



Request for Comments Paper

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**QR's Scheduling and Train Control Protocols**

**and**

**Proposed Assignment of Marshalling Yards**

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***February 2000***

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## SUBMISSIONS

The Queensland Competition Authority (the Authority) considers public involvement to be an important element of its decision-making processes. It therefore invites submissions from interested parties concerning the appropriateness of QR's scheduling and train control protocols and its proposed assignment of marshalling yards.

To facilitate the publication of submissions on the QCA's website, it is preferred if submissions could be made electronically by disk or by e-mail. However, if this is not possible, submissions can be made in writing. Submissions, comments or inquiries regarding this paper should be directed to:

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The **closing date** for submissions is 31 March, 1999.

### Confidentiality

In the interests of transparency and to promote informed discussion, the Authority would prefer submissions to be made publicly available wherever this is reasonable. However, if a person making a submission does not want that submission to be public, that person should claim confidentiality in respect of the document (or any part of the document). Claims for confidentiality should be clearly noted on the front page of the submission and the relevant sections of the submission should be marked as confidential, so that the remainder of the document can be made publicly available.

To facilitate disclosure of the non-confidential portion of submissions, it would be appreciated if a copy of the submission with the confidential information excised could be provided in addition to the full submission. Again, it is preferred if the relevant submissions could be made electronically by disk or by e-mail. However, if this is not possible, the submissions can be made in writing. Where it is unclear why a submission has been marked "confidential", the status of the submission will be discussed with the person making the submission.

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## GLOSSARY OF TERMS

### **Above rail/below rail**

The services delivered by the rail infrastructure (eg. track, signalling) are referred to as ‘below rail’ services. The services provided by rolling stock (eg. locomotives, wagons and carriages) on the rail infrastructure are commonly referred to as ‘above rail’ services.

### **Access Co-ordination Plan**

To be prepared by Network Access and the Scheduling and Train Control officers. It details the operational and interface requirements for a specific railway operator and contains all the information that these officers need to be aware of for them to perform the Train Scheduling, Train Control and associated Incident Management services they are contracted to supply to Network Access.

### **Balloon loop**

Rail line terminus that backs upon itself in a circular shape.

### **Breakdown**

A mechanical or electrical breakdown, where the equipment is rendered inoperable. For wagons, a breakdown generally occurs in transit and the wagon must be taken out of the train and left at a siding for repair. For locomotives, a fault in the engine or superstructure of the locomotive is most common. Breakdowns can also occur in the region of the axles with traction motors, springs, wheels, and gears.

### **Capacity**

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 to perform activities associated with the repair or enhancement of the rail infrastructure, including the operation of work trains.

### **Capacity Entitlement**

A railway operator’s entitlement under an access agreement to operate a specified number and type of train services over the rail infrastructure within a specified time period and in accordance with specified Scheduling constraints, for the purpose of either carrying a specified commodity or providing a specified transport service.

### **Consist**

The composition of a train, in terms of locomotive and wagon identification and its loading.

### **Crewing**

The manning of the locomotive at the front of the train with a crew. The crew is usually one or two locomotive drivers and/or assistant.

### **Daily Train Plan**

Collectively, for a particular day, the Train Schedules for all train services operating on QR’s infrastructure together with the track possessions and train paths allocated to infrastructure maintenance providers. The Master Train Plan will form the basis of the Daily Train Plan and may be varied daily in accordance with:

- the Capacity Entitlements of railway operators under current access agreements;
- to meet business requirements,
- to meet project and maintenance works; and/or
- any other planned or unplanned event which may lead to a requirement for alteration.

**Depot**

A rolling stock depot or workshop depot. A central point where equipment is brought for maintenance. A rolling stock depot carries out maintenance where components are swapped in and out of the equipment. A workshop depot is where components are manufactured or modified to be subsequently swapped in and out of the equipment.

**Incident**

Any rolling stock derailment, rolling stock disablement or breakdown, accident, collision or any other unplanned occurrence on the infrastructure that causes or could cause: injury to any person; damage to property; environmental harm; or a loss to process including a cancellation by QR of any train movement.

**Incident Management**

The reporting, management and investigation of incidents occurring on or affecting the rail infrastructure.

**Interface Co-Ordination Plan**

The Interface Plan will supplement the provisions of the access agreement and may include: operational procedures; emergency procedures and incident management; track possession procedures; Train Control contacts; Train Schedule variation procedures; and service recovery procedures.

**Marshalling**

The process of joining or separating locomotives and rail wagons to make up or split train consists.

**Master Train Plan**

Collectively, the Train Schedules for all train services contracted to operate on QR's infrastructure from week to week, together with the track possessions and train paths allocated to infrastructure maintenance providers for that same time. Specifically, the Master Train Plan will detail:

- the maximum capacity of the network, based on a train service with the characteristics of the predominant train service operating on the relevant infrastructure;
- the contracted Capacity Entitlements of operators using or planning to use the relevant infrastructure from week to week, including train service paths, pathing determination and railway operator specific requirements;
- maintenance windows/possessions; and

- the available capacity of the network.<sup>1</sup>

### **Out-Of-Course Running**

Any occurrence where the movement of a train service differs from the Train Schedule for that train service as provided in the Daily Train Plan.

### **Passing loop**

A section of track that has two ends, both of which lead onto the mainline. The primary purpose of the passing loop is to permit the passing of two trains travelling in the opposite direction on a single track. The mainline is often a single track, but there can also be passing loops on double track to permit overtaking and double passes.

### **Provisioning**

The supply of consumables to the locomotive(s) such as fuel, water, sand, crew consumables (water and food) and the crew itself.

### **QR Business Groups**

The primary activity of QR's Above Rail Business Groups (Coal and Mainline Freight and Metropolitan and Regional Services) relates to providing and operating the equipment running on the infrastructure thereby providing the services to the railway customer. These Business Groups have certain track under their control and will be accessing the common user infrastructure such as the mainline.

Network Access is also a Business Group, but for the purposes of allocating management responsibility for rail infrastructure it is referred to by its own name. Other QR Business Groups include Infrastructure Services Group and Workshops.

### **QR's Information Systems**

Those systems used by QR for recording the planned and actual performance of train services operating on QR's rail infrastructure, including, but not limited to, consist specification, running times and the occurrence and management of Incidents.

### **Queuing**

The waiting of one train behind the other as the trains are processed through a terminal such as an unloading or loading point.

### **Road**

In a marshalling yard situation, a road is a track long enough to store, stage or marshal a train. A yard is generally composed of a set of 'roads' which come together at either end of the yard. A road is usually double ended and contrasts with a 'neck' and a 'siding' which are single ended.<sup>2</sup>

### **Rolling stock**

Locomotives and wagons. In some usage, the locomotives are called 'locomotives' and wagons are the 'rolling stock'.

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<sup>1</sup> The difference between maximum Capacity and Capacity Entitlements.

<sup>2</sup> A 'neck' is a section of track built to accommodate a locomotive involved in shunting operations which are carried out from one end of a yard. A 'siding' is a storage road leading nowhere.

**Running inspection**

An inspection of a train prior to the train starting its journey (or run), where no faults are expected to be found or at least the faults are very minor.

**Scheduling**

The process of determining arrival and departure times for train services at the origin, intermediate locations and at the destination of a journey to meet the requirements of individual railway operators and the integration of such times with the other planned and unplanned activities necessary for the management of QR's infrastructure. Scheduling also includes entering these times into QR's Information Systems.

**Scheduling and Train Control Officers**

These officers are located within QR's Above Rail Business Groups and it is proposed by QR that they will provide Train Control and prepare the Daily Train Plan for, and on behalf of, Network Access.

**Shiploader**

A piece of equipment that loads a ship with a (bulk) commodity, usually by way of conveyor belt or crane.

**Shunting**

Refers to the movement of locomotives and wagons in a yard situation. Normally associated with the creation or separation of specific train consists.

**Staging**

Very short term storage, where the train is required to wait for its train path on the mainline or at a terminal. Staging is built into timetables. During this time the train may be inspected and other non-invasive forms of maintenance and provisioning may be carried out.

**Storage**

The parking of the wagons of a train. Locomotives are only rarely stored. Storage can range from short term to long term depending on the reason for their storage. Short term storage may be necessary during an industrial dispute, inclement weather or port equipment breakdown. Very short term storage is better known as 'staging'.

**Surge**

A short term occurrence, where the number of trains operating at a particular location is greater than the average or designed rate. Mostly, surges arise when a disruption has occurred to the system and a number of trains accumulate at a location within a short period.

**Terminal**

Any facility that is used for the loading and unloading of goods onto a train.

**Third Party Operator**

A railway operator other than QR.



**Traction motor**

The electric motor that drives the axle of a locomotive.

**Train Control**

The control of train movements and of all other rolling stock operations in accordance with the Daily Train Plan, QR's safety management system and other pre-determined procedures and of any other activities, including track possessions and other infrastructure maintenance activities, affecting or potentially affecting such train movements or rolling stock operations. In addition, Train Control includes:

- recording train running times in QR's Information Systems;
- reporting Incidents occurring on the infrastructure;
- Scheduling;
- management of Incidents from within the control centre; and
- exchanging information with railway operators.

**Train Schedules**

The arrival and departure times for a particular train service at specified locations as contained in the Master Train Plan and/or the Daily Train Plan and entered into QR's Information Systems.

**ABBREVIATIONS**

<b>Interface Plan</b>	Pro forma Interface Co-ordination Plan a copy of which is set out at Attachment 2.
<b>Protocols</b>	The draft Scheduling and Train Control Protocols a copy of which is set out at Attachment 1.
<b>The Matrix</b>	Traffic Management Decision Making Matrix (included as Attachment 1 to the draft Scheduling and Train Control Protocols).

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## OVERVIEW

1. The attached paper addresses two issues relating to QR's draft Undertaking which has been lodged with the Authority:-

- the performance of the Scheduling and Train Control functions; and
- the assignment of management responsibility for marshalling yards.

*A key feature of the draft Undertaking is that Network Access, as part of QR, is responsible for managing access arrangements between QR and Third Party Operators.*

2. The terms of the draft Undertaking will extend to those parts of QR's operations which are *declared services* under the Queensland Government's regulation of March 1998. Stakeholders are reminded that once the Authority accepts the draft Undertaking, stakeholders may be bound by its terms in future negotiations with QR.
3. The matters dealt with in the attached paper have the ability to affect the efficacy of an approved Undertaking in different ways.
4. Scheduling and Train Control are important functions in relation to the operation of the rail network. Both functions are currently undertaken within QR as part of an integrated process. It includes: the assessment of Capacity, reflected in the development of a Master Train Plan; the determination of levels of priority for each train using the network; the development of a Daily Train Plan; any alterations to the Master or Daily Train Plans; and the making of real time decisions with respect to the priority of trains where, for example, there are difficulties in the execution of the Daily Train Plan.
5. QR proposes that the Scheduling and Train Control functions remain with its Above Rail Business Groups. It is important to realise these Business Groups are a potential competitor of Third Party Operators who will seek access to QR's network. Much of the justification for maintaining the status quo in respect of Scheduling and Train Control is based on the fact QR perceives that integration delivers cost savings by providing an easy interface for QR's management of that part of its operations. However, integrated Scheduling and Train Control may provide QR's Above Rail Business Groups with an ongoing advantage in the marketplace and may have the potential to distort the development of competition in the above rail market.
6. QR argues that the Scheduling and Train Control Protocols address this potential problem by specifying principles in accordance with which Scheduling and Train Control services will be provided by its Above Rail Business Groups, as well as providing for compliance reporting and independent auditing. Alternatively, it is possible for the Scheduling and Train Control function to be removed from its current organisational structure and, for example, to be placed under the control of Network Access. However, that alone may not address the subtleties that could arise in the execution of Train Control on a day to day basis in relation to the operations of Third Party Operators.
7. The issues in relation to marshalling yards are somewhat different. The way in which QR has approached the matter provides an opportunity or a means whereby certain QR assets could, if those yards do not fall within a common user class, be effectively removed from the operation of the draft Undertaking. That is to say, only those portions of the existing marshalling yards that are designated as common use facilities, would be made available to Third Party Operators. Accordingly, Third Party Operators would need to negotiate separately with one of QR's Above Rail Business Groups to use those facilities. In such a circumstance, a Third Party Operator would not have the advantage of the protection afforded by the terms and conditions outlined in the draft Undertaking.
8. This paper seeks views from stakeholders with respect to all issues associated with the Scheduling and Train Control functions. This includes, but is not limited to, the identification of the most effective QR Business Group to undertake these functions and the framework within which these functions should be performed in order to ensure transparency and adequately address conflicts of interest. The paper also considers matters associated with QR's assignment of responsibility for marshalling yards.

## EXECUTIVE SUMMARY

This paper identifies a number of matters that have arisen from a review of material received from QR in relation to its draft access Undertaking. That material is set out in two documents being:

- QR's draft Scheduling and Train Control Protocols (the Protocols); and
- QR's proposed assignment of responsibility for marshalling yards.<sup>3</sup>

This paper seeks to assist interested parties to comment on the implications of the above documents in the context of the draft Undertaking. The Authority does not wish to inhibit comment. Accordingly, the Authority seeks submissions that respond to matters in the paper or are otherwise relevant to the matters dealt with in the above documents.

### The Protocols

The function of the Protocols is to govern the performance of Train Scheduling, Train Control and associated Incident Management services by the Scheduling and Train Control Officers in respect of train operations on QR's infrastructure.

The Protocols raise four key issues:

- the clarity and transparency of the processes QR proposes to establish concerning its performance of Scheduling and Train Control functions;
- the level of consultation with Third Party Operators in which QR proposes to engage when developing such things as the Master and Daily Train Plans and in establishing train priority on its network;
- the measures QR has taken to address the conflict of interest faced by officers within QR's Above Rail Business Groups performing Scheduling and Train Control functions, including the measures against which the performance of these functions can be assessed by parties outside of QR; and
- the scope QR reserves for itself to exercise discretion in performing the Scheduling and Train Control functions.

### *QR's proposed framework for the performance of Scheduling and Train Control functions*

QR proposes to perform the Scheduling and Train Control functions within a framework established by four documents:

- Draft Undertaking – the overarching document that establishes the respective roles of the Protocols and the Interface Plan. However, no direct relationship between the Protocols and the Interface Plan is established, notwithstanding some apparent overlap in the matters each is proposed to address.
- Protocols – establish the role of Access Co-ordination Plans, to be developed between Network Access and the relevant QR Above Rail Business Group for each Third Party Operator. While not stated in the Protocols, QR has advised that the content of the Interface Plan will be reflected in each Access Co-ordination Plan. QR proposes that the Protocols

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<sup>3</sup> The Scheduling document was received on 23 December 1999 and the Marshalling document on 8 December 1999. QR endorsed the public release of its position on the marshalling yards assignment on 23 December 1999.

have two roles – allocate below rail capacity and manage on-track traffic; and address the conflict of interest arising from its Above Rail Business Groups performing Scheduling and Train Control functions.

- Interface Plan – will address issues such as operational procedures, emergency procedures and incident management, track possession procedures, train control contacts, train schedule variation procedures and service recovery procedures.
- Access Co-ordination Plan - this is proposed to contain all the information of which the Scheduling and Train Control officers need to be aware for them to perform the Train Scheduling, Train Control and associated Incident Management services they are contracted to supply to Network Access.

The framework that has been proposed by QR for performing the Scheduling and Train Control functions necessitates transparent links between the draft Undertaking, the Protocols, the Access Co-ordination Plan and the Interface Plan. This is necessary to ensure that stakeholders have a sound understanding of how QR will perform these functions. It is possible that some matters currently addressed in the Interface Plan could be addressed in the Protocols.

