost causality;

**“Below Rail Costs”** means the costs and/or assets (as the context implies) associated with the provision of Below Rail Services;

**“Below Rail Services”** means the activities associated with the provision and management of Rail Infrastructure, including the construction, maintenance and renewal of Rail Infrastructure assets, and the network management services required for the safe operation of Train Services on the Rail Infrastructure, including train control and the implementation of safeworking procedures;

**“Capacity”** means the capability of a specified section of Rail Infrastructure to accommodate Train Services within a specified time period after providing

for QR's reasonable requirements for the exclusive utilisation of that specified section of Rail Infrastructure for the purposes of performing activities associated with the repair or enhancement of the Rail Infrastructure, including the operation of work trains;

**"Corporations Law"** has the meaning given to that term in the Corporations (Queensland) Act 1990;

**"Corporate Overhead"** costs are those costs that relate predominantly to the overall management, strategy and governance of the corporation and include, for example, the chief executive's office, internal audit, corporate strategy and planning, corporate finance, information strategy, safety and industrial relations;

**"Corporate Services"** costs are the costs of services that are provided at the corporation wide level to groups and divisions within QR and include, for example, legal services, computer services, motor vehicle fleet management, administration building services, payroll preparation and employee relations;

**"Costing Manual"** of **"Manual"** means the document prepared by QR that identifies those matters required of the cost allocation manual, as identified in the Undertaking;

**"Cross Subsidy"** means where:

- one Train Service or combination of Train Services pays Access Charges which are insufficient to meet the Incremental Cost imposed on the Rail Infrastructure by that Train Service or combination of Train Services; and
- the shortfall is contributed by revenue from another Train Service or combination of Train Services that is paying Access Charges which provide revenue greater than the Stand Alone Cost of that Train Service or combination of Train Services;

**"Evaluation Period"** means, when in reference to an Individual Train Service, the period which is equal to the length of the expected duration of the existing or proposed Access agreement in respect of the relevant Train Service or, when in reference to a group of Train Services, the period which is equal to the length of the expected duration of the longest existing or proposed Access agreement in respect of any of the Train Services comprising the combination of Train Services, provided that such period does not exceed ten (10) years;

**"Financial Statements"** means the annual accounts prepared in accordance the requirements of the *Financial Administration and Audit Act (1997)* and audited by the Queensland Auditor-General;



**“Geographic Region”** means sections of the Track identified in Appendix 2 as a “Region”;

**“Geographic System”** means sections of the Track identified in Appendix 2 as a “System” and, for those Geographic Regions that have no “Systems” identified, means that Geographic Region;

**“Identification”** means, where costs are directly incurred, or assets directly used in the performance of a function/service, the identification of those costs to that function/service;

**“Incremental Costs”** means those costs of providing Access, including capital (renewal and expansion) costs, that would not be incurred (including the cost of bringing expenditure forward in time) if the particular Train Service or group of Train Services (as appropriate) did not operate and “Incremental” has a similar meaning;

**“Infrastructure Payments”** means payments to QR from the Queensland Government to enable QR to provide specified sections of Rail Infrastructure;

**“Line Section”** means a section of railway route as defined in QR’s chart of accounts from time to time and that is identified for the purpose of classifying the Rail Infrastructure into line sections with reasonably consistent traffic (in terms of type of traffic and density of traffic) and reasonably consistent Track standards;

**“Line Section Specific”** means costs and assets able to be specifically Identified or Attributed to a Line Section;

**“Network Access”** means the business group established within QR to manage the provision of Below Rail Services with the exception of stations and platforms;

**“Network Wide”** means costs and assets associated with the provision of Below Rail Services not able to be Identified or Attributed to a Line Section or a Geographic Region;

**“Other Activities”** are activities undertaken by QR that are neither Above Rail Services nor Below Rail Services and include, for example, consulting activities, treasury activities such as cross border leasing, foreign exchange and financing;

**“Other Activities Costs”** means the costs and/or assets (as the context implies) associated with the provision of Other Activities;

**“QCA”** means the Queensland Competition Authority as established by the Act;

**“Queensland Transport”** means the Department of Transport for the State of Queensland;

**“Rail Infrastructure”** means Rail Transport Infrastructure as defined in the Transport Infrastructure Act 1994 (Qld) for which QR is the Railway Manager;

**“Railway Manager”** has the meaning given to that term in the Transport Infrastructure Act 1994 (Qld);

**“Railway Operator”** means a person who has, or is seeking, Access from QR to operate Train Services on the Rail Infrastructure and who is, or who will become, Accredited in respect of those Train Services;

