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Glossary

ABS	Australian Bureau of Statistics
above-rail business groups	QR Coal and Freight Services and Passenger Services groups which provide and operate the equipment running on the infrastructure providing the services to the railway customer. These groups have track under their control and will be accessing the common user infrastructure such as the mainline.
above-rail costs	Costs and/or assets associated with the provision of above-rail services.
above-rail services	Activities, other than below-rail services, required to provide and operate train services including rollingstock provision, rollingstock maintenance, non-train control related communications, train crewing, terminal provision and services, freight handling and marketing and administration of those services.
ACCC	Australian Competition and Consumer Commission
access	Utilisation of a specified section of rail infrastructure for the purposes of operating train services.
access agreement	Agreement between QR and a railway operator or end user for the provision of access.
access application	Request for access by an access seeker which has been prepared in writing and which complies with the information requirements of paragraph 4.3(b) of the Draft Undertaking.
access charge	Price paid by a railway operator for access under an access agreement.
access co-ordination plan	Plan prepared by Network Access and the scheduling and train control officers detailing operational and interface requirements for a specific railway operator.
access plan	Access Co-ordination Plan
access rights	Entitlement of a railway operator or end user to access in accordance with a specified capacity entitlement.
access seekers	Third-party operator or an end user who proposes to gain access to the network under the terms of the Undertaking.
Access Undertaking Or Undertaking	Document approved by the Queensland Competition Authority in accordance with the Queensland Competition Authority Act 1997 (Qld) that sets out the principles for negotiating access to QR's declared infrastructure services. References to 'access undertaking' or 'undertaking' in a

	lower case form are not QR specific.
accreditation	Rail safety accreditation in accordance with Part 4, Chapter 6 of the Transport Infrastructure Act 1994 (Qld).
AD	Accelerated depreciation
additional information	Information that is to be provided by QR to a third-party operator during the negotiation period as set out in Schedule D, excluding any information that is provided as part of the preliminary information, but only to the extent required either by the third-party operator or as part of the access agreement.
allocation	Sharing of joint costs/assets between functions/services.
AMC	Australian Magnesium Corporation
APCS	Asia Pacific Coal Services
APT	Arbitrage pricing theory
ARTC	Australian Rail Track Corporation
attribution	Sharing of costs between functions/services on a basis of cost causality where there is a causal relationship between the resources used and the function/service provided.
available capacity	Capacity that is not committed capacity including committed capacity which will cease being committed capacity prior to the time in respect of which capacity is being assessed.
axle load	Weight limit applied to trains passing over a line by the railway engineer. It is the limit allowed to be applied to any one axle on the train.
backbone telecommunications	The telecommunications assets that provide major trunk telecommunications and are used by many groups simultaneously.
ballast	Material upon which the sleepers bear; normally a load distributor to the formation or sub-grade.
balloon loop	Rail line terminus that backs upon itself in a circular shape.
BCM	Ballast cleaning machine
below-rail costs	Costs and/or assets associated with the provision of below-rail services.
below-rail service	Activities associated with the provision and management of rail infrastructure, including the construction, maintenance and renewal of rail infrastructure assets, and the network management services required for the safe operation of train services on the rail infrastructure, including train

	control and the implementation of safeworking procedures.
block	In signalling terminology, a physical length of track protected by a fixed signal which indicates to a driver whether it is safe to proceed into the section.
bottleneck	A track section that limits the throughput of the network by restricting the number of trains able to pass through it.
breakdown	Mechanical or electrical breakdown, where the particular piece of equipment is rendered inoperable.
bridgemaster	A supervisor with resources suitable for bridge works and generally available to a district.
broad-gauge	General name given to gauges of track greater than standard-gauge of 1435mm
BSNF	Burlington Northern Sante Fe Corporation
cant	The term used to denote the raising of the outer rail on curved track to allow higher speeds than if the two rails were level. Cant compensates for the centrifugal force arising from a train traversing a curve.
capacity	Capability of a specified section of rail infrastructure to accommodate train services within a specified time period. This is after providing for QR's reasonable requirements for the exclusive utilisation of that specified section of rail infrastructure for the purposes of performing activities associated with the repair or enhancement of the rail infrastructure, including the operation of work trains.
capacity analysis	Assessment of the available capacity of a specified section of rail infrastructure including an assessment of whether that capacity is sufficient for the proposed access requirements. If the available capacity is not sufficient for the proposed access requirements the term includes an assessment of rail infrastructure expansion or other capacity enhancement required to meet those proposed access requirements.
capacity entitlement	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. Until such time that access agreements have been developed for all existing QR operated train services, the term includes capacity that is demonstrably required for the purpose of QR operated train services and in respect of which access charges are applicable.

