

Standard

Train Route Acceptance

MD-10-170

QUEENSLAND RAIL OFFICIAL

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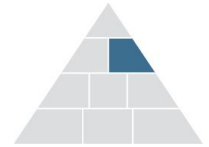
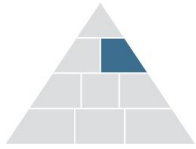


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1 Purpose

This standard sets the requirements for authorising and registering train route acceptances for trains that comply with the interface standards for operation on tracks managed by Queensland Rail.

This standard provides procedures for assessing the suitability of rolling stock for operation on Queensland Rail's network.

1.1 Scope

1.1.1 What is in scope

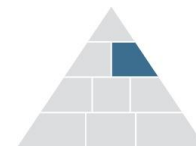
This standard applies to all rolling stock operators, who operate or intend to operate train services on tracks managed by Queensland Rail.

The standard also applies to new or changed Queensland Rail operated rolling stock configurations.

The standard also applies to third party owned On-track vehicles and one-off trials.

1.1.2 What is out of scope

Train services that operate on tracks not managed by Queensland Rail.



2 Requirements of this Standard

2.1 General requirements

Rolling stock operators proposing to operate trains on the Queensland Rail network must apply for access to Queensland Rail and must obtain an access agreement prior to any operation occurring. This does not apply to trains operated by Queensland Rail.

As part of the access application process, the interface risks posed by the operation of a particular train service on the network must be assessed and managed through the train route acceptance process.

The risks associated with operation of trains by Queensland Rail must also be assessed and managed through the train route acceptance process.

Train services proposed for operation on the network must only be granted train route acceptance if the risk to rail infrastructure, other trains, workers, the public and the environment is acceptable to either the Head of SEQ or the Head of Regional dependant on the relative network area.

The train route acceptance process stipulates the methods of identifying and assessing risks and determining control measures associated with proposed train services.

Train route acceptance may be issued subject to restrictions or conditions. A train service or configuration that exceeds the restrictions, conditions or other limits set through the train route acceptance process must not operate on the Queensland Rail network unless otherwise permitted by this standard.

For a train service to operate on the network, it must have a train route acceptance or an Authority to Travel fulfilling the requirements of this standard.

Existing Operators on the Queensland Rail network who wish to operate new or changed rolling stock configuration also need to follow this process.



2.2 Train criteria

2.2.1 General

Train criteria are those limits concerning the train that apply irrespective of where the train operates and concern aspects of the train.

These criteria are derived from the performance of the individual items of rolling stock that are used to construct the train.

2.2.2 Rolling stock authorisation

Rolling stock must be certified by the rolling stock operator as complying with the agreed interface standards (or any exceptions recorded) and authorised by Queensland Rail prior to operation on the network. Rolling stock, which has not changed, and has previously been accepted for operation on the network following an earlier process, prior to implementation of this standard may continue to operate without being recertified.

2.2.3 Train criteria factors

Train criteria considered by a rolling stock operator in its application for train route acceptance and considered during the risk assessment must include but not be limited to those factors listed in Appendix 2.

2.3 Route criteria

2.3.1 General

Route criteria are those limits that are location/route specific or arise from special/particular characteristics of the interaction between the rolling stock and the rail infrastructure.

2.3.2 Route standards

Train services must either:

- comply with the Interface Standards standard (MD-10-194); or
- have non-compliances with Interface Standards standard assessed and documented in a risk assessment and control measures determined and documented

Train services must have an Authority to Travel.



2.3.3 Train configurations

Rolling stock must be marshalled within a train to enable operation such that the risk of

- derailments,
- damage to rail infrastructure,
- train pull-aparts,
- injury to workers, public and passengers,

is acceptable to the Head of SEQ or the Head of Regional dependant on the relative network area.

2.3.4 Route criteria factors

Route criteria considered by a rolling stock operator in its application for train route acceptance and considered during risk assessment must include but not be limited to those factors listed in Appendix 3.

2.4 Train Route Acceptance process

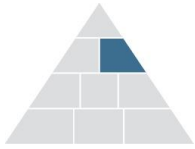
2.4.1 General

The steps in the train route acceptance process for external rolling stock operators are as follows:

- either have or apply for an access application submitted by rolling stock operator;
- develop or review (and amend if required) an interface risk management plan, this includes a risk assessment;
- carry out on-track testing if required;
- develop or review (and amend if required) an environmental investigation and risk management report (EIRMR);
- develop processes for train service compliance and to control risks;
- document train route acceptance process;
- finalise interface risk management plan and access agreement;

The steps in the train route acceptance process for new or changed Queensland Rail operated rolling stock are as follows:

- application to operate submitted by relevant manager;
- develop or review (and amend if required) a risk assessment that address relevant safety and environmental matters;
- comply with the Interface Standard standards;
- carry out on-track testing if required;



- develop processes for train service compliance and to control risks;
- document train route acceptance process;

The above steps may be undertaken concurrently, may overlap or may be dependent on the results of other steps.