It may also be appropriate for measures to be developed to provide for effective auditing of the processes outlined in the Protocols, irrespective of how the Scheduling and Train Control functions are allocated within QR.

#### *Train Scheduling practice*

The development of a transparent process for the allocation of currently unutilised train paths - representing spare capacity – will be very important to the integrity of the Undertaking. A key element of such a process is likely to be sufficient consultation with access seekers in the development of the Master and Daily Train Plans.

QR proposes that, in allocating train paths, Network Access will seek outcomes that address the requirements of railway operators and QR's infrastructure maintenance provider. It seems that in this way it is expected that the efficient utilisation of network Capacity will be achieved. Network Access will also seek to optimise the sharing of Capacity. However, a process to achieve these objectives is not established. Additionally, there may be alternative objectives that could be adopted.

The Protocols state that, in order to optimise the performance of the network for all railway operators, changes to the Master Train Plan are to be developed in consultation with those operators, Network Access' service providers and the Scheduling and Train Control officers. Network Access will make the final determination on all changes to the Master Train Plan. However, the nature of the proposed consultation arrangements is not outlined. The consultation arrangements that are to apply to the development of, or variations to, the Daily Train Plan are also not outlined. Finally, it is not clear what measures, if any, have been adopted to address the conflict of interest faced by officers in QR's Above Rail Business Groups developing the Daily Train Plans.

#### *Train priority*

The Protocols state the critical objectives of Train Control.

It may be that the critical objectives QR has determined for different traffics are consistent with the likely requirements of Third Party Operators. However, pre-determining priority levels has the effect of constraining the choice of Third Party Operators as to their preferred level of priority. An alternative approach to that proposed by QR would be for critical objectives not to

be related to specific traffics but rather to allow for a Third Party Operator to negotiate the level of priority it requires.

The decision making process for resolving conflicts in the event of Out-Of-Course Running is proposed to be managed in accordance with a Traffic Management Decision-Making Matrix. The Matrix will be used in accordance with a series of notes that elaborate upon the Matrix and explain how it will be applied. Consequently, the rules underpinning the Matrix will be fundamental to the performance of the Train Control function on QR's network. This means that the rules must be clear and transparently applied.

While the Matrix establishes a decision making process for resolving conflicts in the event of Out-Of-Course Running, there is little other detail in the Protocols concerning what happens when train path entitlements are disrupted.

In the event of an Incident, the General Manager of each of QR's Above Rail Business Groups may authorise the departure from, or suspension of, the Protocols relating to the resolution of conflicts arising from Out-Of-Course Running for the purpose of restoring normal operations. However, there is no process to handle disputes over departures from, or suspensions of, the Protocols.

#### *Performance of the Train Control function*

Network Access must be advised of every departure from or suspension of the Protocols relating to the resolution of conflicts in the event of Out-Of-Course-Running within 24 hours of its occurrence.

However, the Protocols do not indicate what action Network Access will take if the reporting shows up discrepancies in the performance of the Train Control function. Moreover, the Protocols do not provide any operator adversely affected by a Train Control decision to have the right to any relevant information.

A key issue for the efficacy of an approved Undertaking will be whether this reporting and monitoring framework provided reassurance to access seekers that Train Control will be undertaken in a competitively neutral manner.

In an environment where QR's Above Rail Business Groups will be competing with Third Party Operators, there may be certain commercial-in-confidence information that Third Party Operators will not wish to share with other operators, including QR's Above Rail Business Groups. However, the Protocols envisage officers from QR's Above Rail Business Groups preparing weekly reports for Network Access on such indicators.

Notwithstanding the proposed development of confidentiality arrangements intended to protect commercial-in-confidence information of Third Party Operators flowing to other parts of QR's Above Rail Business Groups, from a competitive neutrality perspective, a legitimate question is whether Network Access should allow Third Party Operators to access similar information on QR's Above Rail Business Groups.

#### **Marshalling yards**

QR is conducting a review of its entire rail infrastructure, including marshalling yards, in order to assign management responsibility for the infrastructure amongst its Business Groups. The review is being conducted in two stages, rail infrastructure including and north of Gladstone, which is now complete, and rail infrastructure south of Gladstone, to be completed by mid 2000.

*QR's proposal for access to marshalling yards*

QR has submitted to the Authority a set of principles and series of line diagrams indicating how it intends to assign management responsibility for marshalling yards, and, in so doing, indicate whether or not the services provided by marshalling yards will be subject to the Undertaking. This development represents a significant departure from the 'agency negotiation' framework outlined in the draft Undertaking.

QR has proposed that a high level 'common use' test be used to identify those area of yards that should be assigned to Network Access or to QR's other Business Groups. The common use approach simplifies the provision of access to these facilities by specifying the 'roads' within marshalling yards that are available for access and assigns responsibility for them to Network Access.

However, an inappropriate assignment of marshalling yards to QR Above Rail Business Groups instead of to Network Access, would force Third Party Operators to negotiate with these Business Groups, who will be direct competitors, in order to access the services of these yards that are necessary for their train operations.

QR's Above Rail Business Groups are likely to have little incentive to accommodate the needs of Third Party Operators in these circumstances or, if they do provide access, to do so at a reasonable price. QR's Above Rail Business Groups would thereby secure an inappropriate competitive advantage over Third Party Operators, undermining the efficacy of the competition objectives underlying the QCA Act.

*Train functions*

The scope of the declaration of QR's rail transport infrastructure includes the use of the infrastructure for services such as mainline running, train queuing and staging, train marshalling and shunting and short term maintenance. A number of these services are performed within marshalling yards and their smooth operation significantly influences the efficiency and effectiveness of the transit of passengers and freight on the mainline.

Consequently, the compatibility of QR's proposed approach to the assignment of marshalling yards with the services provided by QR's declared rail transport infrastructure will be an important consideration for Third Party Operators interested in running train services on QR's network.

*Assessment of the common user approach*

In the description of its proposed approach, QR does not explicitly link the concept of a common use principle to the scope of the declaration under the QCA Act. QR argues that areas within yards where the only functions currently being performed are above rail functions, such as train storage, should be reserved for the exclusive use of that QR Above Rail Business Group. However, marshalling yards potentially provide both declared and non-declared services. Consequently, a difficulty arises concerning conflicts between the assignment of responsibility to QR's Above Rail Business Groups and Network Access.

There are three interrelated issues that must be considered in the context of a common user test:

- how the term 'common user' should be defined for the purposes of assigning responsibility for marshalling yards, having regard to the possibility that factors such as surplus marshalling yard capacity, operational constraints or feasibility to duplicate might mean that the assignment of marshalling yards to QR's Above Rail Business Groups is appropriate;

- whether the onus of demonstrating that a particular marshalling yard should be reserved for the exclusive use of a QR Above Rail Business Group is on QR or those seeking access; and
- to what extent there should be scope for the assignment of marshalling yards to be revisited, and if so, through what mechanism. If a review mechanism is to be adopted, the QCA understands that there are two options available;
  - one option could be to incorporate a mechanism into the Undertaking that enables the assignment of yards to be reviewed in an expeditious manner. A second option is for the QCA to accept an Undertaking only in respect of the service provided by the marshalling yards that are assigned to Network Access. This approach would enable the QCA to request an amending undertaking in respect of services provided by marshalling yards left outside the original undertaking in the context of a Third Party Operator's specific access proposal.

QR has provided the line diagrams indicating the assignment of management responsibility of rail infrastructure north of Gladstone only. A matter requiring resolution is the assignment of those marshalling yards south of Gladstone and whether all such yards should be assigned to Network Access pending the submission of an amending undertaking that addresses QR's proposed assignment.

#### *QR's application of the common user approach*

In the advice QR has provided to the QCA, Network Access has not gone beyond supplying line diagrams for its network north of Gladstone and explaining its application of a high level assignment principle 'common use'. Consequently, there is a question as to whether QR's advice and line diagrams are sufficient for stakeholders to gain an understanding of how QR has applied its common use definition.

It is conceivable that QR's view about what rail infrastructure can be considered common use may differ from a Third Party Operator's or the QCA's views. In particular, QR's approach might presuppose that a Third Party Operator's operational arrangements should mirror QR's. Moreover, it is possible that QR's proposal reflects the fact that its operations currently dominate the use of the rail infrastructure and hence it is proposing to vest a greater proportion of its track in its Above Rail Business Groups than is appropriate.

Using QR's line diagrams, the QCA has identified some examples of possible anomalies in the assignment of management responsibility for marshalling yards. In addition, experience in other Australian rail jurisdictions indicates that growth in Third Party Operator traffic will be associated with an expansion of common use facilities.

#### *Process to resolve marshalling yard assignment*

If it is not possible to achieve a transparent process for assigning management responsibility for marshalling yards through the application of a high level principle such as 'common use', an alternative may be to convene a 'round table' meeting of interested parties.

Under such an approach, the QCA could chair a meeting involving an independent mediator, Network Access, QR's Above Rail Business Groups and other affected Business Groups, such as Infrastructure Service Group, Third Party Operators, and other stakeholders. The meeting could conduct a case-by case assessment of each of Network Access' assignments.

## 1. INTRODUCTION

### 1.1 The role of QR's Undertaking

QR has submitted a draft access Undertaking to the QCA covering certain services relating to the use of rail transportation infrastructure owned by QR. Accompanying the draft access Undertaking is an Explanatory Guide that QR has produced to clarify the intent of selected provisions of the Undertaking. These documents are available from the QCA (telephone Ms Natasha Bree on (07) 3222 0555) or can be downloaded from the QCA's website at [www.qca.org.au](http://www.qca.org.au).

The draft access Undertaking sets out the basis under which QR proposes to provide third party access to certain declared services. Under Part 5 of the *Queensland Competition Authority Act 1997* (the QCA Act), the QCA is required to assess the Undertaking and decide whether or not to approve it. In determining whether to approve QR's draft Undertaking, the Authority is mindful of the role of an undertaking under the QCA Act, which is principally to provide certainty to stakeholders. If approved, the Undertaking will effectively bind the Authority in any future disputes between QR and those seeking to use its network. Accordingly, once the Authority accepts the draft Undertaking, stakeholders may be bound by its terms in future negotiations with QR.

The Authority has adopted a consultative approach to its assessment of the draft Undertaking. As part of this process, there are some specific matters related to papers viewed by QR in respect of:

- Scheduling and Train Control Protocols (the Protocols) - submitted on 23 December 1999; and
- the proposed assignment of responsibility for marshalling yards - submitted on 8 December 1999,<sup>4</sup>

upon which the Authority seeks submissions.

QR has advised that, once finalised, the Protocols will form the basis of a set of principles to be incorporated as a schedule to the Undertaking. The Protocols are at Attachment 1 to this paper.

QR's proposed assignment of responsibility for marshalling yards forms part of a broader process of assigning management responsibility for QR's rail infrastructure assets within QR's various Business Groups. A copy of QR's advice to the Authority is at Attachment 3 to this paper.

The Authority is aware that its *Request for Comments - Queensland Rail Draft Undertaking* paper sought stakeholder views on matters associated with the Protocols and the assignment of responsibility for marshalling yards. Those views are mentioned in the relevant sections of this paper. The QCA will take any previous comments on these matters into account in developing its Draft Decision on QR's Undertaking. The recent documentation submitted to the QCA represents QR's attempt to deal with some of the concerns previously raised by stakeholders. The Authority is particularly interested in the extent to which stakeholder concerns are allayed by the content of this documentation.

**The Authority has produced this paper in an effort to assist interested parties to comment on these documents in the context of QR's draft Undertaking. However, the Authority does not wish to inhibit comment. To this end, the Authority wishes to receive submissions**

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<sup>4</sup> QR consented to the public release of its position as set out on this matter on 23 December, 1999.



**that also raise issues other than those outlined in this paper. To facilitate feedback, this paper summarises aspects of the documents and QR's draft undertaking as the Authority has interpreted it. However, this summary is intended only as a guide and should not be regarded as a substitute for stakeholders reading the relevant documents.**

## 1.2 QR's Train Scheduling and Train Control practice

The development of a Train Schedule is the means by which a rail network's capacity is allocated. The train paths reflect the priorities established in the schedule for different types of traffic. Train Schedules also provide for discrete time periods where maintenance and enhancement work can be performed on the track and related infrastructure.

The opening up of QR's rail transportation services to third party access has important implications for its Scheduling task. This is because QR will be required to allocate train paths for both its own traffic and that of potentially competing Third Party Operators. This has the potential to distort the development of competition in the above rail market - either through Third Party Operators perceiving that the risks of entry to the market are too great; or, after having entered the industry, finding that their scheduled train services are more subject to adverse change than are QR's Above Rail Business Groups.

Situations where QR could conceivably favour its own traffic in developing Train Schedules include:

- QR's Above Rail Business Groups could be allocated the most attractive and hence most valuable train paths - this is particularly relevant for time sensitive freight;
- where capacity has been determined in terms of a certain number of services per week rather than fixed train paths, QR may need to choose between one of its Above Rail Business Groups and a Third Party Operator seeking to use the same train path(s) during the week; and
- train services may need to be re-scheduled or cancelled as a result of unplanned events – such as track damaged by flooding or a train derailment – which may also necessitate unplanned maintenance work. In re-scheduling train services for all above rail operators, QR could impose greater disruption on the services of a Third Party Operator than its own Above Rail Business Groups.

In a railway network, the need for co-ordination of train traffic arises from the strict restrictions on the times a particular track section may be used. This reflects the fact that trains operate on a fixed track and, unless duplicated, may only accommodate movement in one direction at any point in time. The role of the Train Control function in a rail network is to undertake this traffic co-ordination task.

The management of traffic is one of the most significant influences on the performance and efficiency of a train operator on a daily basis. Poor quality Train Control has the potential to cause, amongst other things, excessive delays and increases in train cycle times, which affects the operator's utilisation of its locomotive/rolling stock assets and the quality of service it is able to offer customers.

In addition, it is relatively easy for a Train Control centre to favour one operator over another in administering Train Control services eg in deciding which train gets right of way and which train has to wait in a passing loop on a single line track. However, it is very difficult to detect and prove whether overt discrimination has taken place.

In this operational context, several matters arise that will be critical to the confidence Third Party Operators have in the integrity of the Scheduling and Train Control processes. These include:

- the clarity and transparency of the processes QR proposes to establish concerning its performance of Scheduling and Train Control functions;
- the level of consultation with Third Party Operators in which QR proposes to engage when developing such things as the Master and Daily Train Plans and in establishing train priority on its network;
- the measures QR has taken to address the conflict of interest faced by officers within QR's Above Rail Business Groups performing Scheduling and Train Control functions, including the measures against which the performance of these functions can be assessed by parties outside QR; and
- the scope QR reserves for itself to exercise discretion in performing the Scheduling and Train Control functions.

### 1.3 QR's proposed assignment of marshalling yards

The rail transportation services provided by QR's rail transport infrastructure, including marshalling yards, have been declared under the third party access provisions of the QCA Act - refer Attachment 4. This means that the rail transportation services provided by this infrastructure is available for access by Third Party Operators.

Since the submission of its draft undertaking, QR has undertaken an internal review of its marshalling yards. This has resulted in QR proposing a change from the position it originally adopted in its draft Undertaking, with QR now proposing to assign the responsibility for the management of its marshalling yards according to its assessment of whether or not those yards will need to be used by all above rail operators or only by QR Above Rail Business Groups.

Under QR's proposed approach, the former are called common user yards, assigned to Network Access and available to Third Party Operators - refer to lines marked red on the diagrams contained in Attachment 6. The remaining yards - lines marked blue on the diagrams - are assigned to QR's Above Rail Business Groups and are not available for third party access under the draft Undertaking.