CAPM	Capital asset pricing model
capping	A layer of material between the ballast and the sub-grade which prevents the sharp rocky material of the ballast from degrading the sub-grade.
centralised traffic control	A generic term for remote monitoring and control of field signalling systems.
CEO	Chief Executive Officer
CIB	Capital indexed bonds
clip fastener	Similar to track spike, but are spring clips which secure the rail to concrete sleepers.
Coal and Freight Services	QR's above-rail business group whose major customers are the mining industry, minerals processors, electricity generators and freight forwarders. Also provides Q-Link and non-bulk services.
coefficient of adhesion	The factor used to determine the maximum tractive effort which can be applied by a locomotive under a given rail condition before slipping off the wheels occurs.
commencing date	Date from which the Undertaking takes effect.
committed capacity	Portion of capacity required to meet the capacity entitlements of railway operators.
common costs	Costs associated with the provision of rail infrastructure that are not incremental costs for any particular train service using that rail infrastructure.
confidential information¹	<p>That information which is not publicly available and the disclosure of which might reasonably be expected to affect materially the commercial affairs of a person, where such information:</p> <ul style="list-style-type: none"> • is not already in the public domain; • does not become available to the public through means other than a breach of confidentiality; • was not in the other party's lawful possession prior to such disclosure; and • is not received by the other party independently from a third party free to disclose such information, data

¹ QR defines confidential information as any information, data or other matter marked confidential by a party when disclosed to the other party or disclosed to the other party with an express requirement in writing that the information, data or other matter be treated as confidential, where such information data or other matter

- is not already in the public domain
- does not become available to the public through means other than a breach of confidentiality;
- was not in the other party's possession prior to such disclosure; and
- is not received by the other party independently from a third-party free to disclose such information, data, or other matter.

	<p>or other matter; and</p> <ul style="list-style-type: none"> the disclosure of which might reasonably be expected to affect the commercial affairs of a person or is marked confidential by a party when disclosed to the other party. <p>Such information, data or other matter must be treated as confidential by the party receiving it.</p>
consist	Composition of a train, in terms of locomotive and wagon identification and its loading.
corporate overhead costs	Costs that relate predominantly to the overall management, strategy and governance of the corporation including, for example, head office, internal audit, corporate strategy and planning, corporate finance, information strategy, safety and industrial relations.
corporate services costs	Costs of services that are provided at the corporation wide level to groups and divisions within QR including, for example, legal services, computer services, motor vehicle fleet management, administration building services, payroll preparation and employee relations;
corporations law	The meaning given to that term in the Corporations (Queensland) Act 1990.
cost allocation manual or costing manual	Manual prepared by QR which identifies the matters outlined in Paragraph 5.5(a) of the Draft Undertaking.
CPI	Consumer Price Index
crewing	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.
cross subsidy	<p>The shortfall contributed by another train service or combination of train services where one train service or combination of train services pays access charges which are insufficient to meet:</p> <ul style="list-style-type: none"> the incremental cost imposed on the rail infrastructure by that train service or combination of train services; and in respect of a group of train services, the common costs related specifically to sections of rail infrastructure that are used solely for the purpose of train services within that combination of train services.
CSO	Community service obligation
CSX	CSX Corporation
CTC	Centralised traffic control

DAC	Depreciated actual cost
daily train plan	<p>Daily train schedules for all train services operating on QR's infrastructure together with the track possessions and train paths allocated to infrastructure maintenance providers on a daily basis. The master train plan will form the basis for development of the daily train plan which may be modified:</p> <ul style="list-style-type: none"> periodically during the term of its currency, in accordance with the railway operators capacity entitlements or Network Access; needs or the needs of other infrastructure providers; at any time following a request by a railway operator to make such a change on terms established by its capacity entitlement; and where actual train running indicates a consistent variation to that established in the access agreement and formulated in the daily train plan.
DBCT	Dalrymple Bay Coal Terminal
declared infrastructure	Infrastructure services declared available for access by access seekers in accordance with the Queensland Competition Authority Act 1997 (Qld).
DED	Dragging equipment detector
delay	The time a train is prevented from operating at the speed it would operate if it did not need to stop at passing sidings, signals or stations.
depot	Rollingstock depot or workshop depot. A rollingstock depot is a place where maintenance is carried out and where components are swapped in and out of equipment. A workshop depot is a place where components are manufactured or modified to be subsequently swapped in and out of equipment. Sometimes it is the sign-on location for infrastructure gangs.
district	A geographic area, a number of which make up a region in the infrastructure organisation. District resources or gangs are available to the entire district, whereas local gangs and resources are generally confined to a small infrastructure length within the district.
DNR	Department of Natural Resources & Mines
DORC	Depreciated optimised replacement cost
double track or dual track	A railway line consisting of two parallel tracks usually used for trains travelling in opposite directions.
draft amending undertaking	One or more documents specifying amendments to the Draft Undertaking, or the undertaking submitted to the

	QCA in circumstances envisaged in Part 5 of the Act.
Draft Undertaking	The document lodged with the QCA by QR on January 23, 1999.
dragging equipment detector	A track-mounted device capable of detecting whether a piece of rollingstock equipment has fallen or is not in its design configuration, such as derailed wheels or hanging brake-gear.
duplication	The construction of a second parallel track over section(s) of the network.
EBA	Enterprise bargaining agreement
end user	A purchaser of train services (for example, a mine, a livestock producer, a power station).
environmental investigation	Study of the likely short-term and long-term beneficial and detrimental effects on the environment of the third-party operator's operations insofar as they interact with the rail infrastructure and other train services.
environmental management system	A railway operator's plan of management to address all environmental risks and ensure compliance with all environmental laws and licences.
environmental risk management plan	Plan identifying the control measure agreed between QR and the third-party operator to address risks identified through the environmental investigation. The plan identifies the party responsible for implementation of those control measures. In the Final Decision, it is referred to as the environmental risk investigation and risk management report.
EPA	Environmental Protection Agency (Qld)
EPA Act	Environmental Protection Act 1994 (Qld)
ER	Employee relations
evaluation period	<p>Defined in the Draft Undertaking in relation to:-</p> <ul style="list-style-type: none"> • an individual train service - the period which is equal to the length of the expected duration of the existing or proposed access agreement in respect of the relevant train service; • a group of train services - the period which is equal to the length of the expected duration of the longest existing or proposed access agreement in respect of any of the train services comprising the combination of train services; <p>provided that such period does not exceed ten years.</p>