2.4.2 Application requirements

Rolling stock operators (including Queensland Rail) seeking train route acceptance must apply to Queensland Rail and must include full details of the train service including:

- types of rolling stock to be used;
- maximum size of train (length and weight);
- train configurations (including limits where rolling stock may be attached/detached along the route);
- proposed routes;
- frequency of operation;
- communication systems;
- diversionary routes for regularly scheduled services;
- movements to and from depots or workshops;
- movements to and from rail infrastructure not managed by Queensland Rail;
- ad hoc movements if required;
- operational life of train service.

It is acceptable to specify the train configurations generically (e.g. a minimum / maximum number of a variety of rolling stock types in any order).

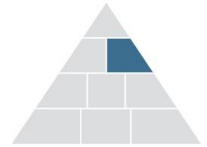
The application for train route acceptance may be part of a conceptual operating plan or a feasibility access inquiry to Queensland Rail or any other form required by Queensland Rail.

Where it is required to operate a train prior to a train route acceptance being issued (e.g. for testing), an Authority to Travel must be obtained. The Authority to Travel must be determined as far as possible using the train route acceptance process.

2.4.3 Interface Risk Management Plan

Any new external rolling stock operator must produce an interface risk management plan jointly with Queensland Rail detailing how the identified risks must be managed.

For a new or changed operation by an existing rolling stock operator, depending upon the level of change, a new interface risk management plan may be required or the existing one reviewed and any changes made if required.



Queensland Rail should be involved in the development of the plan at the earliest possible stage so that all issues are included and concerns resolved as soon as possible.

The interface risk management plan must detail each interface risk between the proposed train service, other train services, the rail infrastructure, workers, the public and the environment that were identified and assessed in a risk assessment, the agreed control measures and the responsibility for implementing each agreed control measure.

The plan must:

- identify which interface standards are applicable to the proposed train service;
- briefly outline how and when the control measures must be implemented and refer to any supporting documentation as necessary;
- include a justification for adoption of a standard where compliance with that standard is a control measure;
- include a justification for any intended non-compliance with any agreed interface standard or element thereof;
- document the control measures to be implemented and maintained for managing the safety and environmental risks identified in the Interface Risk Assessment and EIRMR;
- document the audit, inspection and review regime agreed with Queensland Rail;
- be updated as necessary to reflect changes that occur.

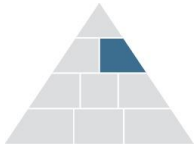
An interface risk management plan is not required to be completed for train services operated by Queensland Rail. However, a risk assessment must still be conducted jointly with relevant Queensland Rail stakeholders to identify risks posed by the operation of the train service to the rail infrastructure, other trains, workers, the public and the environment and determining suitable controls.

As a component of the interface risk management plan the external rolling stock operator must conduct a risk assessment jointly with Queensland Rail Commercial and Rail Access team to identify risks posed by the operation of the train service to the rail infrastructure, other trains, workers, the public and the environment. Queensland Rail must advise the rolling stock operator of the interface standards for the proposed train service.

If the train service does not meet the agreed interface standards, the non-compliances must be assessed in the risk assessment.

Rolling stock operators seeking train route acceptance must advise Queensland Rail of:

- known limitations applicable to the rolling stock that may affect its operation on the network (e.g. unusual design features, non-standard couplings etc);
- dangerous goods, out-of-gauge loads or other loadings that may have route restrictions;



- legislative requirements (e.g. competent authority restrictions on the carriage of dangerous goods).

Risks considered must include each of the following operational timeframes:

- pre-departure - planning for train service as well as immediate pre-departure timeframe;
- en-route - actual operation of the train service;
- post arrival - close of operations, stabling locations/ requirements, seasonal traffic stowage, etc;
- emergency - unanticipated incidents or accidents.

2.4.4 On-track testing

Validation of new rolling stock or new train configuration compliance with interface standards may require on-track testing.

Where this is required, the rolling stock operator must prepare, submit and have accepted by the relevant access area of Queensland Rail, an Operating Plan which may include a test plan including but not limited to:

- details of the factors being tested;
- detailed risk assessments;
- proposed control measures for each identified risk.

Prior to carrying out on-track tests of rolling stock or train configurations, the rolling stock operator must obtain an Authority to Travel issued by Interface Unit, Queensland Rail.

If testing indicates that there are non-compliances with the agreed interface standards, then the rolling stock operator must amend the application for train route acceptance detailing how the non-compliances must be addressed.

2.4.5 Environmental investigation and risk management report

The external rolling stock operator must prepare an environmental investigation and risk management report (EIRMR) that must identify:

- possible environmental risks/issues arising out of the introduction of the train service; and
- the strategies, approach and / or controls for the management of the identified environmental risks/issues risk.

The EIRMR shall consider relevant environmental management laws and any approved or proposed environmental authorities or approvals held by the external rollingstock operator.



A copy of the EIRMR must be provided to Queensland Rail. Queensland Rail must consider whether the EIRMR adequately addresses the issues and advise the rolling stock operator.

If Queensland Rail considers that the EIRMR does not adequately address the issues, the rolling stock operator must submit a proposal indicating how Queensland Rail's concerns must be addressed.