This approach simplifies the provision of access to these facilities by specifying the 'roads' within marshalling yards that are available for access and aligning responsibility for them to Network Access. However, if there is an inappropriate assignment of marshalling yards to QR Above Rail Business Groups instead of to Network Access, Third Party Operators would be forced to negotiate with QR's Above Rail Business Groups for access to facilities which are necessary for them to be able to compete with QR's Above Rail Business Groups. QR's Above Rail Business Groups are likely to have little incentive to accommodate the needs of Third Party Operators in these circumstances or, if they do provide access, to do so at a reasonable price. Accordingly, Third Party Operators may be forced to either pay higher than necessary charges to QR's Above Rail Business Groups or to unnecessarily duplicate the relevant infrastructure.

QR's Above Rail Business Groups may thereby secure an inappropriate competitive advantage over Third Party Operators, undermining the efficacy of the competition objectives underlying the QCA Act.

Ultimately, this could result in shippers paying higher haulage charges than appropriate. Any cost penalty imposed by QR on its competitors for access to these facilities could also flow to QR's own charges. This is because the prices charged by competitors are one of the key constraints on the price QR is able to charge in a market where there are limited intermodal alternatives.

#### **1.4 Purpose of paper**

The purpose of the paper is to seek comments on the appropriateness of the Protocols (Part A) and to seek comments on the appropriateness of QR's proposed assignment of management responsibility for its marshalling yards (Part B).

**PART A**

**QR'S SCHEDULING AND TRAIN CONTROL PROTOCOLS**

## **1. PERFORMANCE OF SCHEDULING AND TRAIN CONTROL FUNCTIONS**

The purpose of this section is to outline how QR intends to manage the Scheduling and Train Control functions for its network. Specifically, the following issues will be outlined:

- the current performance of Scheduling and Train Control functions in QR; and
- the framework established by the draft Undertaking within which QR proposes that the Scheduling and Train Control functions will be performed.

### **1.1 Current Practice**

The performance of the Scheduling and Train Control functions currently has four discrete phases:

- a master train plan (“Master Train Plan”) for the whole network is prepared six to nine months in advance by Network Access in consultation with scheduling officers in the Above Rail Business Groups. Network Access has the final say if there are any scheduling disagreements;
- a daily train plan (“Daily Train Plan”) is prepared around 24 to 48 hours in advance by planning officers in QR’s Above Rail Business Groups - the Above Rail Business Group will vary depending upon the traffic and the location;
- QR’s Train Control centres, which are currently attached to QR’s Above Rail Business Groups, manage traffic movements in real time utilising the Daily Train Plan. However, train controllers have the discretion to change these plans in response to unforeseen events eg unloading delays at a port, loading delays at a mine, a train derailment or unplanned maintenance; and
- reporting of the performance of the Train Control function, including any Incidents, after the event, by the relevant Above Rail Business Group to Network Access.

### **1.2 Relationship between draft Undertaking, Protocols and Interface Plan**

QR will perform the Scheduling and Train Control functions within a framework established by four documents:

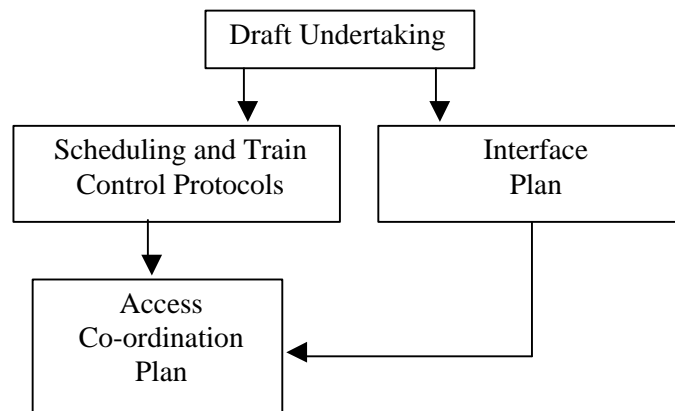
- draft Undertaking;
- Protocols;
- Interface Plan; and
- Access Co-ordination Plan.

The draft Undertaking is the overarching document establishing the respective roles of the Protocols and the Interface Plan. However, no direct relationship between the Protocols and the Interface Plan is established, notwithstanding some apparent overlap in the matters that it is proposed each is to address.

The Protocols, in turn, establish the role of Access Co-ordination Plans. An Access Co-ordination Plan will be developed between Network Access and the relevant QR Above Rail Business Group for each Third Party Operator. While not stated in the Protocols, QR has

advised that the content of the Interface Plan will be reflected in each Access Co-ordination Plan along with the operator's Capacity Entitlement.

The links between the documents can be represented diagrammatically as follows:



It is proposed that the Protocols have two roles:

1. the allocation of below rail Capacity and the management of on-track traffic; and
2. to regulate a conflict of interest faced by its Above Rail Business Groups.

The first role means that the Protocols cannot be considered in isolation from Part 6 of the draft Undertaking dealing with Capacity Management.<sup>5</sup>

The second role stems from QR's proposal that its Above Rail Business Groups perform Train Scheduling, Train Control and associated Incident Management services on behalf of Network Access. This means that QR's Above Rail Business Groups will be simultaneously controlling their own and potentially competing third party traffic.<sup>6</sup>

The Protocols propose that Access Co-ordination Plans for each Third Party Operator will be developed between Network Access and the Scheduling and Train Control Officers. These Plans will incorporate the operational and interface requirements of that operator and all information that QR's officers require in order to perform Train Scheduling, Train Control and Incident Management Services on behalf of Network Access.

QR has subsequently advised the QCA that an Access Co-ordination Plan will contain:

- the operator's train service entitlements, including the train service description, and Train Schedule;
- a description of the part(s) of the network on which the operator will be entitled to operate, including the specification of any enhancements that will affect that part of the network and the specification of the relevant Train Control centre/s for the relevant parts of the network;
- a specification of authorised rolling stock and rolling stock configurations;

<sup>5</sup> Once the draft Undertaking is approved, the Master Train Plan and Daily Train Plan will reflect the outcome of the processes established in Sections 6.1 (Service Specification and Train Scheduling), 6.2 (Capacity Analysis) and 6.3 (Capacity Allocation) of Part 6 of the undertaking.

<sup>6</sup> QR's Above Rail Business Groups are also to manage stations, platforms and certain marshalling yards that are not essential to the through operation of trains. QR's proposed assignment of management responsibility for marshalling yards is discussed in detail in Part B of this paper.

- a specification of the applicable safeworking procedures, safety standards, emergency procedures and environmental standards, including relevant contacts and Incident investigation procedures; and
- a specification of the information in an operator's Interface Plan.

In addition, the Scheduling and Train Control Protocols indicate that the Access Co-ordination Plan will:

- have a role in the day-to-day implementation of the Master Train Plan through the Daily Train Plan [section 2.7]. This may include variations in the Daily Train Plan to accommodate day-to-day business requirements of Railway Operators [section 3];
- set out where Capacity Entitlements may be departed from [section 4.1];
- establish the train operation and communication practices [section 4.3];
- set out Incident Management practices [section 4.5]; and
- specify the extent to which the Matrix will be usurped in order to provide passenger trains with priority [the Matrix].

QR has advised that Access Co-ordination Plans will not be provided to Third Party Operators, however, all information in the Plans will be drawn from schedules to a Third Party Operator's Access Agreement.

As one of a number of interface considerations set out in Part 7 of the draft Undertaking, QR proposes that prior to the commencement of a Third Party Operator's train services, it will develop, in consultation with the Third Party Operator, an Interface Plan.<sup>7</sup>

The Interface Plan provides information on how QR intends to manage certain aspects of the Scheduling and Train Control functions. Some elements of the Interface Plan complement the Protocols while other elements appear to overlap the content of the Protocols. QR has advised that the Interface Plan is a schedule to its current standard access agreement.<sup>8</sup> Its standard access agreement is subject to ongoing review and amendment and, as such, the Interface Plan will be subject to the same process. Given the detailed process nature of the Interface Plan, QR has advised that it does not intend to incorporate it in either the Undertaking or the Protocols.

QR has provided a copy of the current version of the Interface Plan for inclusion in the consultation process associated with the Protocols – refer to Attachment 2 of this paper. This is on condition that the Interface Plan is used only for the purpose of providing background information regarding the operation of the Protocols, and that the QCA recognises that the Interface Plan may be reviewed and amended by QR at any time or times in the future.

The implication of addressing additional matters, or existing matters in greater depth, in the Protocols is that they will be approved as part of the Undertaking. This means that any changes QR wishes to make to the Protocols in future would require formal submission of a draft amending Undertaking to the QCA. The QCA's assessment would involve a public consultation process. However, QR may change its Interface Plan at its discretion, unless, for

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<sup>7</sup> Section 7.6 states that the Interface Plan will supplement the provisions of the access agreement and may include: operational procedures; emergency procedures and Incident Management; track possession procedures; Train Control contacts; Train Schedule variation procedures; and service recovery procedures.

<sup>8</sup> The QCA's *Request for Comments - Queensland Rail Draft Undertaking* paper raised issues relating to the appropriateness of Schedule E to QR's draft undertaking, which outlines principles underpinning QR's standard access agreement. The QCA is currently pursuing this matter with QR.

example, it forms part of a contract in which case the terms of the contract would govern amendments to the Plan.

Accordingly, an assessment of the need for refinements to the Protocols would need to balance a number of factors, including whether there are any aspects of the Interface Plan that are of sufficient importance as far as the performance of Scheduling and Train Control functions is concerned so as to warrant being addressed in the Protocols. This would be done having regard to:

- QR's legitimate business interests in being able to retain some flexibility in the performance of its Scheduling and Train Control functions;
- Third Party Operators' interests in maximising the clarity and transparency of the performance of those functions;
- the public interest, including the public interest in having competition in markets.

### **1.3 Request for comments**

**The Authority seeks comments on whether:**

- 1.3.1 the links between the draft Undertaking, the Protocols, including the Access Co-ordination Plan, and the Interface Plan are sufficiently clear to provide stakeholders with a sound understanding of how QR will perform the Scheduling and Train Control functions?**
- 1.3.2 there are any matters currently addressed in the Interface Plan and the Access Co-ordination Plan that should be incorporated into the Protocols?**



## 2. TRAIN SCHEDULING PRACTICE

QR's Above Rail Business Groups operate the majority of train paths currently utilised on the network reflecting the capacity QR considers it requires to fulfil existing contractual and non-contractual arrangements.<sup>9</sup> The small number of Third Party Operators currently using QR's network accounts for only a very small proportion of total utilised paths. The train paths for QR's Above Rail Business Groups and these Third Party Operators have been allocated around infrastructure maintenance windows, discrete periods when the track is closed for maintenance work.

In the short term, the paths potentially available to Third Party Operators will be those not required by any of the existing parties using the network. This 'first come first served' approach is a simple and administratively inexpensive way of allocating capacity rights. However, QR's incumbency would give it an advantage over new operators if it sources the most attractive paths for itself. It is understood that railway managers in Australia have generally adopted the 'first come first served' approach when rail networks have been opened up to third party entry.<sup>10</sup>

Nevertheless, the development of a transparent process for the allocation of currently unutilised train paths - representing spare capacity - may be very important to the integrity of the Undertaking.<sup>11</sup> A key element of such a process is likely to be sufficient consultation with access seekers in the development of QR's Master and Daily Train Plans.

### 2.1 Capacity Entitlements

The Protocols state that Network Access is responsible for the analysis, determination and allocation of network Capacity. In analysing network Capacity or determining the Capacity Entitlement of a potential or actual Third Party Operator, Network Access will not involve personnel within QR's Above Rail Business Groups responsible for the commercial arrangements associated with the provision of QR train services: [Part 1].

This does not prevent officers from QR's Above Rail Business Groups not involved in commercial arrangements from becoming involved in the Capacity Assessment process. The QCA notes that excluding those involved in day-to-day Scheduling from the assessment of Capacity Entitlements will fragment QR's capacity management arrangements. However, QR's proposed approach will mean that officers from QR's Above Rail Business Groups could become involved in assessing the amount of Capacity that is available to its competitors and have early information about competitors' proposed operational arrangements.

### 2.2 Master and Daily Train Plans

Network Access will prepare a Master Train Plan for the entire QR network, as well as for discrete sections of the network that will be updated as required.

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<sup>9</sup> This will be an important issue in QR's development of internal access agreements in line with the provisions in Part 3 of the draft Undertaking. QR could assess its capacity needs in an anti-competitive manner ie by over-estimating its capacity needs QR can limit or prevent third party entry. QR could also establish internal access agreements (with associated capacity rights) for periods longer than the terms of external haulage agreements.

<sup>10</sup> The QCA's *Request for Comments - Queensland Rail Draft Undertaking* paper raised a question concerning the possibility of customers of bulk commodities holding access rights (to train paths). The QCA is pursuing this matter with QR.

<sup>11</sup> The QCA's *Request for Comments - Queensland Rail Draft Undertaking* paper raised this matter. A majority of submissions in response supported the establishment of protocols in the Undertaking to ensure competitive neutrality in capacity allocation.

According to the Definitions section of the Protocols, the Master Train Plan will detail:

- the maximum capacity of the network, based on a train service with the characteristics of the predominant train service operating on the relevant infrastructure;
- the contracted Capacity Entitlements of operators using or planning to use the relevant infrastructure from week to week, including train service paths, pathing determination and railway operator specific requirements;
- maintenance windows/possessions; and
- the available capacity of the network.<sup>12</sup>

The Group General Manager, Network Access will allocate train paths in the Master Train Plan in accordance with the Capacity Entitlements of all railway operators on the network. In allocating train paths, the Group General Manager is to seek outcomes that address the requirements of railway operators and achieve the efficient utilisation of network Capacity, and recognise the needs of the infrastructure maintenance provider. The Group General Manager is to optimise the sharing of Capacity on the network and encourage co-operation between railway operators, and between railway operators and Network Access, to improve overall service, and provide overall service patterns and connections that meet the needs of users: [Section 2.1].

The Protocols do not provide any detail explaining the meaning of “efficient utilisation” and “optimisation of capacity” nor establish the criteria or process by which these objectives will be achieved. For example, as a starting point, the maximum capacity of the network could be defined as the mix of train services that maximises the yield of the network, based on the most efficient train service, rather than that based on a train service with the characteristics of the predominant train service as proposed by QR.

To facilitate the effective maintenance, renewal and development of the network, the Group General Manager will allocate train paths in the Master Train Plan to allow for the provision of maintenance and enhancement of the infrastructure: [Section 2.2].

The Group General Manager can accommodate new and/or additional traffic on the network or agreed variations to Capacity Entitlements of existing railway operators, provided the contracted Capacity Entitlements of other existing railway operators are preserved: [Section 2.4.]

As currently drafted, the process for developing the Master Train Plan focuses principally on the role of Network Access and, in particular, the Group General Manager of Network Access. While Network Access, as railway manager, will always have a central role in this regard, there may be merit in establishing the role and responsibilities of all relevant parties, including railway operators - both QR’s Above Rail Business Groups and Third Party Operators and possibly shippers. This could form part of a more detailed set of procedures in the Protocols that need not be ‘legalistic’ in nature and may include consultation, information flows, responsibilities of all relevant parties including railway operators, and decision-making procedures with respect to the development of the Master Train Plan.

Rail Access Corporation’s (RAC’s) Operation Protocol defines the roles and responsibilities of all parties involved in the generation of its standard working timetable and daily working timetable.<sup>13</sup>

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<sup>12</sup> The difference between maximum Capacity and Capacity Entitlements.

<sup>13</sup> These are the equivalent documents to QR’s Master and Daily Train Plans.