expansion	An increase in network or system capacity.
explanatory guide	Document developed for the purpose set out in Paragraph 1(d) of the Draft Undertaking.
failure mode effect analysis	An analysis of work functions designed to ensure levels of maintenance are appropriate to the consequences of failure.
financial statements	Annual accounts prepared in accordance with the requirements of the Financial Administration and Audit Act (1997) and audited by the Queensland Auditor-General.
flange	Larger part of wheel form used as the principal means of the railway guidance system.
FMEA	Failure mode effect analysis
FMS	Freight management system
freight management system	Mainframe computer-based application that monitors overall train performance.
frog	The component in a turnout where one rail from one line crosses the other rail from the other line. The shape of the two rails coming together and diverging apart is in the shape of a frog. Also, swing nose frog relates to an arrangement where the continuity of each rail is maintained.
geographic region	Sections of the rail infrastructure identified as such in the cost allocation manual.
geographic system	Sections of the rail infrastructure identified as such in the cost allocation manual.
geotextile	A man-made fabric used in earthwork applications to constrain movement of material whilst allowing water drainage.
GHD	Gutteridge Haskins and Davey Pty Ltd
GOC	Government owned corporation
government service agreement	Contract between the Queensland Government & QR for the purchase of rail services.
gross tonne kilometres	Total weight of a train multiplied by the distance travelled.
gross-to-tare ratio	Ratio of the total weight of a loaded wagon to the weight of the empty wagon.
GSA	Government service agreement
GST	Goods and services tax

GTK	Gross tonne kilometres
HBD	Hot box detector
head-hardened rail	Rail that has been heat-treated so that the head is approximately 30% harder than standard carbon rail
headway	The distance or time between a train wishing to use the same section of the track, either in the same direction or in opposite directions.
healthy train	A train that has experienced no delay, within agreed tolerances, attributable to the above-rail operator either on entry or whilst on the network.
heavy-haul	Rail transport associated with the movement of bulk commodities, for example coal and iron ore, hauling in excess of 20 million gross tonnes per annum.
hot box detector	A track-mounted device with the function of measuring the axle box temperatures of a passing train. Axle box bearings have a risk of failing, causing bearing heating and eventual axle box shearing, resulting in a derailment.
identification	Where costs are directly incurred, or assets directly used in the performance of a function/service, the identification of those costs to that function/service.
IMPACT	Infrastructure, Planning & Capacity Tool
impact assessment study	Referred to in the Draft Undertaking as a detailed study of the short and long-term beneficial and detrimental effects on the environment of the third-party operator's operations insofar as they interact with the rail infrastructure. The study includes an assessment of all relevant environmental factors, including social, economic and biophysical factors related to such operations.
incident	Any rollingstock derailment, rollingstock 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	Reporting, management and investigation of incidents occurring on or affecting the rail infrastructure.
incremental costs²	Those costs of providing access, including capital (renewal and expansion costs), that would not be incurred if the particular train service or group of train services (as appropriate) did not operate. Incremental costs are

² QR defines incremental costs of providing access, including capital (renewal and expansion) costs, that would not be incurred (including the cost of bringing expenditure forward in time) if the particular train service or group of train services (as appropriate) did not operate.

	considered in the context of efficient operations and an efficient level of assets actually required by QR, as network manager, to provide the service(s).
indicative access proposal	Non-binding response from QR to an access application of a third-party operator, prepared in writing, including the information set out in CI 4.5 of the Draft Undertaking.
information pack	The information pack will fulfil QR's Schedule D obligations concerning the provision of technical operational information and it will be made available on request at any time for a fee. An Information Pack will be prepared for each of QR's 14 systems.
infrastructure improvement	Physical works applied to the infrastructure to increase the number of paths available on the system.
infrastructure payments	Payments to QR from the Queensland Government to enable QR to provide specified sections of rail infrastructure.
Infrastructure Services Group	QR's business group which supplies track maintenance and construction services to QR's above-rail business groups and Network Access.
interlocking	Generally signalling interlocking where various functions such as points switching cannot occur without other conditions occurring, such as the passage of a train. Proprietary systems for this function are known as VPI, Westrace, Microlok and Relay.
initial capacity assessment	Preliminary capacity analysis undertaken in a manner that gives an indicative assessment only and which will require further analysis as part of a final capacity analysis.
interface coordination plan	Plan which identifies the procedures to be followed and the responsible officers from both QR and the third-party operator, in respect of all regular operational interfaces between the parties that arise in the exercise of rights and the performance of obligations under the access agreement. Provided for in clause 7.6 of the Draft Undertaking.
interface plan	Interface co-ordination plan
interface risk management plan	QR and a third-party operator must undertake a joint safety risk assessment of the third-party operator's proposed train services. The interface risk management plan is the outcome of that joint risk assessment process. Referred to as the safety risk management plan in the Draft Undertaking.
intermediate loops/signals	Passing loops or signals constructed at an intermediate point between two existing loops or signals to assist in increasing the capacity of the system.