**“Region Specific”** means costs and assets associated with the provision of Below Rail Services not able to be Identified or Attributed to a specified Line Section, but able to be Identified or Attributed to a Geographic Region;

**“Rollingstock”** means locomotives, carriages, wagons, rail cars, rail motors, light rail vehicles, light inspection vehicles, rail/road vehicles, trolleys and any other vehicle that operates on or uses the Track;

**“Stand Alone Costs”** means those costs that QR would reasonably incur if the relevant Train Service or combination of Train Services (as appropriate) was the only Train Service or combination of Train Services (as appropriate) provided Access by QR and “Stand Alone” has a similar meaning;

**“Third Party Operator”** means a Railway Operator other than QR;

**“Track”** means that part of the Rail Infrastructure comprising the rail, ballast, sleepers and associated fittings upon which Trains operate;

**“Train”** means any configuration of Rollingstock operating as a unit on the Track;

**“Train Service”** means the operation of a Train between specified origins and destinations on the Rail Infrastructure;

**“Undertaking”** refers to QR’s undertaking developed and approved in accordance with the Act.

## **8. GEOGRAPHIC REGIONS AND SYSTEMS**

### **METROPOLITAN REGION**

Roma Street - Rosewood  
Bundamba - Box Flat  
Ipswich - Workshops  
Ipswich - Churchill  
Yarrowlea - Ebenezer  
Roma Street - Robina  
Yeerongpilly - Corinda  
Salisbury Jct - Acacia Ridge  
Bethania - Beaudesert  
Park Road - Cleveland  
Lytton Jct - Fisherman Islands  
Roma Street - Nambour  
Roma St - Exhibition - Mayne  
Bowen Hills - Ferny Grove  
Eagle Jct - Pinkenba  
Northgate - Shorncliffe  
Caboolture - Wamuran

### **STANDARD GAUGE REGION**

Acacia Ridge - NSW Border  
Salisbury Junction – Acacia Ridge

### **SOUTH WEST REGION**

#### **Mainline System**

Rosewood - Toowoomba

#### **South West System**

Toowoomba - Dirranbandi  
Wyreema - Millmerran  
Hendon - Allora  
Warwick - Wallangarra

#### **Western System**

Toowoomba - Quilpie  
Oakey - Cecil Plains  
Dalby - Bell  
Tycanba - Jandowae  
Dalby - Glenmorgan  
Miles - Wandoan  
Westgate - Cunnamulla

### **NORTH COAST LINE REGION**

Nambour - Gladstone Station

Rocklands - Durroburra  
Mackay - Marian  
Erakala - Mackay Harbour  
Kaili - Cairns  
Townsville Jetty Branch  
Cobarra Balloon  
Gympie Nth - Gympie  
(Gladstone to Rocklands included in Blackwater System)  
(Durroburra to Kaili included in Newlands System)

**OTHER BRANCHES REGION**

Theebine - Kingaroy / Byee  
Mungar - Monto  
Graham - Monto  
Maryborough West - Maryborough (Incl M'boro Yard)  
Colton - Takura  
Dakenba - Biloela  
Earlsfield - Kooemba  
Moura Mine Jct - Goolara  
Bajool - Wheat Board Siding  
Glenmore Jct - Yeppoon  
Bowen Jct - Bowen

**CENTRAL WEST REGION**

Burngrove - Longreach - Hughenden  
Nogoa - Springsure  
Emerald - Blair Athol Mine Jct  
Jericho - Yaraka

**MOUNT ISA LINE REGION**

Stuart - Mt Isa  
Yurbi Jct - Yurbi (Cannington Mine)  
Flynn - Phosphate Hill

**NORTHERN TABLELANDS REGION**

Cairns - Forsayth  
Mareeba - Atherton  
Arriga Jct - Arriga  
Almaden - Mungana  
Normanton - Croydon

**CENTRAL QUEENSLAND COAL REGION****Newlands System**

Newlands - Abbot Point  
Pring - Merinda  
Collinsville - McNaughton

**Goonyella System**

Hay Pont/ Dal Bay - Coppabella  
Coppabella - North Goonyella  
Wotonga - Blair Athol Jct  
Coppabella - Oaky Creek Jct  
Mine Spurs

**Blackwater System**

Gladstone Station - Burngrove  
Callemondah Yard & Golding  
Fish landing Jct - Fish Landing  
East End Jct - East End  
Burngrove - Oaky Creek Junction  
Mine Spurs

**Moura System**

Gladstone (Parana) - Callemondah via short line  
Callemondah - Moura Mine  
Annandale - Boundary Hill  
Earlsfield - Callide Coalfields