The Master Train Plan will form the basis of a Daily Train Plan, which QR proposes be prepared by the officers in its relevant Above Rail Business Groups. The Master Train Plan may be varied on a daily basis to form the Daily Train Plan in accordance with:

- variations in the day-to-day business requirements of railway operators in accordance with the terms of their Access Co-ordination Plans<sup>14</sup>;
- infrastructure maintenance and enhancement works on the network; and
- any other planned or unplanned events that may lead to a need to deviate from the Master Train Plan.

According to QR, such unplanned events may include industrial action, force majeure events or Incidents: [Part 3].

The Scheduling and Train Control officers from the relevant Above Rail Business Groups will implement the requirements of the Master Train Plan through the Daily Train Plan on a day-to-day basis in accordance with the relevant Access Co-ordination Plans, QR's safety management system and other predetermined procedures<sup>16</sup>: [Section 2.7].

The proposed preparation of the Daily Train Plan appears to be more a statement of high level principles than protocols. As with the Master Train Plan, the key issue that arises is whether procedures concerning consultation, information flows, responsibilities of the relevant parties and decision-making procedures should be incorporated in the Protocols concerning the preparation of the Daily Train Plan.

In addition, the development of the Daily Train Plan by officers in QR's Above Rail Business Groups rather than Network Access will place these officers in a conflict of interest situation each day. For example, if a Third Party Operator and a QR Above Rail Business Group have identical Capacity Entitlements defined in terms of frequency (ie. a certain number of train services per week) rather than fixed train paths, QR's Above Rail Business Groups will be allocating train paths for their own train services at the same time as allocating paths for Third Party Operators. Conceivably, the respective operators could be seeking to use the same path(s).

It appears the only guidance these officers will be given in making the allocation of paths is that specified in each operator's Access Co-ordination Plan. However, the definition of the Access Co-ordination Plan does not clarify the obligations to which the officers will be subject; nor does it provides a means of assessing their performance/conduct, in order to provide reassurance to Third Party Operators that the train path allocations are being made in a competitively neutral manner.

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<sup>14</sup> The Definitions section of the Protocols provides a somewhat looser explanation of this criterion. It states that the Master Train Plan may be varied "in accordance with the Capacity Entitlements of railway operators under current access agreements" and "to meet business requirements". The QCA prefers the tighter definition used in the body of the Protocols and would prefer that only one definition is used to avoid confusion.

<sup>16</sup> Such procedures might include QR's environmental management system, railway operators' loading requirements and rolling stock plans.

Notwithstanding the same Capacity Entitlements, QR's Above Rail Business Group could be given a significant commercial advantage over a Third Party Operator through the development of the Daily Train Plan.<sup>17</sup>

QR argued in its supplementary submission to the *Request for Comments - Queensland Rail Draft Undertaking* paper that it did not object to providing the Master and Daily Train Plans to those parties who request it, although it did outline what it perceived as practical problems.<sup>18</sup> However, the disclosure of the Master and Daily Train Plans is not addressed in the Protocols.

There could be benefit in the Master and Daily Train Plans being made publicly available to improve the transparency of QR's Capacity allocation process. That though would be subject to ensuring that any confidential train path information in the train plans is not publicly released. However, it is not clear whether any such information is in fact confidential.<sup>19</sup> On the other hand, rail operators may not wish to publicly disclose details of Out-Of-Course Running. This latter issue is discussed in more detail in Section 4.2 of this paper.

The QCA's *Request for Comments - Queensland Rail Draft Undertaking* paper raised the issue of whether information about train movements such as master timetables, '24/48' hour plans and Train Control diagrams should be publicly available. There was strong support for the release of such information to potential train operators on request.<sup>20</sup>

### 2.3 Changes to the Train Plans

As manager of the network, QR has a legitimate interest in making changes to timetables/schedules in response to unforeseen events such as accidents and flooding. On the other hand, the possibility of arbitrary changes in agreed train timetable/schedules would pose a threat to the efficacy of an approved Undertaking given that such changes impact directly on the quality of service Third Party Operators can offer their customers. The more time sensitive the freight or passenger traffic carried, the greater the risks faced by a Third Party Operator potentially subject to such timetable/Scheduling changes. The greater the perception of

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<sup>17</sup> The QCA's *Request for Comments - Queensland Rail Draft Undertaking* paper raised the issue of whether public reporting is an appropriate vehicle to facilitate transparency of capacity allocation and if so, what reporting arrangement could be established. A majority of submissions in response supported some form of reporting to facilitate transparency of capacity allocation. One suggestion received was that the QCA could give consideration to this reporting being incorporated with other reporting by QR on its compliance with the Undertaking (Queensland Government). In contrast, another submission argued that there does not seem an obvious way in which public reporting of capacity allocation would enhance the allocation mechanism, beyond making the timetable public. Rather, it would be preferable that the process be scrutinised by the QCA to ensure that the legitimate interests of all parties are maintained (FreightCorp).

<sup>18</sup> The practical problems were: the train plans are large documents that cannot easily be reproduced in their entirety in paper form; Third Party Operators may only want to see the part of the plan(s) applicable to their (proposed) operations, however, it may be misleading for QR to provide just this because it may not always be possible to consider available capacity in some regions in isolation from other regions in the network; and the Master Train Plan is unlikely to reveal all information regarding the Capacity Entitlements of individual operators (eg. rescheduling options and priority) or whether Capacity is currently under negotiation.

<sup>19</sup> For example, it would be possible for a person to sit by the side of the track and observe the train movements on a particular line section in order to gain a reasonable understanding of the relevant part of the Daily Train Plan.

<sup>20</sup> Comments included: the full working timetable should be made available to operators (FreightCorp); Third Party Operators should have access to all information about train movements, including a timetable protocol and publicly available master timetable (Queensland Government), to facilitate transparency and fairness; it is critical that information about train movements are publicly available. Without this public knowledge it is unlikely Third Party Operators or customers would have any confidence in the access arrangements (Australian Magnesium Corporation & Stanwell); and information about train movements should be publicly available, however, the 24/48 hour control arrangements should remain confidential to those operators who have a current access agreement (Great Southern Railway).

arbitrary changes to timetables/schedules, the less likely Third Party Operators will enter the above rail market, jeopardising the realisation of the benefits third party access was intended to deliver.

QR states that, in order to optimise the performance of the network for all operators, changes to the Master Train Plan will be developed in consultation with railway operators and QR's internal service providers to Network Access, including Infrastructure Services Group and the officers from the Above Rail Business Groups [Section 2.5]. However, the nature of the consultation process QR envisages establishing is not spelt out. In order to provide Third Party Operators with a better idea of their role in the process, there may be merit in the Protocols producing more detail on the nature of the consultation process. Following consultation, the Protocols state that the Group General Manager Network Access will make the final determination on all changes to the Master Train Plan [Section 2.6].

Part 3 of the Protocols does not address consultation processes for the development of, or variations to, the Daily Train Plan. Rather, it envisages a situation where deviations from the Master Train Plan will reflect, amongst other things, variations in the day-to-day business requirements of railway operators in accordance with their Access Co-ordination Plans. However, it is not clear whether situations where a Third Party Operator may wish to make an unanticipated change to its schedule are addressed.

A conflict of interest involving officers in QR's Above Rail Business Groups arises because they will be required to make, and act upon, judgements about the need for unplanned infrastructure maintenance work that may be necessary after flooding or cyclones, or because of a perceived deterioration in track condition. This may include track closures for certain periods. This is likely to be a particularly important issue in the northern regions of QR's network where climatic conditions can be volatile. Such unplanned maintenance work may necessitate contracted train paths being re-scheduled. In choosing the timing of this unplanned maintenance work, the officers may be required to impose differing levels of disruption on Third Party Operator's and its own Above Rail Business Group's train paths.<sup>21</sup>

#### *QR's Interface Plan*

The following parts of the Interface Plan indicate how QR intends to perform the Train Scheduling function:

- Part 1 - Train Scheduling Procedures – establishes a number of high level conditions to which variations to scheduled train services in the Master Train Plan must be subject;
- Part 6 - Operations Protocols – establishes the process for QR and Third Party Operators to seek a variation to the Master and/or Daily Train Plans; and
- Part 4 - Notification Procedures for Operational Constraints – establishes the process for when QR requires possession of the track, either planned or in an emergency, or faces some other operational constraint.

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<sup>21</sup> The QCA's *Request for Comments - Queensland Rail Draft Undertaking* paper raised the issue of whether compensation should be paid in the event of a re-assignment of train schedules. A majority of submissions supported the payment of compensation where Third Party Operator's train services are adversely affected by scheduling changes. Only where QR has clearly reserved the right to re-schedule trains without reference to, or agreement of, the third party should compensation not apply. QR has not addressed the issue of compensation for re-scheduling in either the Protocols or the Interface Plan. The QCA intends to pursue this matter with QR.

## **2.4 Request for comments**

**The Authority seeks comment on whether:**

- 2.4.1 it is appropriate that officers from QR's Above Rail Business Groups be involved in the assessment of available Capacity for Third Party Operators?**
- 2.4.2 the guiding principles for the allocation of train paths and sharing of Capacity on QR's network are sufficiently transparent? If not, how may they be improved?**
- 2.4.3 the Protocols identify with sufficient clarity how the objectives of 'efficient utilisation' and 'optimise the sharing of Capacity' will be achieved. Are there any alternative objectives that could be adopted?**
- 2.4.4 in the context of the Protocols and as a minimum, the Master and Daily Train Plans should be available to operators and access seekers. Is there any reason why they should not be made publicly available? Are there any aspects of the Plans that should remain confidential?**
- 2.4.5 the proposed consultation arrangements regarding the development of, and proposed variations to, the Master and Daily Train Plans are sufficiently transparent?**
- 2.4.6 the Protocols establish adequate measures to address the potential conflict of interest faced by officers in QR's Above Rail Business Groups developing and accommodating changes to the Daily Train Plans?**

### 3. TRAIN PRIORITY

In simple terms, train priority is the determination of which train is to be given right of way when two or more trains seek to move over a particular section of the rail network at the same time.

A key issue for the efficacy of the Undertaking is the interaction between service quality, priority and pricing with respect to third party rail access and whether they have been adequately addressed in the Protocols. In order to facilitate an efficient allocation of track capacity, access rights should be defined in terms of priority arrangements and price differentials reflecting the value users put on different priority arrangements. To date, the practical implementation of such an approach within the Australian rail sector has been on a piecemeal basis only. The widespread adoption of more sophisticated pricing and service arrangements is likely to evolve with the increasing maturity of the below rail market.

In the context of QR's Scheduling and Train Control Protocols, two discrete priority related issues arise:

- the specification of priority across operators and traffics, including whether Third Party Operators should be capable of purchasing differing levels of priority; and
- the priority implicit in the Protocols in the context of "Out Of Course Running" and the suspension of the Protocols.

#### 3.1 Specification of priority across above rail operators and different traffics

On QR's network passenger and livestock traffics have traditionally received priority over other traffics, such as coals and minerals. The priority assigned to above rail haulage activities directly impacts on the price and service quality that any above rail operator can offer to its customers as a result of its impact on variables such as cycle times and hence capital utilisation.

Section 4.2 of the Protocols states that the fundamental objective of Train Control will be to achieve on-time running for all trains and on-time commencement and closure of track possessions. This objective will be considered in the context of different types of traffic on the network as follows:

<b>Traffic</b>	<b>Critical objective</b>
Passenger	To arrive and depart from all stops in accordance with a published timetable.
Freight and livestock	To achieve scheduled network entry and exit times, and to arrive and depart from any other service delivery locations scheduled.
Coal and bulk commodities (including coal, sugar, minerals, fuel, grain, sugar, acid and fertiliser)	To achieve their contracted Capacity Entitlements in terms of an overall number of scheduled trains within a nominated period.
Construction and infrastructure	To perform planned tasks as scheduled.

By establishing critical objectives for different types of traffic, Section 4.2 implicitly establishes priority and different values of Capacity rights on the network. Hence, passenger traffic would appear to receive priority on the network because its critical objective is to arrive and depart from all stops in accordance with a published timetable. This will generally necessitate guaranteed or fixed train paths for passenger traffic, with other traffics accommodated around these fixed train paths. Note 4 to the Traffic Management Decision-Making Matrix (the Matrix) provides further support that passenger traffic will receive priority on the network: see Section 3.2 of this paper.

It is far from clear that the critical objectives QR has determined for different traffics will be consistent with the likely requirements of Third Party Operators. Pre-determining priority levels constrains the choice of Third Party Operators as to their preferred level of priority. An alternative approach would be for critical objectives not to be related to specific traffics but rather to the levels of priority operators require and for which they are prepared to pay. Such an approach would allow recognition of the many aspects of train priority.<sup>22</sup>

The QCA's *Request for Comments - Queensland Rail Draft Undertaking* paper sought views on whether priority and queuing arrangements should be established for the purpose of rationing Capacity. A range of responses was received which reflected varying perceptions as to the issues involved. Nevertheless, a majority supported more sophisticated priority arrangements than proposed in the draft Undertaking.<sup>23</sup> The key issue is the extent to which the priority arrangements in the Protocols have addressed these stakeholder concerns.

QR's approach to priority on its network can be contrasted with that of the Australian Rail Track Corporation (ARTC) which defines four levels of priority: 'premium', 'high', 'standard' and 'low' for a number of defined origin-destination points. The four priority levels are reflected in the flagfall access price. For example, the access price for 'premium' priority is generally around 50 per cent higher than for 'low' - off peak - priority.<sup>24</sup>

### 3.2 Traffic Management Decision Making Matrix (the Matrix) – Out-Of-Course Running

The decision making process for resolving conflicts in the event of Out-Of-Course Running will be managed in accordance with the Matrix: [Sub-Section 4.4.2.] QR states that the identity of a railway operator will, of itself, play no part in a decision to alter that railway operator's Train Schedule: [Sub-Section 4.4.1.]

QR provides that the Matrix will be used as follows:

<sup>22</sup> For example, if a train is given absolute priority, the length of the train is not constrained by the length of passing loops or alternatively it may be possible to reduce the number of consists required to perform a freight task (as a result of reduced cycle times). These examples indicate the importance of a railway manager allowing flexibility in the specification of train priority.

<sup>23</sup> Comments included: a concern that the priority and queuing arrangements suggested in the draft Undertaking are very broad and do not give potential rail operators the level of certainty that would be required for them to enter the business); and a clearly defined priority and queuing arrangement should be established particularly to handle situations where Capacity is constrained (Australian Magnesium Corporation & Stanwell; if passenger trains are to be given priority over coal trains (and others) then they should pay for the privilege; and prices should reflect the priority accorded each traffic (FreightCorp). However, Queensland Mining Council did not favour priority and queuing arrangements among coal and minerals access users. Instead, access capacity should be defined and sold in terms of frequency - eg trips per week - rather than guaranteed time slots. Where an access seeker insists on reserved paths, its access charge should reflect the adverse cost effects of any consequential loss of overall system capacity/efficiency.

<sup>24</sup> These priority levels in turn are related to maximum train speed and axle loads. For example, the premium level of priority relates to a train with a maximum speed of 115kph and maximum axle load of 20T. In contrast, a standard level of priority relates to a train with a maximum speed of 80kph and maximum axle loading of 23T.



- Train A and Train B are competing for the right to go first in relation to a traffic management decision by the Train Control eg. network entry, a cross or pass with another train in single line territory: [Note 1];
- the controller compares the current “status” or performance of both trains in terms of running “on time” “ahead” or “late”: [Note 2];
- the decision is given to the train and the rule that has been applied indicated at the point of intersection: [Note 3];
- passengers may be given priority over other trains in contravention of the Matrix rules if specified in the relevant Access Co-ordination Plans: [Note 4];
- a train running “on time” may be delayed and preference given to the train running “late” if it is reasonably expected that the consequences of such action will be less aggregated consequential delays to other trains than otherwise would be the case, provided the second train is running “late” due to no fault of that train operator: [Note 5].