internal access agreement	Arrangement between Network Access and another QR business group for the provision of access for the purpose of QR-operated train services.
IPART	Independent Pricing and Regulatory Tribunal of New South Wales
ISG	Infrastructure Services Group
IT	Information technology
Kwik Drop Door mechanism	An opening trigger for coal wagons that forms part of a coal unloading facility
KPI	Key performance indicator
linear tariffs	Tariffs that vary with a dependent variable, such as distance travelled or tonnes hauled, and which are portrayed as a single price without differentiation between fixed and variable elements.
Line-section	Section of railway route as defined in QR's chart of accounts from time to time and that is identified for the purpose of classifying the rail infrastructure into line sections with reasonably consistent traffic and reasonably consistent track standards.
Line-section specific	Costs and assets able to be specifically identified or attributed to a line section.
LNG	Liquefied natural gas
local resources	Resources of gangs whose field of work is confined to a relatively small geographic part of the district, which in turn is a subset of the region.
MA	Moving average
marshalling	Process of joining or separating locomotives and rail wagons to make up or split train consists.
marshalling yard	Typically, a train yard in which wagons are shunted to or from a train consist. Marshalling yards perform other functions including stabling, light maintenance, train inspection, and queuing.
master train plan	<p>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:</p> <ul style="list-style-type: none"> 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

material change event

requirements;

- maintenance windows/possessions; and
- the available capacity of the network being the difference between maximum capacity and capacity entitlements.

The Draft Undertaking defines material change event as the occurrence of any of the following events on or after the date upon which the QCA approves the relevant reference tariff/s:

- any amendment, repeal, modification or enactment of any acts, ordinances, regulations, by-laws, proclamations and subordinate legislation made under, by or pursuant to any Commonwealth or State statute or any relevant Authority ('legislation');
- any binding change in the interpretation or application of any legislation resulting from a decision of a court or tribunal;
- the making of any new policy, instruction, direction or order ('directive') of an Authority (including without limitation QR's shareholding ministers) which impacts on QR, or the modification, extension or replacement of any existing directive;
- the imposition of a requirement for any licence, permit, approval, consent or other authority ('Authorisation') not required as at the date upon which the QCA approved the relevant reference tariff;
- after the date of grant of any authorisation, a change in the terms and conditions attaching to that authorisation or the attachment of any new terms or conditions;
- the imposition or abolition of, increase or reduction in the rate of, or change in the basis of calculating, any Commonwealth, State or Local Government-imposed tax, charge, levy, duty, impost, rate, royalty or imposition ('tax') imposed on, or payable by, QR including, without limitation, any tax relating to the protection of the environment imposed on users of electricity or imposing a form of consumption, value added or sales tax, but excluding any income tax; or
- a change in the Commonwealth Government 10-year bond rate of more than one hundred (100) basis points from the time that the reference tariff:
 - was endorsed by the QCA; or
 - was varied in accordance with Paragraph 5.3.2(b) of the Draft Undertaking to reflect a change in the Commonwealth Government 10-year bond rate;

	whichever is the later.
material default	<p>The Draft Undertaking defines material default as follows:</p> <ul style="list-style-type: none">• repeated failure to comply with the terms and/or conditions of any of the agreements specified in Paragraph 4.1.2(c) of the Draft Undertaking; or• any breach of a fundamental term and/or condition of any of the agreements specified in Paragraph 4.1.2(c) of the Draft Undertaking.
MEERA	Modern engineering-equivalent replacement asset
MGT	Million gross tonnes
multi-part tariff	Tariff that consists of at least two components (but generally more) which individually indicate the price of different parts of the service being purchased, inclusive of or in addition to fixed cost elements.
NAG	Network Access Group
narrow-gauge	General name given to gauges of track, less than standard-gauge of 1435mm. QR operates a narrow-gauge network of 1067mm.
NCC	National Competition Council
neck	A section of track built to accommodate a locomotive involved in shunting operations which are carried out from one end of a yard.
negotiation period	Period during which the terms and conditions of an access agreement will be negotiated and which commences upon the third-party operator providing QR with a notification of intent to proceed with negotiations pursuant to cl 4.6 of the Draft Undertaking and concludes upon any of the events set out in Paragraph 4.7.1(c).
net tonne kilometres	Weight of the payload multiplied by the distance travelled in the loaded section of the cycle.
Network Access	Business group established within QR to manage the provision of below-rail services with the exception of operational management of stations, platforms and selected marshalling yards.
network management principles	Generally referred to as the Scheduling and Train Control Principles.
network wide costs	Costs and assets associated with the provision of below-rail services not able to be identified or attributed to a line section or a geographic region.
NPC	Network Planning Centre