These Notes raise a number of potentially sensitive matters regarding the conduct of on-track train management in the event of Out-Of-Course running.

Out-Of-Course Running is a common occurrence on QR’s coal network, often due to factors beyond the control of the above rail operator such as loading delays at mines and unloading delays at ports caused by mechanical failure of the loading/unloading equipment. This will necessitate train controllers regularly applying their discretion. Consequently, Notes 1 to 5 of the Matrix will be fundamental to the performance of the Train Control function on key parts of QR’s network.

Notes 1 and 2 establish that where two trains are competing for priority, the train controller’s decision will depend on the status of the respective trains ie whether they are running ‘on time’, ‘late’ or ‘ahead’. A departure from ‘on time’ provides train controllers with significant power through the exercise of their discretion. However, the Protocols do not provide definitions for ‘on time’, ‘late’ or ‘ahead’.

QR’s supplementary submission to the *Request for Comments - Queensland Rail Draft Undertaking* paper indicated that a Third Party Operator’s Capacity Entitlement will specify the range within which that operator’s train path/s may be varied and the circumstances in which such variation may occur. It is not clear whether this aspect of a Third Party Operator’s Capacity Entitlement will also address train running requirements.

Note 3 provides that the train controller’s decision is given to the train and the rule that has been applied indicated at the point of intersection. QR has advised that the note merely explains how the Matrix is applied. QR also indicated that the communication arrangements between the train controller and the train driver will be specified in the Third Party Operator’s Interface Plan and incorporated into their Access Co-ordination Plan.

Note 4 provides that passenger trains may be given priority over other trains in contravention of the Matrix. It is not clear from this statement whether train controllers will be able to exercise their discretion to give passenger trains priority over other trains or alternatively whether this is effectively a mandatory requirement having regard to Section 4.2. Either way, this lack of clarity in the Protocols is likely to create uncertainty in the minds of Third Party Operators using the network and raises the question of whether priority has been adequately addressed in the Protocols.

Note 5 to the Matrix provides avenues for train controllers to step outside of the structured decision making process. This note will apply to many trains on all routes every day. The implications of Note 5 appear to be:

- that aggregated consequential delays are more important than the contractual rights of an individual operator;
- given the incomplete data that will be available, the proposed conditions are too complicated for a train controller required to make a split second decision<sup>25</sup>; and
- more clearly defined measures are likely to be required for operators to be assured about the integrity of the Train Control process and that they will not be singled out on the basis of train controller discretion.

At a more general level, while the Matrix establishes a decision making process for resolving conflicts in the event of Out-Of-Course Running, there is little other detail in the Protocols concerning what happens when train path entitlements are disrupted. An alternative could be to develop principles that will underpin the Matrix. For example, principles underpinning the Protocols might include the following:

- trains that enter the network on time exit the network on time;
- procedures for clearing network blockages and the rights and responsibilities of operators involved; and
- the track manager informs operators when the predicted exit time from the network will be at variance to the scheduled exit time.

The last dot point above is addressed in QR's Interface Plan: [Section 4.4]. This raises the question of whether the detailed information that Third Party Operators will need to be aware of concerning Scheduling and Train Control processes should be incorporated in a single document for ease of reference. Railway managers in other States, such as RAC, ARTC and Westrail, have incorporated all Scheduling and Train Control information in such a document.

### 3.3 Departure or suspension of SATC Protocols

If an Incident occurs, the Scheduling and Train Control Officers will implement the Incident Management practices provided in each railway operator's Access Co-ordination Plan: [Section 4.5]. In addition, the Protocols provide that the Scheduling and Train Control Officers may deviate from a railway operator's Capacity Entitlement in the event of an Incident: [Section 4.5]. In such circumstances, the following procedures will apply:

- the identity of a railway operator will, of itself, play no part in a decision to deviate from a railway operator's contracted Capacity Entitlement in the event of an Incident: [Sub-Section 4.5.1];
- the General Manager of each of QR's Above Rail Business Groups - Coal and Mainline Freight, Metropolitan & Regional Services, Citytrain - may authorise the departure from, or suspension of, the Protocols relating to the resolution of conflicts arising from Out-Of-Course Running for the purpose of restoring normal operations after the occurrence of an Incident. Such an authorisation may be granted on a case-by-case basis after consideration

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<sup>25</sup> The train controller may have to make a judgement about whether the second train is running late due to no fault of that train's operator when the cause for a delay may be rooted in events that occurred hours or days beforehand.

of all relevant facts and, where possible, consultation with affected railway operators: [Sub-Section 4.5.2]; and

- train services should return to normal and the relevant Protocols for resolving conflicts that arise from Out-Of-Course Running should apply as soon as reasonably possible after an Incident: [Sub-Section 4.5.3].

A threshold issue for the efficacy of the operation of the Undertaking is whether it is possible for the Protocols to address the processes that QR's Train Control centres will follow after an Incident has occurred in order to facilitate train movements recommencing in line with the schedule. This would be an alternative to departing from or suspending the Protocols.

Network Access must be informed of every instance where a departure or suspension of the Protocols occurs: [Section 5.2]. This presumably is intended to provide some reassurance to Third Party Operators that QR's Above Rail Business Groups are accountable for any departure or suspension from the Protocols, although there is no provision for the systematic publication of this information.

Nevertheless, the alternative of the Protocols addressing procedures that may occur in the event of an Incident may provide more reassurance to Third Party Operators about the management of the Train Control function, especially given the authority conferred on the managers of QR's Above Rail Business Groups under the Protocols. Moreover, there is no process to handle disputes over departures/suspensions. This matter is discussed further in Section 4 of this paper.

If departures from the Protocols can be justified, it may be beneficial for the document to state exactly how the General Manager of the Above Rail Business Group will identify the person who will authorise the departure, because the senior persons QR has listed are unlikely to personally make such an authorisation.

### 3.4 Request for comments

The Authority seeks comments on whether:

- 3.4.1 **Rail Operators should have the ability to negotiate differing levels of train priority on QR's network. What other levels of priority, if any, should be available for Third Party Operators to negotiate?**
- 3.4.2 **the Matrix provides an adequate process to manage the resolution of conflicts in the event of Out-Of Course running. Are the rules to be used by QR's train controllers sufficiently clear, particularly in light of the conflict of interest faced by these officers? If not, in what ways could they be improved?**
- 3.4.3 **all detailed information regarding scheduling and train control should be incorporated into a single document?**
- 3.4.4 **it is reasonable for the Protocols to be suspended for the purpose of restoring normal operations after the occurrence of an Incident?**
- 3.4.5 **the Protocols should address the process for restoring normal operations after an Incident?**
- 3.4.6 **the Protocols should make it clear who will be the person who will be delegated authority to suspend the Protocols. Who should have this authority?**

#### **4. PERFORMANCE OF TRAIN CONTROL FUNCTION BY QR'S ABOVE RAIL BUSINESS GROUPS**

Once engaged on their journey, trains are under the overall control of train controllers who give authorities for all train movements over defined areas of a rail network in accordance with the Train Schedule. As part of this task, the train controllers monitor and report, in real time, on the location and progress of trains and track maintenance work forces. In this way, the train controller is co-ordinating train activity on different track sections and attempting to ensure that trains are entering and leaving the network on time as scheduled. Finally, the Train Control centres establish and apply, as necessary, emergency track management procedures such as action to be taken in the event of a failure of the train or safe working system or when there are Incidents and derailments.

When trains are running in accordance with scheduled times, the train controller's task is to implement the Daily Train Plan. However, train controllers regularly will be required to use their discretion to change the Daily Train Plan in response to unforeseen events eg unloading delays at a port, loading delays at a mine, a train derailment. In this regard, it is evident that the conflict of interest faced by QR's Above Rail Business Groups in performing the Train Control function poses particular difficulties.

Every time a Third Party Operator runs train services on QR's Network, it is effectively placing control of one of its key strategic assets - its rolling stock - in the hands of a competitor. QR's Train Control centres will make decisions that affect the quality of the service a Third Party Operator can deliver to its customer(s).<sup>26</sup>

In relation to the assessment of this conflict of interest, the Authority is aware the performance of Train Control is difficult to monitor, even if data is available. This is because the Train Control process can involve split second decisions on matters that arise from events hours or even days beforehand. The conflict of interest is exacerbated by the confidentiality concerns arising from the involvement of officers from Above Rail Business Groups in the Scheduling process and hence their access to information concerning Third Party Operators' train paths.

##### **4.1 Monitoring by Network Access**

The inclusion of reporting obligations within the Protocols is intended to ensure that any discrepancy that occurs in the performance of Scheduling and Train Control services is transparent to Network Access: [Part 5]. However, any such discrepancy is not transparent to Third Party Operators nor is there any provision for reporting of discrepancies to the QCA.

The Protocols indicate that these reporting obligations allow for auditing for the purposes of compliance with the Undertaking and the QCA Act. The Protocols do not, however, indicate what action Network Access will take if the reporting shows up discrepancies in the performance of the Train Control function. Nor do they outline a process for auditing under the QCA Act.

The efficacy of an approved Undertaking may be undermined if this reporting and monitoring framework does not provide reasonable reassurance to access seekers so that they may have confidence that Train Control will be undertaken in a competitively neutral manner.

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<sup>26</sup> The QCA has already sought stakeholder views on the appropriateness of officers within QR's Above Rail Business Groups performing the Train Control function. Strong views were expressed both in favour and against the proposed assignment. Nevertheless, a majority of submissions considered that the allocation of responsibility for train control to QR's Above Rail Business Groups was inappropriate. The QCA has yet to make a decision regarding the matter and the manner of allocation of the Train Control function within QR. The Authority's assessment of the potential for the Protocols to effectively fulfil their proposed dual role will be a factor in that decision (refer Section 1.2).

## 4.2 Reporting of key performance indicators

### *Implementation monitoring and reporting*

The Manager Network Operations, Network Access will be responsible for implementing the Protocols on behalf of the General Manager Network Access. This includes the development of the Master Train Plan and the negotiation and administration of agreements with QR's Above Rail Business Groups for the provision of Train Control services to Network Access: [Section 5.1]. QR does not propose the terms of this arrangement be made public.

The Manager Network Operations must be advised of every departure from or suspension of the Protocols relating to the resolution of conflicts in the event of Out-Of-Course-Running within 24 hours of its occurrence. This advice will note the reason for the departure or suspension, whether it was authorised in accordance with Incident Management practice and detail the impact the departure or suspension had on an operator's contracted Capacity Entitlements [Section 5.2]. However, the Protocols do not provide any operator adversely affected by such a decision with a right to access this information. Moreover, there are no mechanisms in the Protocols for action to be taken against the inappropriate departures from or suspension of the Protocols. A weekly report for the General Manager Network Access will also be prepared: [Section 5.3].

The respective General Managers' Operations for QR's Above Rail Business Groups (Coal and Mainline Freight, Metropolitan and Regional Services and Citytrain) will provide the Manager Network Operations with weekly exception reports with respect to the following key performance indicators for each operator:

- percentage of allocated train paths used;
- causes of cancelled train paths;
- number of delays outside of agreed range specified in Capacity Entitlement;
- causes and extent of delays; and
- causes and extent of below rail faults (including track, overhead, signals etc). [Section 5.4]

In an environment where QR's Above Rail Business Groups will be competing with Third Party Operators, there may be certain information eg. causes of train delays and specific details of Incidents, that Third Party Operators will not wish to share with other operators. This would include QR's Above Rail Business Groups. However, the Protocols envisage officers from QR's Above Rail Business Groups preparing weekly reports for Network Access on such indicators. Notwithstanding the proposed development of confidentiality arrangements intended to protect commercial-in-confidence information of Third Party Operators flowing to other parts of QR's Above Rail Business Groups, from a competitive neutrality perspective, a legitimate question is whether Network Access should allow Third Party Operators to access similar information on QR's Above Rail Business Groups.

There may also be other information that is relevant to assess the integrity of the Train Scheduling and Train Control processes. For example, the percentage of trains that are scheduled or controlled to enable them to run in advance of their nominated paths could be as relevant as the percentage that are delayed for the purpose of assessing the even handedness of the Train Control function. This is because a Third Party Operator could derive a considerable competitive advantage in its rolling stock utilisation if its trains run consistently in advance of their nominated paths.

### *QR's Interface Plan*

Section 3.3 of the Interface Plan provides for regular operational meetings between QR and railway operators regarding train movements on the network. There appears to be the potential for some overlap in the matters raised in this section of the Interface Plan and Section 5.4 of the Protocols. However, the link, if any, between the operational meetings and the monitoring and reporting of key performance indicators is not clear from either the Protocols or Interface Plan.

#### **4.3 Train operation and communication practices**

Section 4.3 of the Protocols provides that the officers will implement the 'train operation and communication practices' provided in each railway operator's Access Co-ordination Plan. No detail of the train operation and communication practices is provided.

Part 2 (Train Control Procedures) of the Interface Plan outlines some detail regarding 'train operation and communication practices'. This raises a question discussed earlier in this paper concerning the appropriate level of detail in the Protocols vis-à-vis the Interface Plan and the link between the two documents. For example, examples of relevant 'train operation and communication practices' could be provided in an attachment to the Protocols. Similarly, an example of an Incident Management practice [Section 4.5] could be beneficial.

#### **4.4 Request for comments**

**The Authority seeks comments on whether:**

- 4.4.1 the Protocols adequately address the conflict of interest inherent in QR's Above Rail Business Groups performing the Train Control function, having regard to the scope for train controller discretion provided in the Protocols?**
- 4.4.2 measures are necessary to provide for effective auditing of the processes outlined in the Protocols, irrespective of how the Scheduling and Train Control function is allocated within QR. If so, what form should these measures take?**
- 4.4.3 the arrangements between Network Access and QR Above Rail Business Groups for the delivery of Train Control services should be transparent? If so, how is that to be achieved?**
- 4.4.4 Network Access' role in monitoring departures from or suspension of the Protocols is sufficiently clear, particularly if a Third Party Operator perceives that it has been adversely affected by such a departure or suspension and is not satisfied with the rationale provided by QR?**
- 4.4.5 Third Party Operators should be provided with specific rights where they believe they have been adversely affected by Scheduling and Train Control decisions including:**
- the extent of QR's obligation to provide an explanation and justification for its decision-making;**
  - any other information relating to discrepancies in the delivery of Scheduling and Train Control services that is provided to Network Access; and**

- **the right for Third Party Operators to make a complaint and to have it investigated?**
- 4.4.6** what information relating to discrepancies in the delivery of Scheduling and Train Control services that is provided to Network Access should be available to affected Third Party Operators?
- 4.4.7** in relation to the weekly reporting process by QR's Above Rail Business Groups (Train Control centres):
- what information should be included in these reports?
  - should trains running ahead of time as well as those that are delayed be reported upon?
  - how much of this information would Third Party Operators likely consider being commercial-in-confidence?
  - what information should be reported to Third Party Operators? What information should be reported to the QCA?
  - are the arrangements satisfactory?
- 4.4.8** the Protocols facilitate the inappropriate transmission of information eg. Incidents, to QR's Above Rail Business Groups. Should QR allow Third Party Operators to access similar information on its Above Rail Business Groups?
- 4.4.9** is the link between the operational meetings foreshadowed in the Interface Plan and the monitoring and reporting of key performance indicators foreshadowed in the Protocols sufficiently clear?