NSC	Norfolk Southern Corporation
NTK	Net tonne kilometre
NTS	New tax system
ODV	Optimal deprival value
operating plan	Description of how the proposed train services are to be operated, including the matters identified in Schedule H of the Draft Undertaking.
operational systems	An organisational sub-group of ISG comprising signalling and communications, asset maintenance and construction.
ORG	Victorian Office of the Regulator General
other activities	Activities undertaken by QR that are neither above-rail services nor below-rail services including for example, consulting activities and treasury activities.
other activities costs	Costs and/or assets associated with the provision of other activities.
out-of-course running	Occurrence where the movement of a train service differs from the train schedule for that train service as provided in the daily train plan.
Passenger Services	QR's above-rail business group whose major customers are metropolitan, long distance and tourist passengers.
passing loop	Section of track that has two ends, both of which lead onto the mainline which enables two trains travelling in the opposite direction on a single track to pass.
PC	Pacific Coal
PCI	Pulverised coal injection
PCQ	Ports Corporation of Queensland
preliminary information	Information required to be provided by QR, prior to the submission of an access application, by a third-party operator.
price index	A composite measure of the prices of items expressed relative to a defined base period.
production resources	In the context of major track program maintenance, those resources available to the whole district and designed for rapid output of finished work, such as mechanised equipment and large gangs concentrating on specific jobs. This contrasts with routine or caretaker maintenance local track gangs.

protocols	Scheduling and train control protocols
provisioning	Supply of consumables to a locomotive such as fuel, water, sand, crew consumables and the crew itself.
QCA	Queensland Competition Authority
QCA Act	Queensland Competition Authority Act 1997 (Qld)
QMC	Queensland Mining Council
QR business groups	Above-rail business groups, Network Access, Infrastructure Services, Technical Services, Corporate Services and Workshops.
QR's information systems	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.
QRNA	Network Access
QT	Queensland Transport
QTC	Queensland Treasury Corporation
Queensland Transport	Department of Transport for the State of Queensland.
queuing	Time spent by train consists at terminals or intermediate points waiting on rail traffic to clear.
RAC	See RIC
rail	Steel wheel guide with a head, stem and base.
Rail Access Corporation	See Rail Infrastructure Corporation
rail anchors	On wooden sleepered track fitted with track spikes, a steel fitting that grips the rail base and prevents the rail sliding longitudinally with respect to the sleepers by wedging against sleepers. For concrete and steel sleepers, the mechanism of restraint is incorporated into the clip fasteners.
rail creep	Lengthwise movement of rail forcing buckles in rail and misalignment of sleepers.
rail grinding	Process performed by a machine whilst on the track where the head of the rail is shaped and surface defects removed by means of grinding wheels.
rail infrastructure	Rail transport infrastructure as defined in the Transport Infrastructure Act 1994 (Qld) for which QR is the railway manager.

Rail Infrastructure Corporation	A vertically separated below-rail service provider that owns the NSW intrastate and interstate rail network. It was formed following the amalgamation of Rail Access Corporation and Rail Services Australia (which provided track maintenance services to RAC, FreightCorp, State Rail Authority and other business clients).
railway manager	Meaning given to that term in the Transport Infrastructure Act 1994 (Qld).
railway operator	Defined in the Draft Undertaking as a person who has, or is seeking, access from QR to operate train services on the rail infrastructure and who is, or who will become, accredited in respect of those train services.
RAMS	Rail Access Management System
RCAF	Rail cost adjustment factor
RCS	Radio controlled signalling
reference tariff	Access charge applicable for a specified reference train service, established in accordance with CI 5.3 of the Draft Undertaking. The purpose of the reference tariff is to provide information to third-party operators as to the likely level of access charge for train services of a similar type as the specified reference train service.
reference train service	Notional train service conforming to certain criteria, including carrying a specified commodity type, operating between specified geographical points and conforming to specified technical characteristics, operational characteristics and contract terms and conditions.
region specific	Costs and assets associated with the provision of below-rail services not able to be identified or attributed to a specified line section, but able to be identified or attributed to a geographic region.
re-railing	Carried out where the rail needs replacing but the sleepers still have reasonable life.
re-sleepering	The replacement of sleepers which are life expired.
re-surfacing	Maintenance of the geometry of the track using a machine called a tamper which lifts, lines and levels the track and packs the ballast to accommodate the new position of the track.
revenue limit	Defined in the Draft Undertaking as the maximum revenue which QR should be entitled to earn from the provision of access to the train service or train service group over the evaluation period.
RHA	Rail haulage agreement

RIC	Rail Infrastructure Corporation
Ring-fencing guidelines	Guidelines prepared by QR in accordance with Cl 3.5 of the Draft Undertaking.
RIS	Rollingstock Interface Standards
RMS	Rail Management Services Pty Ltd
road	In a marshalling yard situation, 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 in contrast with a neck and a siding which are single ended.
Roadmaster	A senior supervisor within a district allocated the responsibility of supervising resources that work across the district or are common across the district, in contrast to a track supervisor who supervises resources allocated to a sub-section of the district.
Rollingstock	Locomotives, carriages, wagons, rail cars, rail motors, light rail vehicles, light inspection vehicles, rail/road vehicles, trolleys and any other vehicle which operates on or uses the track.
Rollingstock configuration	Combination of rollingstock comprising a train that includes an identification number and a gross mass of individual items of rollingstock and the order in which those rollingstock items are placed in the train.
Rollingstock interface standards	Standards to be agreed between QR and a third party operator relating to the interface between rollingstock and the rail infrastructure with which the rollingstock and rollingstock configurations must comply in order for them to be able to be operated on the relevant parts of the rail infrastructure, including standards relating to the criteria identified in Part 2 of Schedule D of the Draft Undertaking.
Rollingstock standards	Rollingstock interface standards that relate to the design and performance of rollingstock.
ROR	Rate of return
RSAU	Rail Safety Accreditation Unit within Queensland Transport.
RTBU	Rail, Tram and Bus Union
running inspection	Inspection of a train prior to the train starting its journey where no faults are expected to be found or at least the faults are very minor.
safety management system	Defined in the Draft Undertaking in respect of:- <ul style="list-style-type: none"> • a railway operator - a system developed by the

	<p>railway operator to manage all risks associated with the operation of train services including specifically those risks identified in the safety risk assessment; and</p> <ul style="list-style-type: none"> • a railway manager - a system developed by the railway manager to manage all risks associated with the provision of rail infrastructure and safe management of train operations on the rail infrastructure, including specifically those risks identified in the safety risk assessment; <p>and which forms the basis upon which the railway operator or railway manager becomes accredited.</p>
safety regulator	The Chief Executive of Queensland Transport or delegate operating in accordance with Part 4 of the Transport Infrastructure Act 1994. RSAU is the safety regulator in Queensland.
safety risk assessment	Assessment of the operational and safety risks associated with the third-party operator's operations insofar as they interface with the rail infrastructure and other train services. Also referred to as the interface risk management process in the Final Decision.
safety risk management plan	Plan identifying the set of control measures agreed between QR and the third-party operator to address risks identified through the safety risk assessment, and the party responsible for the implementation of those control measures. Also referred to as the interface risk management plan in the Final Decision.
safety standards	Standards relating to safety, including occupational health and safety, established in published guidelines, industry practice or QR policies and all standards relating to safety, including occupational health and safety, prescribed by any laws.
safeworking procedures	Procedures and systems, including supporting communications systems, for the safe operation of trains and protection of work sites on rail infrastructure.
S&P	Standard and Poors
scheduling	Process of determining arrival and departure times for train services at the origin, intermediate locations and 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	Officers who provide train control and prepare the master and daily train plans.

scheduling and train control protocols	Protocols QR proposed to prepare in the Draft Undertaking which would outline the approach QR will adopt with respect to the matters outlined in Paragraph 3.2(e) of the Draft Undertaking.
sectional running time	The time it takes a train to traverse a section travelling at the speed it would be travelling if it did not have to stop at passing loops or stations.
shunting	The movement of locomotives and wagons in a yard situation. Normally associated with the creation or separation of specific train consists.
siding	Storage road leading nowhere.
single track	A railway line that consists, for the most part, of only one track and punctuated by passing loops.
sleepers/ties	The transverse members of trackwork, made of wood, concrete or steel which are used to secure the rail at the correct gauge.
solvent³	<p>None of the following events have happened in relation to the third-party operator:</p> <ul style="list-style-type: none"> • the third-party operator is unable to pay all its debts as and when they become due and payable or it has failed to comply with a statutory demand as provided in Section 459F(1) of the Corporations Law; • a meeting is convened to place it in voluntary liquidation or to appoint an administrator, unless the resolution is withdrawn within 14 days or the resolution fails to pass; • an application is made to a court for it to be wound up and the application is not dismissed within one month; • the appointment of a controller as defined in the Corporations Law of any of its assets, if that appointment is not revoked within 14 days after it is made; or • the third-party operator proposes to enter into or enters into any form of arrangement (formal or informal) with its creditors or any of them, including a deed of company arrangement.

³ QR defined solvent in the Draft Undertaking as:

- the third-party operator is unable to pay all its debts as and when they become due and payable or it has failed to comply with a statutory demand as provided in Section 459F(1) of the Corporations Law;
- a meeting is convened to place it in voluntary liquidation or to appoint an administrator;
- an application is made to a court for it to be wound up and the application is not dismissed within one month;
- the appointment of a controller as defined in the Corporations Law of any of its assets; or
- the third-party operator proposes to enter or enters into any form of arrangement formal or informal with its creditors or any of them, including a deed of company arrangement.

SPI	Share price index
SRA	NSW State Rail Authority
stabling	Taking a train out of service and parking it in a siding without a crew.
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.
stand-alone costs⁴	Those costs that would be incurred if the relevant train service or combination of train services (as appropriate) was the only train service or group of train services provided access by QR. Stand alone costs are considered in the context of efficient operations and an efficient level of assets actually required by QR, as network manager, to provide the service(s).
standard-gauge	Nominal gauge between rails of 1435 mm.
standard train path	One of a number of similar hypothetical paths, in combination representing the least time-distance trajectories of trains over a network and therefore permitting the maximum number of trains of a given specification to be operated over the network.
STB	US Surface Transportation Board.
storage	Parking of the wagons of a train. 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'.
stowage	The temporary storage of trains off the running mainline. This occurs in unplanned circumstances due to operational interruptions arising from weather conditions, loading and unloading problems and derailments, as well as in planned circumstances that relate to the operators' operational patterns. The unplanned circumstances could exist for up to a week or more, while planned stowage is in accord with the operators' capacity entitlements.
STP	Standard train path
sub-grade	The prepared earth upon which the trackwork is built.
surfactant	Spray to stabilise loose particles.