## 5. REQUEST FOR COMMENTS

Authority seeks comments on whether:

- the links between the draft Undertaking, the Protocols, including the Access Co-ordination Plan, and the Interface Plan are sufficiently clear to provide stakeholders with a sound understanding of how QR will perform the Scheduling and Train Control function? [Q1.3.1]
- there are any matters currently addressed in the Interface Plan and the Access Co-ordination Plan that should be incorporated into the Protocols? [Q1.3.2]
- it is appropriate that officers from QR's Above Rail Business Groups be involved in the assessment of available capacity for Third Party Operators? [Q2.4.1]
- the guiding principles for the allocation of train paths and sharing of Capacity on QR's network are sufficiently transparent? If not, how may they be improved? [Q2.4.2]
- the Protocols identify with sufficient clarity how the objectives of 'efficient utilisation' and 'optimise the sharing of Capacity' will be achieved. Are there any alternative objectives that could be adopted? [Q2.4.3]
- in the context of the Protocols and as a minimum, the Master Train Plan and the Daily Train Plan should be available to operators and access seekers. Is there any reason why they should not be made publicly available? Are there any aspects of the Plans that should remain confidential? [Q2.4.4]
- the proposed consultation arrangements regarding the development of, and proposed variations to, the Master and Daily Train Plans are sufficiently transparent? [Q2.4.5]
- the Protocols establish adequate measures to address the potential conflict of interest faced by officers in QR's Above Rail Business Groups developing and accommodating changes to the Daily Train Plans? [Q2.4.6]
- Rail Operators should have the ability to negotiate differing levels of train priority on QR's network? What other levels of priority, if any, should be available for Third Party Operators to negotiate? [Q3.4.1]
- the Matrix provides an adequate process to manage the resolution of conflicts in the event of Out-Of Course running. Are the rules to be used by QR's train controllers sufficiently clear, particularly in light of the conflict of interest faced by these officers? If not, in what ways could they be improved? [Q3.4.2]
- all detailed information regarding scheduling and train control should be incorporated into a single document? [Q3.4.3]
- it is reasonable for the Protocols to be suspended for the purpose of restoring normal operations after the occurrence of an Incident? [Q3.4.4]
- the Protocols should address the process for restoring normal operations after an Incident? [Q3.4.5]
- the Protocols should make it clear who will be the person who will be delegated authority to suspend the Protocols? Who should have this authority? [Q3.4.6]



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- **the Protocols adequately address the conflict of interest inherent in QR's Above Rail Business Groups performing the Train Control function, having regard to the scope for train controller discretion provided in the Protocols? [Q4.4.1]**
  - **measures are necessary to provide for effective auditing of the processes outlined in the Protocols, irrespective of how the Scheduling and Train Control function is allocated within QR. If so, what form should these measures take? [Q4.4.2]**
  - **the arrangements between Network Access and QR Above Rail Business Groups for the delivery of Train Control services should be transparent? If so, how is that to be achieved? [Q4.4.3]**
  - **Network Access' role in monitoring departures from or suspension of the Protocols is sufficiently clear, particularly if a Third Party Operator perceives that it has been adversely affected by such a departure or suspension and is not satisfied with the rationale provided by QR [Q4.4.4]**
  - **Third Party Operators should be provided with specific rights where they believe they have been adversely affected by Scheduling and Train Control decisions including:**
    - **the extent of QR's obligation to provide an explanation and justification for its decision-making;**
    - **any other information relating to discrepancies in the delivery of Scheduling and Train Control services that is provided to Network Access; and**
    - **the right for Third Party Operators to make a complaint and to have it investigated? [Q4.4.5]**
  - **what information relating to discrepancies in the delivery of Scheduling and Train Control services that is provided to Network Access should be available to affected Third Party Operators? [Q4.4.6]**
  - **In relation to the weekly reporting process by QR's Above Rail Business Groups (Train Control centres):**
    - **what information should be included in these reports?**
    - **should trains running ahead of time as well as those that are delayed be reported upon?**
    - **how much of this information would Third Party Operators likely consider being commercial-in-confidence?**
    - **what information should be reported to Third Party Operators? What information should be reported to the QCA?**
    - **are the arrangements satisfactory? [Q4.4.7]**
  - **the Protocols facilitate the inappropriate transmission of information (eg. Incidents) to QR's Above Rail Business Groups. Should QR allow Third Party Operators to access similar information on its Above Rail Business Groups? [Q4.4.8]**
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- **is the link between the operational meetings foreshadowed in the Interface Plan and the monitoring and reporting of key performance indicators foreshadowed in the Protocols sufficiently clear? [Q4.4.9]**

**In seeking comment on these issues, the Authority is keen not to inhibit any other comments interested parties wish to make.**

**PART B**

**QR'S PROPOSED ALLOCATION OF RESPONSIBILITY FOR  
MARSHALLING YARDS**

## 1. QR'S PROPOSAL FOR ACCESS TO MARSHALLING YARDS

The purpose of this section is to outline QR's proposed approach to the assignment of marshalling yards in the context of the declaration of the rail transportation services provided by QR's rail infrastructure. Specifically, the following issues will be outlined:

- the declaration of rail services for third party access purposes,
- the importance of access to marshalling yards for Third Party Operators;
- the assignment of yards initially proposed in QR's draft Undertaking;
- QR's current proposal and how it is different to that originally proposed in the draft Undertaking.

### 1.1 Government's declaration of QR's rail infrastructure

In 1997, the Queensland Government declared the rail transportation services provided by QR's rail transport infrastructure for the purposes of the third party access provisions of the QCA Act. The term "rail transport infrastructure" means "facilities necessary for operating a railway". The term is specifically defined to include "marshalling yards".<sup>27</sup>

Excluded from the declaration were the services provided by "other rail infrastructure" which includes, amongst other things, freight centres and depots, maintenance facilities, workshops and track that forms part of those facilities. Accordingly, the services provided by these facilities are not currently declared under the QCA Act.<sup>28</sup>

### 1.2 Importance of 'marshalling yards'?

The term 'marshalling yard' is not defined in the *Transport Infrastructure Act 1994* – refer Attachment 5. Basically, the marshalling of trains involves the breaking up and assembling of train consists (ie locomotives and rail wagons) for a variety of purposes that support mainline transit, including loading, unloading and maintenance. The smooth operation of these services has a large influence on the efficiency and effectiveness of the origin to destination portion of the service.

### 1.3 QR's draft undertaking

QR originally proposed in its draft Undertaking that its Above Rail Business Groups would manage marshalling yards. Clause 4.1.1(a) provided for the 'agency negotiation' framework whereby Network Access would negotiate access to the below rail services of these facilities as an agent for the QR Above Rail Business Group that manages the facility.

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<sup>27</sup> Declarations under Part 5 of the QCA Act relate to the services provided by means of a facility ie the use of rail transportation infrastructure, including marshalling yards, for providing transportation by rail. There is an important distinction between services and facilities under the declaration and the QCA Act. A facility (such as a length of track) could provide many services within a period of time. A facility could provide one service to one operator that falls within the category defined in the declaration, eg. rail transportation provided by a length of track to gain access to a private siding, and another service to a QR Above Rail Business Group that falls outside the declaration (eg. facilitating the unloading of a train).

<sup>28</sup> However, this does not prevent parties making an application under sections 84-87 of the QCA Act to declare the services provided by any of these facilities (eg bulk freight terminals) for third party access purposes.

In other cases, Third Party Operators would negotiate access to the services provided by these facilities with the QR Above Rail Business Group that had been assigned management responsibility for the facility (clause 4.1.1(b)). This was based on the premise that these facilities predominantly provide services that have not been declared under the QCA Act.

#### 1.4 QR's current proposal

In its supplementary submission to the QCA's *Request for Comments - Queensland Rail Draft Undertaking* paper<sup>29</sup>, QR foreshadowed a significant change to the treatment of marshalling yards. This amended approach was clarified in its submission to the QCA on the Definition of Common User Yards.<sup>30</sup> Essentially, QR's revised approach involves an assessment of each of its marshalling yards with a view to identifying the areas within each yard that provide declared services and those that do not.

QR notes that there are areas within 'yards', which may involve one or two 'roads', that may be required by a number of operators in order to effectively utilise the mainline corridor or in circumstances where a number of above rail facilities exist in the same vicinity. QR proposes that these yards be called 'common user yards' and be assigned to Network Access. Network Access will directly negotiate with Third Party Operators for access to 'common user yards' in accordance with QR's draft Undertaking. These yards are identified in red on the line diagrams contained in Attachment 6.

In contrast, QR argues that a single (QR) Above Rail Business Group often exclusively uses particular areas within 'yards' for the performance of above rail functions, such as train storage, provisioning, maintenance or activities at freight terminals (other than those assigned to Network Access). This use is generally dictated by that operator's ownership of facilities - such as terminals or maintenance facilities - adjacent to those 'yard' areas and the 'yard' areas are currently solely used in conjunction with those facilities. QR argues that there is no legitimate need for these 'yards' to be made available for access by other operators and therefore should be reserved for the exclusive use of that QR rail operator, ie not be available for third party access.<sup>31</sup> QR proposes that these yards, marked in blue on the line diagrams, be assigned to Above Rail Business Groups and that the Undertaking not apply to them.<sup>32</sup>

QR advises that it is conducting a review of its entire rail infrastructure network, including marshalling yards. The review is being conducted in two stages – rail infrastructure including and north of Gladstone, which is now complete, and rail infrastructure south of Gladstone. QR expects the review covering infrastructure south of Gladstone to be completed by mid 2000. QR's proposed assignment of management responsibility for its rail infrastructure is summarised in Table 1 below.

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<sup>29</sup> Available on the QCA website at [www.qca.org.au](http://www.qca.org.au)

<sup>30</sup> QR has also advised that it is seeking an amendment to the declaration from the Queensland Government to confine it to the services provided by "common user yards" instead of "marshalling yards" as is currently the case. The Queensland Government has advised that it has given QR no commitment to amend the declaration but is currently considering the proposal. In the present circumstances, the QCA is continuing with its assessment of QR's draft Undertaking on the basis of the current declaration (Attachment 3).

<sup>31</sup> Third Party Operators may seek access to such infrastructure via a commercial arrangement with the QR Above Rail Business Group that manages that facility. For example, a Third Party Operator may enter a commercial service agreement for QR to maintain its rolling stock in a QR maintenance facility, or to load and unload its trains at a QR freight terminal.

<sup>32</sup> It is clear that declared services need not be subject to an undertaking (although the QCA is empowered under the QCA Act to request an undertaking from an access provider in relation to the provision of declared services). If access to declared services not covered by an undertaking is sought, the arbitration machinery contained in the QCA Act would be available (unless the Queensland Government amends the declaration in accordance with QR's proposal). This means that third party access to the declared services provided by these facilities is still available irrespective of QR's assignment of control to its Above Rail Business Groups.

**Table 1: Proposed Assignment of Management Responsibility**

<b>Infrastructure/Facility Type</b>	<b>Management Responsibility</b>
Mainlines and passing loops	Network Access
Container terminals and associated storage yards	Relevant QR Above Rail Business Group/private owner (if private)
Major coal loading/unloading terminals	Network Access/private owner (if private)
Major mineral loading/unloading terminals	Network Access/private owner (if private)
All other loading/unloading terminals	Relevant QR Above Rail Business Group/private owner (if private)
Private sidings	Private owner
Queuing facilities associated with a loading/unloading terminal/facility	Manager of the loading/unloading terminal/facility (for coal and minerals this will be Network Access)
Sections of yards used for access to private sidings (including any associated requirements for marshalling trains)	Network Access
Rolling stock maintenance depots and associated storage yards	Relevant QR Above Rail Business Group
Infrastructure maintenance depots	QR Infrastructure Services Group
Workshops and associated storage yards	QR Workshops
Storage facilities/yards other than those associated with workshops, depots or terminals	Relevant QR Above Rail Business Group

Matters relevant to an assessment of the appropriateness of QR's assignment of marshalling yards will be raised in light of a discussion of the various functions provided by rail infrastructure in the context of rail operations.

## 2. TRAIN FUNCTIONS

Rail transportation involves many complementary functions that go beyond the simple transit of passengers and commodities from origin to destination. Marshalling yards contribute to these operations because the smooth operation of the ancillary services undertaken in marshalling yards significantly influences the efficiency and effectiveness of the mainline running involving the origin to destination portion of the service. The purpose of this section is to highlight the major activities comprised in a rail operation in order to highlight these interactions and assist interested parties respond to the issues raised later in this paper.

The functions typically comprised in a rail operation include:

1. Node to node mainline running, where the node may be a station, junction, passing loop, balloon loop, or other interface location where other operators' trains may run. Mainline running also includes trains passing on single track (ie. passing loops).
2. Train loading and unloading.
3. Train queuing or staging:
  - for loading or unloading;
  - for transit; and
  - for maintenance and provisioning and crewing activities.
4. Train marshalling/shunting:
  - in preparation for transit;
  - in preparation before or after train loading or unloading; and
  - in preparation before or after maintenance and provisioning.
5. Train repair and provisioning.
6. Train storage:
  - in a breakdown situation;
  - for short periods where product flow has been disrupted;
  - for short periods where the timetable does not allow use; and
  - for longer periods where the rolling stock is not required for operations or is redundant.

Each of these activities occurs in single user or multi-user situations. Whilst mainline running and passing loops do not involve marshalling yard activities, the appropriate assignment of management responsibility for the remaining functions outlined in (2) to (6) is less clear. These functions are often undertaken with particular infrastructure within or around marshalling yards, although in some instances they may be undertaken in outside yards (for example, train loading/unloading may also occur in ports and multi-modal terminals).

## 2.1 Mainlines and passing loops

Mainline running refers to the transit from origin to destination of a consist. Typically, rail operators are provided with a discrete slot for occupancy of a section of a mainline. Passing loops are integral to mainline running as they provide a means for consists to pass one another on a single track (eg passing loops allow trains to cross if they are travelling in opposite directions).<sup>33</sup>

## 2.2 Train loading/unloading

QR has defined a terminal as any facility which is used for the loading of goods onto and unloading of goods from a train.<sup>34</sup> Loading and unloading facilities may also include track. In addition, any section of 'yard' QR considers to be solely associated with a terminal is treated by QR as forming part of that terminal.

## 2.3 Train queuing and staging

Queuing occurs where one train waits to be processed through an unloading or loading point behind another train.

The fleeting of trains, where many trains heading in the same direction follow closely behind each other, ensures that mainlines have high surge capacities. Queuing is an inevitable consequence of this mainline surge capacity and is an integral part of any railway logistical system.

Staging refers to very short term storage, where the train is required to wait for its train path on the mainline or at a terminal. Staging is built into timetables. During this time the train may be inspected and other non-invasive forms of maintenance and provisioning (discussed in Section 2.5) may be carried out.

Queuing and staging are integral to rail transportation and infrastructure is necessary for trains to operate smoothly into and out of terminals. Queuing infrastructure is often located adjacent to a yard complex where train maintenance and preparation of trains for maintenance is undertaken. The queuing tracks and the marshalling tracks (see below) may not be able to be distinguished as separate entities, as they may be a group of tracks used interchangeably.

## 2.4 Marshalling and shunting

Marshalling and shunting is a train function that involves adding, culling or re-positioning wagons to make up a train consist suitable for later operation. This activity may be carried out to prepare the train for departure, unloading, maintenance on specific wagons, or preparation for or after storage.

These tasks are effected by moving individual wagons or groups of wagons, called shunting, from track to track in a yard situation, to result in their placement in the correct position in the train or in the terminal. The preparation of the train for departure or arrival to and from terminal situations is called marshalling.

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<sup>33</sup> However, passing loops have very different occupancy characteristics to mainline running, since they are frequently occupied.

<sup>34</sup> Terminals (referred to as freight centres and depots in the TI Act) are not included in the definition of rail transport infrastructure and therefore the services provided by these facilities are not currently declared under Part 5 of the QCA Act. As the services provided by the terminal facility are not declared, it is beyond the scope of the QCA's powers to require access be provided to these services. It is possible that the services provided by selected facilities could be declared in future under the Ministerial or regulation based declaration processes outlined in Part 5 of the QCA Act.