⁴ QR defines stand-alone cost as the costs that it would incur if the relevant train service or combination of train services (as appropriate) was the only train service or group of train services provided access by QR.

tamping	Process by which ballast is packed around the sleepers of a track to ensure the correct position for the location, speed and curvature.
Technical Services Group	QR's business group that supplies engineering, project management and supply services to QR's above-rail business groups and corporate groups.
terminal	Any facility that is used for the loading and unloading of goods onto a train.
TFP	Total factor productivity
third-party	QR's terminology for an access seeker in Schedule E.
third-party operator	Railway operator other than QR
TI Act	Transport Infrastructure Act 1994 (Qld)
TLM	Track laying machine
track	Part of the rail infrastructure comprising the rail, ballast, sleepers and associated fittings upon which trains operate.
track gauge	Distance between the inner faces of the rail heads of a railway track. A narrow gauge railway is designed for 1067 mm whilst a standard gauge railway is designed for 1435mm. The measurement is made 16 mm below the top of the rail on the inner face.
track geometry	The position of the two rails transversely and longitudinally with respect to the alignment of the track.
track laying machine	A track-mounted machine designed to be able to place or replace rails and sleepers simultaneously and continuously.
track occupation	The presence of a train on a section of track that precludes the presence of another train in order to maintain safe separation between trains. Occupation can occur by other means such as a maintenance occupation.
track relaying	The complete replacement of the track structure, usually carried out by track-laying machines, except where relatively small lengths are involved.
track section supervisor	Usually a supervisor with a geographic allocation of the track asset.
trackside systems	All assets, their maintenance and construction, comprising signalling, communications and overhead power provision.
track spikes	Large iron 'nails' with enlarged heads for securing rail to wooden sleepers.
traction current	Term used for electric power supply used on electric railways for trains. Normally supplied by overhead wire or

	third rail.
traction motor	Electric motor that drives the axle of a locomotive.
tractive effort	Power that a locomotive is able to deliver to the rail through its wheels notwithstanding the ability of the wheels to grip the rail.
tractive force	Longitudinal force that can be applied to the rails by the locomotive wheels, influenced by locomotive horsepower and wheel to rail adhesion.
train	Any configuration of rollingstock operating as a unit on the track.
train control	<p>The control of train movements and of all other rollingstock 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 rollingstock operations. In addition, train control includes:</p> <ul style="list-style-type: none"> • 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 cycle	The period of time required for a train consist to load, transit, unload and return to load again.
train path	Defined entry, exit and transit time for a train consist on a particular network or corridor.
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.
train service	Operation of a train between specified origins and destinations on the rail infrastructure.
train service group	Specified combination of train services that operate over discrete parts of the rail infrastructure and which is nominated as such in Schedule F of the Draft Undertaking.
train standards	Rollingstock interface standards that relate to rollingstock configurations.

transit time	The time it takes a train to run from an origin to a destination, usually over a number of sections, and composed of sectional running times, stopping allowances, starting allowances and waiting at passing sidings.
TSG	Technical Services group
TSS	Track section supervisor
turnout	Trackwork where a single track splits to become two tracks and is equipped with moving rails to change the route.
two-part tariff	Tariff that is divided into two components – a variable component, typically reflecting marginal costs, and a fixed component.
Undertaking or Access Undertaking	The document approved by the Queensland Competition Authority in accordance with the Queensland Competition Authority Act 1997 (Qld) that sets out the principles for negotiating access to QR's declared infrastructure. References to 'access undertaking' or 'undertaking' in lower case form are not QR-specific.
UPC	Union Pacific Corporation
VERS	Voluntary early retirement scheme
WACC	Weighted average cost of capital
working groups	Meetings of QR's stakeholders convened by QCA to assist in the assessment of the Draft Undertaking.
Workshops	QR's business group that undertakes maintenance, modifications, major overhaul, component exchange and manufacturing support for the rollingstock requirements of QR's above-rail business groups.

Overview

Introduction

On January 23, 1999, QR voluntarily submitted to the QCA a Draft Undertaking covering certain services relating to the use of the rail transport infrastructure it owns. That was accompanied by a document entitled *An Explanatory Guide*. The QCA interpreted the Explanatory Guide as if it formed part of the Draft Undertaking.

As required by s136 of the QCA Act, the QCA is required to either approve or refuse to approve the draft undertaking given to it. In circumstances where it refuses to approve the Draft Undertaking, it is necessary for the QCA to provide to QR a written notice stating the reasons for the refusal and the way in which the QCA considers it appropriate to amend the Undertaking.

In order to acquit its legislative and other responsibilities, the QCA undertook an extensive consultation process. That process culminated in the QCA issuing its Draft Decision in December 2000. That Draft Decision discussed and analysed submissions received from interested parties in response to a series of QCA papers and matters raised in discussions between the executive of the QCA and representatives of various interested parties.⁵

In addition, a number of working groups, chaired by the QCA, were established to discuss issues relating to the Draft Undertaking. Details of these are set out in Table 1:

Table 1: QR Draft Undertaking Working Group meetings

Date	Topic	Attendees
5 April 2000	Access Agreements	Stanwell, National Rail, QR, ARTC, Queensland Treasury, FreightCorp, Toll, QMC, ACCC, Queensland Transport, Rail, Tram and Bus Union, NCC, AMC.
12 April 2000	Reference Train Services	Stanwell, QR, Queensland Treasury, FreightCorp, QMC, Queensland Transport, NCC.
19 April 2000	Scheduling & Train Control Protocols and Marshalling Yards	ARTC, QR, Queensland Treasury, FreightCorp, QMC, Queensland Transport, Toll.
5 May 2000	Cost Allocation and Other Issues	Stanwell, QR, Queensland Treasury, FreightCorp, QMC, Queensland Transport, ARTC, Toll, Rail Freight Sale Task Force.
22 March 2001	Procedural matters associated with the QCA's Final Decision.	QR, FreightCorp, QMC, Queensland Treasury, Queensland Transport, Department of Mines & Energy, Department of State Development, Queensland Council of Unions, ORG (Victoria).