All trains require marshalling at some time in their life cycle for the purposes of locomotive maintenance or wagon maintenance.<sup>35</sup> Marshalling of some form is an inevitable consequence of train running; it cannot be avoided. Some marshalling will be needed as a result of the restrictions placed on the train by other infrastructure, such as short terminal sidings or customer requirements in terms of priority of loading

## 2.5 Train repair and provisioning

Train repair involves planned and unplanned maintenance. Provisioning involves the replenishment of consumables such as fuel, water and sand. Some train repairs and provisioning can be done on a 'non-invasive' basis whilst the train remains intact and without moving it to a depot and infrastructure is often provided for this purpose. Another method of provisioning involves the detachment of the locomotives while the wagons are otherwise engaged, such as during unloading.

Planned maintenance comprises activities in which known schedules of work are carried out and therefore where it is known what time the equipment will not be available for use. Planned maintenance is almost entirely preventative in nature and occurs on a regular basis. It is comprised of two main components.

The first component of preventative maintenance involves a 'running' inspection while the train is intact and is usually carried out in conjunction with provisioning or during scheduled staging. The inspection activity permits minor maintenance. Where more severe defects are found, that particular piece of equipment is detached from the train consist. This simple form of preventative maintenance or inspection could be performed on common use track during queuing or staging as opposed to within a maintenance depot/facility.

The second component of preventative maintenance involves the inspection and repair while the equipment is not in a train consist. This activity is usually carried out in a maintenance facility where lifting equipment and other specialised equipment is available. This scheduled activity occurs on a time or distance basis and involves the partial disassembly of the locomotive or wagon.

Unplanned maintenance usually occurs after breakdowns, although unplanned maintenance can also occur where an inspection is carried out and the equipment is found to be defective and likely to cause a breakdown in the short term.

Breakdowns typically occur during transit. Accordingly, facilities and track infrastructure are necessary to handle breakdowns that occur on the mainline route. In the case of a locomotive, a breakdown during transit invariably results in the locomotive being assisted into a repair facility. The other locomotives on the train may be able to achieve this result. If they cannot, other locomotives may be required to assist and these are obtained from other trains or the nearest depot.

Where a wagon is found to be defective during transit, the wagon is typically unable to continue with the journey and must be placed into a convenient siding so that mobile tradesmen can attend to it for subsequent transit to a repair facility. In some cases, locomotives must receive similar attendance, although the faults developed on locomotives are mostly concerned with the engine components and not the sub-structure or axle equipment. Breakdown sidings, usually adjacent to passing loops, provide a necessary and convenient facility for all mainline users.

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<sup>35</sup> The services provided by QR's maintenance facilities provide a functionally discrete service to the marshalling of wagons in preparation for maintenance. This marshalling is performed in marshalling yards, which may be remote to the maintenance facility itself. Maintenance facilities are not covered by the declaration but the rail transportation services provided by marshalling yards have been declared.

## 2.6 Train storage

Train storage is required on both a short term and a long term basis.

Short term train storage may be necessary for the reasons outlined above, such as:

- in a breakdown situation; and
- for queuing and staging activities.

In addition, short term train storage may also be required to accommodate train consists for other reasons, including a breakdown of a shiploader or to exit the mainline during cyclones.

In contrast, longer term train storage may be necessary to accommodate trains consists that are surplus to day-to-day requirements. For example, an operator may maintain a fleet of consists, some of which are only periodically required in order to meet a reasonable maximum requirement given specific commodity and market needs. Often these trains will be stabled in a non-operative siding. There may also be a need for an operator to store redundant consists for long periods.

## 2.7 Scope of the declaration

The Authority believes that the declaration of the services provided by QR's rail transport infrastructure extends to the use of that infrastructure for the following rail transport functions:

- mainline running, including the use of passing loops;
- train queuing and staging for the following activities, so long as they are undertaken as part of the normal operational cycle:
  - loading and unloading;
  - transit;
  - maintenance, provisioning and crewing activities (ie maintenance and provisioning that is undertaken whilst the train is waiting);
- train marshalling and shunting:
  - in preparation for transit;
  - in preparation before or after train loading or unloading; and
  - in preparation before or after maintenance and provisioning.
- short term train storage:<sup>36</sup>
  - in a breakdown situation;
  - for short periods where product flow has been disrupted; and
  - for short periods where the timetable does not allow use.

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<sup>36</sup> However, the use of marshalling yards for long term storage of train consists is unlikely to be a declared service.

As indicated in section 1.1, the services provided by facilities that fall within the definition of “other rail infrastructure”, such as loading and unloading terminals, maintenance facilities and workshops have not been declared. Nevertheless, the use of marshalling yards located near these facilities is subject to the declaration. Accordingly, the use of a maintenance facility is not subject to the declaration. However, the use of a marshalling yard that is adjacent to a maintenance facility to break up a train to facilitate the transportation of that part of the train for repair falls within the range of services that have been declared under the QCA Act.

### 3. ASSESSMENT OF THE COMMON USER APPROACH

#### 3.1 Introduction

QR has proposed that a high level “common user” principle or threshold test be used to identify those areas of yards that should be assigned to Network Access or to QR’s Above Rail Business Groups.

In the description of its proposed approach, QR does not explicitly link the concept of a common user principle to the scope of the declaration under the QCA Act. For example, QR argues that areas within yards where the only functions currently being performed are above rail functions (eg train storage) should be reserved for the exclusive use of that QR Above Rail Business Group.

However, marshalling yards potentially provide both declared and non-declared services. Consequently, a difficulty arises concerning conflicts between the assignment of responsibility to QR’s Above Rail Business Groups and Network Access. For example, whilst areas within marshalling yards may exclusively provide non-declared services to QR’s Above Rail Business Groups at present, access to those areas may *potentially* be sought by a number of operators in the future for the provision of declared services.

It is therefore important to consider the assignment of marshalling yards in the context of the facilities that might provide declared services in the future, given the emergence of Third Party Operators on the Queensland system.

QR’s approach would result in Third Party Operators being forced to negotiate with their competitors for access to yards assigned to its Above Rail Business Groups. Moreover, access to the declared services provided by yards assigned to these Above Rail Business Groups could be removed from the operation of the Undertaking.

These arrangements could therefore cause concern to potential Third Party Operators, especially since the history of arrangements in other Australian jurisdictions has been that common use facilities have expanded as new operators enter the market.

There are three interrelated issues that must be considered in the context of a common user test:

- how the term “common user” should be defined for the purpose of assigning responsibility for marshalling yards;
- whether the onus to demonstrate that a particular marshalling yard is covered by the Undertaking should be on QR or those seeking access;
- to what extent should the assignment of marshalling yards be able to be revisited, and if so, through what mechanism.

The interrelationship between these issues can be seen in the trade-off between the approach that is initially adopted and the flexibility for future assignments. For example, if a sufficiently flexible approach to the reassignment of marshalling yards is adopted, there may be a stronger case for a less conservative approach to be taken to the initial assignment of marshalling yards.

A further matter warranting consideration is the approach that should be taken to those marshalling yards that QR is yet to assign to Above Rail Business Groups or Network Access.

### 3.2 Common user threshold test

The first concern that arises is the appropriate specification of the common user principle. Implicit in QR's approach is that marshalling yards will provide services that are either declared or not declared, based in part upon its assessment of whether a marshalling yard is located near a facility that does not provide declared services. However, in practice, it is likely that at least some of the services provided by marshalling yards will fall within the scope of the declaration even though QR's Above Rail Business Groups may be the only user of those services, at least initially.

For example, the services provided by a marshalling yard in facilitating the preparation of a train for maintenance (whether it is undertaken at an adjacent QR facility or another facility) fall within the declaration, even though the services provided by the maintenance facility itself are not declared. If a marshalling yard falls into this category, and its current use is solely in conjunction with that facility, QR considers that marshalling yard should be assigned to QR's Above Rail Business Groups so that access to it will not be subject to the Undertaking.

However, it would be rare that a maintenance facility could accommodate the marshalling of a 120 wagon coal train. Maintenance facilities are typically arranged for limited movements on short tracks for a small percentage of the wagons comprised in a fleet at any one time. The breaking up of a train occurs at the marshalling yard so those wagons with faults can be taken to the maintenance facility. This marshalling is normally undertaken in a yard that is specifically designed to handle large trains.

QR's approach might not therefore pay sufficient regard to whether or not the uses of a marshalling yard might change over time with the emergence of Third Party Operators. In general, QR's marshalling yards will at least potentially provide services that have been declared under the QCA Act (refer to section 2.7 above), even if they also provide services that have not been declared. The question therefore arises as to whether it is appropriate that such yards be assigned to Network Access unless there is some reason why such an allocation is inappropriate.

#### *Identify circumstances where assignment to QR's Above Rail Business Groups is appropriate*

There may be circumstances where, despite meeting the common user criteria, it is appropriate that marshalling yards are assigned to QR's Above Rail Business Groups and not be subject to the Undertaking. However, assignment of a marshalling yard to Network Access does not preclude QR's Above Rail Business Groups gaining access to the services provided to the yard like any other Third Party Operator. Possible reasons for an assignment of marshalling yards to QR's Above Rail Business Groups might include where:

- there is clearly demonstrated surplus marshalling yard capacity;
- there are operational reasons that justify QR (or, potentially, a Third Party Operator) being able to secure exclusive access to its yard; and
- it can be demonstrated that it is commercially feasible to duplicate the marshalling yard infrastructure.

#### Surplus marshalling yard capacity

To assess whether surplus marshalling yard capacity exists, it would be necessary to analyse expected future throughput requirements for the period of the undertaking<sup>37</sup>, including

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<sup>37</sup> QR has indicated that it expects the undertaking to apply for a 3 year period.

allowances for the variability of traffic flows (eg for queuing and staging and allowing for surging etc). If, after undertaking such an analysis, it is concluded that there is marshalling yard capacity that is surplus to requirements, there may be a reason to assign responsibility for surplus yards to QR Above Rail Business Groups for the period of the Undertaking.

Such an approach would help to ensure that lack of available capacity in certain yard facilities would not be a barrier to competition or cause a potential Third Party Operator to be unduly disadvantaged. However, in undertaking this assessment, regard would need to be had to the fact that each Third Party Operator is likely to have different operational configurations, which in turn will affect the capacity required for marshalling yards. Accordingly, there is a risk that the application of such a process may result in an assignment of marshalling yards that limits access to declared services by Third Party Operators.

### Operational constraints

There may be operational reasons why it is appropriate to assign certain areas within marshalling yards to QR's Above Rail Business Groups. This was acknowledged in one stakeholder's response to the *Request for Comments - Queensland Rail Draft Undertaking* paper.<sup>38</sup> Operational constraints relating to the assignment of marshalling yards may be more cogent whilst QR is the only operator on a corridor and there is no likelihood of a Third Party Operator using the corridor during the term of the Undertaking.

### Economic to duplicate

There may be a case to assign marshalling yards to QR's Above Rail Business Groups where it can be demonstrated that the particular facilities providing declared services could feasibly be duplicated by a Third Party Operator. However, it may also be relevant that the very declaration of the services provided by QR's rail transport infrastructure suggests such facilities are unlikely to be feasibly duplicated, notwithstanding there may be exceptions in particular cases.

## **3.3 Onus of proof**

A further consideration if the common user threshold test is adopted concerns who should bear the onus of justifying marshalling yards being excluded from (or included in) the Undertaking. The declaration of the services indicates an intention on the part of Government that the services provided by marshalling yards should be available for third party access and be subject to the Undertaking,<sup>39</sup> for example, even those marshalling yards that are assigned to QR's Above Rail Business Groups would be subject to third party access.<sup>40</sup>

Accordingly, one option involves imposing the onus on Network Access, as network manager, to establish why particular marshalling yards should be reserved for the exclusive use of QR's Above Rail Business Groups.

## **3.4 Flexibility to revisit assignments**

It is very difficult to assign marshalling yards before the event as QR proposes, without at least potentially inhibiting the future operations of Third Party Operators. This is because properly assigning marshalling yards requires knowledge of the particular operations of many possible

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<sup>38</sup> National Rail.

<sup>39</sup> This position was made clear in the Queensland Government's submission in response to the *Request for Comments - Queensland Rail Draft Undertaking* paper.

<sup>40</sup> Third party access may not be available to declared services if it was decided that in the context of a specific arbitration proceeding, access to a particular service was not appropriate having regard to the matters that must be considered in an arbitration - see section 120 of the QCA Act.

Third Party Operators in relation to traffic tasks that are not yet known. The very essence of the competitive process that emerges with third party access is the emergence of innovative solutions by Third Party Operators and incumbents.

For example, it is clear that, as more Third Party Operators have entered the above rail market in NSW, sections of track previously thought to relate exclusively to a particular operator have in fact become integral to the operations of other above rail operators.<sup>41</sup> Operating patterns have changed and track has been abandoned or bypassed necessitating the reassignment and refinement of commercial lease arrangements. Anomalies have also surfaced. These have been progressively dealt with on a consensual basis, with Rail Access Corporation facilitating solutions.<sup>42</sup>

Accordingly, if the common use approach is adopted, it may be desirable that the Undertaking address the possibility that marshalling yards currently identified as providing services exclusively for QR's Above Rail Business Groups could subsequently provide declared services to Third Party Operators.

Allowing for any review of the assignment of marshalling yards potentially undermines the benefit of certainty the undertaking machinery was intended to provide under the QCA Act. The desirability of a review mechanism would also be reduced by the relatively short three year term for the Undertaking proposed by QR (at the end of which the possibility of reassignment would arise). However, the detriment of a loss of certainty should be balanced by the benefit of adopting a more flexible approach that can accommodate changes as they occur and avoid the need to adopt a very conservative approach to the assignment of marshalling yards to Network Access under the undertaking.

If a review mechanism is to be adopted, it is important that it facilitate the expeditious reassignment of marshalling yards, preferably as part of the negotiations for third party access. Such an outcome is desirable to avoid the Third Party Operator being forced to negotiate access to a marshalling yard with a competitor.

The QCA understands that there are perhaps two options that may be available:

- a mechanism be incorporated into the Undertaking that enables the assignment of marshalling yards to be reviewed in an expeditious manner - although in practice, any such process is likely to take at least 2 months on account of the need to instigate the process and allow parties to provide input into it; or
- to accept an Undertaking *only* in respect of the services provided by the selected marshalling yards (at least initially) that are assigned to Network Access. This would leave any facilities that are assigned to QR's Above Rail Business Groups explicitly outside the Undertaking.

The QCA Act allows the QCA to request an undertaking in respect of a declared service.<sup>43</sup> Accordingly, this approach enables the Authority to request an undertaking in the future from QR in respect of the declared services provided by those marshalling yards left outside of the original undertaking, for example, in the context of a specific proposal. The major disadvantage of this approach is that the process of requesting and settling an undertaking is unlikely to be completed within 6 months and could take longer than 12 months. Accordingly, the second

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<sup>41</sup> Refer to FreightCorp's submission in response to the *Request for Comments - Queensland Rail Draft Undertaking* paper.

<sup>42</sup> In early 1990, the legislation that enabled the creation of the Rail Access Corporation (RAC), FreightCorp, State Rail Authority (SRA), and Rail Services Australia (RSA), encompassed a 'vesting order' where infrastructure was vested in the authorities. In practice, this vesting occurred through a consensual assignment of infrastructure, eventually represented on a diagram of the NSW system.

<sup>43</sup> These powers are provided in sections 133-135 of the QCA Act.

option is unlikely to provide interested parties with an acceptable resolution of the issue in the context of a commercial negotiation.

If it is appropriate that the Undertaking provide a mechanism for the review of the assignment of marshalling yards, a process will also need to be established that provides:

- an objective test that can be applied for the assessment of whether the yard ought to be reassigned within QR; and
- stakeholder, including QR, input into the process.