Source: QCA

All stakeholders were invited to attend the meetings of the working groups. In addition, the executive of the QCA liaised with stakeholders on numerous occasions outside of the formal working group meetings. The purpose of these meetings or phone conversations was to give stakeholders an opportunity to speak directly to the executive of the QCA in respect of all issues relevant to the Undertaking thus assisting the executive of the QCA to understand all the issues.

⁵ Details of the papers produced by the QCA and the submissions in respect of those papers is set out in the Draft Decision: see particularly Tables 4 and 5 at pages 39 and 40 of the Draft Decision.

The QCA invited all interested parties to respond to the Draft Decision issued in December 2000. Submissions in respect of that Draft Decision were received from the parties identified in Table 2. The QCA requested that submissions be lodged with the QCA by March 30, 2001. A number of respondents were unable to meet that timeframe as indicated in Table 2.

Table 2: Submissions Received in Response to the Draft Decision of December 2000

Name of respondent	Date response received
QR	5 April 2001
Stanwell	4 April 2001
ARTC	21 March 2001
Queensland Mining Council	2 April 2001
Rail, Tram and Bus Union	20 April 2001
Curragh	29 March 2001
Queensland Treasury Corporation	30 March 2001
Pacific Coal Pty Ltd	4 April 2001
Gladstone City Council	26 March 2001
Jericho Shire Council	22 March 2001
Ports Corporation of Queensland	6 April 2001
Dalrymple Bay Coal Terminal Pty Ltd	30 March 2001
FreightCorp	6 April 2001
Queensland Government	6 June 2001

Source: QCA

In reaching the Final Decision, the QCA was able to take account of all submissions received by it.

QCA Board Members also held meetings with representatives of stakeholders who had made submissions in response to the Draft Decision and who are identified in Table 3.

Table 3: Name of Stakeholders with whom the QCA Board Met

QR	FreightCorp
Anglo Coal Australia	Pacific Coal
BHP Coal	Rail Tram & Bus Union
Ensham Resources	Queensland Mining Council

Source: QCA

The QCA is mindful of the extensive documentation that has been generated throughout the process relevant to the QR Draft Undertaking. Bearing that in mind, the QCA determined that the interests of all stakeholders would be best served by incorporating the Draft Decision into the Final Decision. This would do away with the need to repeat much of the discussion and analysis contained in the Draft Decision or, for that matter, to repeat in the Final Decision those matters in respect of which decisions were taken in the Draft Decision which were not called into question by any stakeholders.

This Final Decision deals in detail (Volume 2) with the submissions received in response to the Draft Decision. In some cases, those submissions have resulted in the QCA changing positions recorded in the Draft Decision.

The QCA has produced, as part of Volume 1, an annotation of the QR Draft Undertaking as originally given to the QCA and recorded in it each and every one of the positions that have been taken by it in relation to the Draft Undertaking. The reasons for those positions are

reflected either in the Draft Decision or, alternatively, in the Final Decision or a combination of both. Where the QCA believes it appropriate to amend the Draft Undertaking, it has set out the detail of the amendment as part of each individual decision.

Final Decision

The QCA refuses to approve the Draft Undertaking given to it by QR. The reasons for that refusal are set out in the Final Decision which has incorporated into it by reference, the content of the Draft Decision of the QCA issued in December 2000. The QCA has identified in the Final Decision and the Draft Decision the way in which it considers it appropriate to amend the Draft Undertaking. It has set out in the annotated version of the Draft Undertaking in Volume 1 its position in relation to each element of the Draft Undertaking.

The QCA notes that QR has acknowledged its agreement to amend the Draft Undertaking in some respects in response to the Draft Decision. Those matters are noted in Volume 2 but do not form part of the QCA's positions, as the Authority is bound to respond to the Draft Undertaking it has before it.

Annotated Draft Undertaking

The structure of QR's Draft Undertaking is as follows:

- Part 1 Preamble
- Part 2 Scope and Administration of Undertaking
- Part 3 Ringfencing Arrangements
- Part 4 Negotiation Framework
- Part 5 Pricing Principles
- Part 6 Capacity Management
- Part 7 Interface Considerations
- Part 8 Definitions & Interpretations

SCHEDULES

- A – Timetable for Internal Access Agreements
- B – Ringfencing Guidelines
- C – Access Application
- D – Preliminary Information and Additional Information
- E – Summary of Standard Access Agreement
- F – Train Service Groups
- G – Application of Reference Tariffs
- H – Operating Plan
- I – Environmental Investigation

The annotated version of QR's Draft Undertaking follows below.