### **3.5 Assigning responsibility for yards not yet addressed by QR**

QR has currently provided diagrams indicating the assignment of management responsibility for rail infrastructure including and north of Gladstone only. The question remains as to how the QCA should treat the assignments located south of Gladstone which QR has indicated it expects will not be completed until at least mid 2000.

There may be a concern if the QCA approves the Undertaking on the basis that QR will assign the remainder of the rail infrastructure on the same principles as it has applied to infrastructure north of Gladstone, when neither the QCA nor stakeholders have seen the proposed remaining assignments. It would appear prudent to ensure that assignments south of Gladstone should be subject to a further public consultation process.

One option, in addition to those outlined above, is that these yards could be assigned to Network Access pending QR's submission of a draft amending Undertaking incorporating its proposed assignments south of Gladstone once its internal review has been finalised. This approach would provide Third Party Operators with confidence in the meantime that they will be negotiating access to marshalling yards with Network Access, at least until the issue is reassessed with the benefit of a public consultation process associated with an amending undertaking.

### **3.6 Request for comments**

**The Authority seeks comments on whether:**

- 3.6.1 the common user approach is more desirable than the blanket allocation of all marshalling yards to Network Access?**
- 3.6.2 if a common user threshold test is appropriate:**
- **is it appropriate that the concept of common user relate to the capacity of the facility to provide declared services? If not, what is the appropriate test?**
  - **how should it apply to facilities that provide declared and non-declared services?**
  - **are there circumstances that justify assignment of declared services to QR's Above Rail Business Groups and, if so, what are those circumstances?**
  - **who should bear the burden of justifying the assignment of marshalling yards to Network Access (or to QR's Above Rail Business Groups)?**
- 3.6.3 given its proposed 3 year term, a mechanism to review the assignment of marshalling yards should be included in the Undertaking and, if so:**



- **what form this review should take (eg. a review mechanism established as part of the undertaking or having the QCA request a further undertaking from QR in respect of a particular marshalling yard)?**
- **if a review mechanism is adopted, what objective test should be applied by the QCA and how should the process be defined?**

**3.6.4 rail transport infrastructure south of Gladstone should be assigned to Network Access pending QR's submission of its proposed assignment of marshalling yards (not expected before mid 2000). How should the review of this assignment be progressed?**

## 4. QR'S APPLICATION OF THE COMMON USER APPROACH

It is conceivable that QR's view of 'common user' may differ from a Third Party Operator's or the QCA's views. In particular, QR's approach might presuppose that a Third Party Operator's operational arrangements will mirror QR's. Moreover, it is possible that QR's proposal reflects the fact that its operations currently dominate the use of the rail infrastructure and hence it is proposing to vest a greater proportion of its track in its Above Rail Business Groups than is appropriate. This is borne out by experience elsewhere that indicates growth in Third Party Operator traffic will be associated with an expansion of common use facilities.<sup>44</sup>

Accordingly, over time, QR's facilities which only potentially provide declared services at the moment, could do so in the future in a way that is critical to the success of a Third Party Operator. It is in this context that this section considers QR's application of the common user approach by raising some examples of possible anomalies in the assignment of marshalling yards.

### 4.1 Mainline and passing loops

In terms of the train functions outlined earlier, mainline running and trains passing at passing loops are clearly below rail functions that do not take place in marshalling yards. QR has assigned management responsibility for all of the main running lines and associated passing loops to Network Access. This allocation of management responsibility reflects the 'natural monopoly' nature of this infrastructure, which makes it uneconomic to duplicate.<sup>45</sup>

### 4.2 Train loading and unloading

QR proposes that Network Access, or a private owner if applicable, will have management responsibility for major coal and mineral loading and unloading facilities. QR intends that access to these facilities will be subject to the Undertaking.

QR's other loading and unloading terminals, including container terminals and associated storage yards, will remain the responsibility of QR's relevant Above Rail Business Group and will not be subject to the Undertaking. Any section of 'yard' QR considers to be solely associated with these terminals is treated by QR as forming part of the terminals and is managed by the Business Group responsible for the terminal. However, it is possible that these yards may be of a common use status (ie. could provide declared services to Third Party Operators).

For example, QR's common user principles indicate track that provides access to a Third Party Operator's private terminal/facility is to be regarded as a 'common use' facility. However, the track providing access to the private siding Duaringa (shown on the Blackwater System Line Diagram: Sheet 3) is to be managed by a QR Above Rail Business Group.<sup>46</sup> Another example is at Stuart yard (shown on the North Coast Line and Mount Isa Line Diagram: Sheet 9), where private sidings owned by Austrac and NAX are connected by track that is allocated to QR Above Rail Business Groups.

Moreover, marshalling yards located near terminals that are currently assigned to Above Rail Business Groups could be used for the provision of declared services currently or in the future. For example, the yards at the Bahle Saleyard (shown on the Townsville Port and North Coast Line Diagram: Sheet 11) are an example of managerial and access negotiation responsibility for

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<sup>44</sup> Refer to FreightCorp's submission in response to the *Request for Comments - Queensland Rail Draft Undertaking* paper.

<sup>45</sup> QR has advised that the facilities at Thalanga and Wellington are loading facilities and are not used as passing loops on the Mt Isa line (refer Mt Isa line diagram: Sheet 9).

<sup>46</sup> The diagram also shows this to have occurred at Dingo. However, QR has advised that the line diagram is incorrect as access to the private siding is available in this case through the turnout.

yards located near a loading/unloading facility being allocated to QR Above Rail Business Groups'.<sup>47</sup> This highlights the importance of clarifying where a marshalling yard ends and a terminal begins.<sup>48</sup>

### 4.3 Queuing and staging

It is not readily identifiable from QR's proposed assignment of management responsibility (refer Table 1 of this paper) where rail transport infrastructure used for queuing or staging is to be allocated other than for coal and minerals (refer to discussion below).

If extended queuing is integral to the provision of rail transportation services, then the allocation of sufficient yard capacity to Network Access for queuing and staging purposes is critical to the ability of Third Party Operators to operate effectively without unnecessary capacity constraints, especially in the coal network.

For example, according to QR's proposal, the Jilalan yard (shown on the North Coast Line and Goonyella Systems Line Diagram: Sheet 7) has almost been entirely allocated to QR Above Rail Business Groups, except for a passing loop. No other facility for extended queuing or short term storage has been made available.

At Pring (shown on the North Coast Line and Newlands System Line Diagram: Sheet 8), two 'holding roads' have been assigned to QR's Above Rail Business Groups and thereby excluded from the Undertaking. This is despite the fact that the Newlands system contains little if any other capacity to queue or stage trains at times when the unloading facility is inoperable or congested, which could therefore severely limit operations for any third party.

Other examples from QR's line diagrams where there may be insufficient queuing, staging and marshalling capacity allocated to Network Access include the Mount Isa (shown on the North Coast Line and Mount Isa Line Diagram: Sheet 10) and Partington yards (North Coast Line and Mount Isa Line Diagram: Sheet 9). While the Mount Isa balloon loop has been allocated to Network Access, there are very few support sidings in the main Mount Isa yard allocated to support the operation of the balloon in terms of queuing, staging or marshalling. The New Over Hill and Old Over Hill sidings could provide this support. The Partington yards have been entirely allocated to QR Above Rail Business Groups, with no roads allocated for queuing, provisioning and staging. The businesses that are supported by the Partington yards are the copper refinery and the zinc smelter.

For traffic tasks that are substitutes for the current QR traffic task, the restricted accessibility to these roads could severely hamper operations for any third party (eg. the marshalling yard located at Cobarra shown on the Townsville Port and North Coast Line Diagram: Sheet 11). For small increments in task it is likely that new facilities would not be required and it is unlikely that it will be economic to duplicate such infrastructure.

### 4.4 Marshalling and shunting

If marshalling is considered to be comprised within the declared service, QR's proposed assignment of much of the available marshalling capacity to QR's Above Rail Business Groups,

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<sup>47</sup> Whilst QR has proposed that terminals (other than bulk minerals and coal) be placed with Above Rail Business Groups, stockyard sidings pose a particular problem for access by third parties. In particular, the track and associated infrastructure is sited specifically for the stockyard. To gain access, not only do third parties have to duplicate rail infrastructure but they are forced to duplicate the stockyards which, like bulk terminals, are specialist infrastructure.

<sup>48</sup> QR has advised that the Phosphate Tippler located at Townsville Port (shown on the Townsville Port and North Coast Diagram: Sheet 11) is no longer used. QR intends using the infrastructure leading to the balloon loop for storage.

and thereby excluding it from coverage by the draft Undertaking, may be a significant concern to stakeholders. The allocation of insufficient marshalling yard capacity for these tasks could undermine the efficacy of an approved Undertaking.

An example from QR's proposed assignment (Attachment 6) where this may be of concern is the proposed arrangements for Callemondah Yard (shown on the Moura and Blackwater Systems Line Diagram: Sheet 1). This indicates that the total yard less the 'through' tracks to the unloading points at Powerhouse and Golding will be assigned to QR Above Rail Business Groups and hence not subject to the Undertaking. This allocation effectively requires any new entrant into the coal business, for either a new or existing traffic task, to build marshalling facilities.

#### **4.5 Train repair and provisioning**

The services provided by maintenance facilities and workshops and any track that forms part of these facilities does not fall within the range of services that have been declared under the QCA Act. QR proposes that this rail infrastructure be the management responsibility of the relevant QR Above Rail Business Group. QR further proposes that any section of 'yard' that is currently associated solely with these facilities be considered to form part of these facilities and be managed by the QR Above Rail Business Group responsible for the facility.

QR's allocation of all of these facilities (ie. including storage areas currently located near rolling stock and workshop depots) to QR Above Rail Business Groups could have the effect of unduly inhibiting Third Party Operators from carrying out less invasive forms of provisioning and maintenance effected while the train remains intact (eg provisioning, running inspections etc). For example, at Jilalan (shown on the North Coast Line and Goonyella Systems Line Diagram: Sheet 7) there is no clear distinction between maintenance and staging areas within the yard. QR's line diagrams indicate the whole of the yard has been allocated to QR's Above Rail Business Groups.

In addition, the allocation of yards located near the maintenance facilities and workshops to QR's Above Rail Business Groups could adversely affect the breaking up of trains for the purposes of Third Party Operators subsequently transporting rolling stock for repair. Typically, maintenance facilities are only built to accommodate a small percentage of trains in a fleet at any one time and it may therefore be necessary to break trains in a yard designed to handle large trains. Such an allocation of marshalling yard capacity could undermine the efficacy of an approved Undertaking.

For example, at Callemondah Yard (shown on the Moura and Blackwater Systems Line Diagram: Sheet 1), the marshalling facilities are designed to accommodate the breaking up of coal trains which typically comprise a large number of wagons. Third Party Operators may therefore seek to marshal trains in this yard irrespective of where maintenance is carried out.

Similarly at Pring (shown on the North Coast Line and Newlands System Line Diagram: Sheet 8) the close proximity of maintenance facilities to the holding roads appear to have been used by QR to justify the allocation of those roads to its Above Rail Business Groups. However, these holding roads could be used for staging and the marshalling of trains for repair elsewhere.

QR's proposed allocation of responsibility for management of this type of infrastructure appears to have some anomalies. On the Blackwater system, the passing loops have been shown as being for negotiation with Network Access in accordance with QR's principles. Also shown for negotiation with Network Access are a majority of tracks and loops abutting the passing loops, presumably to allow for defective rolling stock to be placed so that repairs can be effected prior to final transportation to a repair facility. In contrast to the above allocation, the 'breakdown

siding' at Villafranca on the Goonyella system (North Coast Line and Goonyella Systems Line Diagram: Sheet 7) has been allocated to the QR Above Rail Business Groups.

#### **4.6 Train storage**

Just as is the case with queuing, it would appear that QR proposes that very limited short term storage facilities will be available to Third Party Operators. For example, according to QR's proposal, the Jilalan (shown on the North Coast Line and Goonyella Systems Line Diagram: Sheet 7) and Callemondah (shown on the Moura and Blackwater Systems Line Diagram: Sheet 1) yards have been almost entirely allocated to QR Above Rail Business Groups. No other facility for extended queuing or short term storage has been made available. This allocation effectively requires any new entrant into the coal business, for either a new or existing traffic task, to build short term storage facilities.

#### **4.7 Request for comments**

**The Authority seeks comments on whether:**

- 4.7.1 QR has applied the common user approach appropriately for each of the above functions?**

## **5. PROCESS TO RESOLVE MARSHALLING YARD ASSIGNMENT**

In the advice QR has provided to the QCA, Network Access has not gone beyond supplying line diagrams for its network north of Gladstone and explaining its application of what is a high level assignment principle ie ‘common use’.

Consequently, there is a question as to whether QR’s advice and line diagrams are sufficient for stakeholders to gain an understanding of how QR has applied its ‘common use’ definition. If not, it would be possible to seek further clarification from QR about its assignment.

If it is not possible to achieve a transparent process through high level principles, an alternative means of assigning management responsibility may be to convene a ‘round table’ meeting of interested parties. Under such an approach, the QCA could chair a meeting involving an independent mediator, Network Access, QR’s Above Rail Business Groups and other affected Business Groups (such as Infrastructure Service Group), Third Party Operators, and other stakeholders. The meeting could conduct a case-by case assessment of each of Network Access’ assignments.

Such a process could produce an assignment of marshalling yards for the purposes of the Undertaking that provides a reasonably informed assessment of the issues. One benefit of the process would be that it provides an opportunity for all interested parties to have greater confidence in the assignment of marshalling yards. Moreover, even if a review process is incorporated into the Undertaking, the existence of a prior “roundtable” suggests that subsequent revisiting of the issue is less likely during the term of the Undertaking.

### **5.1 Request for comments**

**The Authority seeks comments on:**

- 5.1.1 whether there is benefit in the adoption of a process whereby all stakeholders are invited to review QR’s assignment of its marshalling yards? and**
- 5.1.2 if so, is a “roundtable” discussion an appropriate forum to resolve this matter?**

## 6. REQUEST FOR COMMENTS

Authority seeks comments on whether:

- the common user approach is more desirable than the blanket allocation of all marshalling yards to Network Access? [Q3.6.1.]
- if a common user threshold test is appropriate:
  - is it appropriate that the concept of common user relate to the capacity of the facility to provide declared services? If not, what is the appropriate test?
  - how should it apply to facilities that provide declared and non-declared services?
  - are there circumstances that justify assignment of declared services to QR's Above Rail Business Groups and, if so, what are those circumstances?
  - who should bear the burden of justifying the assignment of marshalling yards to Network Access (or to QR's Above Rail Business Groups)? [Q3.6.2]
- given its proposed 3 year term, a mechanism to review the assignment of marshalling yards should be included in the Undertaking and, if so:
  - what form this review should take (a review mechanism established as part of the Undertaking or having the QCA request a further Undertaking from QR in respect of a particular marshalling yard)?
  - if a review mechanism is adopted, what objective test should be applied by the QCA and how should the process be defined? [Q3.6.3]
- rail transport infrastructure south of Gladstone should be assigned to Network Access pending QR's submission of its proposed assignment of marshalling yards (not expected before mid 2000)? How should the review of this assignment be progressed? [Q3.6.4]
- QR has applied the common user approach appropriately for each of the above functions? [4.7.1]
- whether there is benefit in the adoption of a process whereby all stakeholders are invited to review QR's assignment of its marshalling yards? [Q5.1.1]
- if so, is a "roundtable" discussion an appropriate forum to resolve this matter? [Q5.1.2]

In seeking comment on these issues, the Authority is keen not to inhibit any other comments interested parties wish to make.