2.4.6 Required day of operations preparations

A rolling stock operator must have processes in place for:

- all train services when presented to the network to have a train route acceptance or an Authority to Travel for operation over the intended routes;
- communicating to its relevant workers conditions or restrictions applicable to the train route acceptance or an Authority to Travel and marshalling trains accordingly;
- validating each train service as complying with the train route acceptance or an Authority to Travel prior to commencing its journey.

A rolling stock operator that has prior train route acceptance for a train service must create and retain auditable records that confirm compliance of each train service with the train route acceptance.

2.4.7 Documentation

To enable the train route acceptance process to be auditable, the rolling stock operator must document each step in the process including the following:

- the proposed train service, its operational plan and the proposed routes;
- the agreed interface standards (including train criteria and route criteria) which the proposed train service is required to comply with;
- risks relevant to the operation of the train service on the proposed route identified in the risk assessment;
- hazards (including but not limited to non-conformances with the interface standards) associated with each identified risk;
- existing control measures for each identified risk;
- analysis and evaluation of each identified risk;
- proposed control measures for each identified moderate or higher risk;
- evidence of satisfactory results of compliance testing (certificates);
- confirmation that required control measures are in place;
- identification of the people performing the functions within the above process.



The rolling stock operator must only use people that have the competence to perform the functions identified, and must provide them with access to the documentation for individual train checking purposes.

The above documentation must be retained by the rolling stock operator for the duration of the train service.

2.4.8 Interpretation

If the external rolling stock operator needs an interpretation of any specific Queensland Rail requirement, it must be referred in the first instance to the General Manager Commercial and Rail Access to resolve. If the Queensland Rail operator needs an interpretation of any specific requirement, it must be referred to either the Head of SEQ or the Head of Regional (or their delegate) dependant on the relative network area.

2.5 Train Route Acceptance

Train route acceptance is confirmation that a train service is acceptable for operation on the nominated route on the network within the parameters defined in the train route acceptance for the purpose of safety and environmental risk management.

Queensland Rail must grant train route acceptance for a train service if the risk assessment shows that the risk to rail infrastructure, other trains, workers, the public and the environment is acceptable to either the Head of SEQ or the Head of Regional (or their delegate) dependant on the relative network (for internal) or the General Manager Commercial and Rail Access (for external).

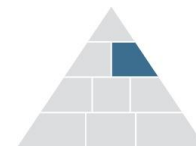
The train route acceptance may include conditions where non-compliances with the agreed interface standards (including train criteria and route criteria) exist provided that control measures agreed at the risk assessment are in place.

Conditions may include train configuration or operational restrictions to limit non-compliances to acceptable levels.

Where the train service comprises more than one train operation or train configuration, the train route acceptance must be based on the train service and train configuration that produces the most adverse effects.

Prior to being granted a train route acceptance, a rolling stock operator must certify that:

- the train complies with the interface standards agreed at the risk assessment
- the train service complies with the interface standards agreed at the risk assessment



- control measures agreed at the risk assessment have been or will be implemented prior to the train service operating
- the train service must operate in accordance with the train route acceptance

However, before the train is allowed to operate on the network, any external rolling stock operator must have an access agreement (incorporating an interface agreement) with Queensland Rail.

Where a train service is approved with conditions, such conditions may include obtaining an Authority to Travel for specified aspects of the train service.

An Authority to Travel may be issued for:

- individual train operations;
- repeated train operations;
- a group of train operations (e.g. similar trains running to various destinations).

as determined by the Interface Unit, Queensland Rail and may be for a limited time period.

A rolling stock operator's train service must comply with its train route acceptance or Authority to Travel throughout its journey.

Where a train route acceptance cannot be issued for a train service, the interface standards (including train criteria or route criteria) may be reviewed and rolling stock or rail infrastructure modified to comply.

Changes to rail infrastructure required for compliance must be managed by Queensland Rail.

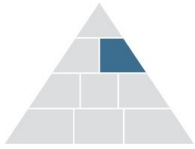
Changes to rolling stock required for compliance must be managed through the rolling stock authorisation process.

When a rolling stock operator or internal manager needs to make changes to the current train route acceptance, Queensland Rail may issue a new train route acceptance by revising as many of the steps mentioned above as are affected by the change.

2.6 Registration of Train Route Acceptance

The Queensland Rail Interface Unit must maintain a register of all train route acceptances issued.

Registration of a train route acceptance becomes effective when the information is entered in the register or as otherwise stated. The register must include details of the train service



(including rolling stock and train configuration), the approved routes and date of approval. The register must also include all train configuration restrictions, operational restrictions and other special conditions.

2.7 Validity of Train Route Acceptance

2.7.1 General

A train route acceptance must be suspended if:

- a train service is changed and becomes non-compliant with its train route acceptance;
- the expiry date applicable to a limitation or special condition has passed;
- a train service is permanently withdrawn from service;
- the access agreement has expired;
- a train service no longer complies (except for authorised variations) with the agreed interface standards;
- changes to the agreed interface standards (including train criteria or route criteria) alter the train configuration or operational restrictions.

Queensland Rail must advise rolling stock operators, of any intended changes to interface standards that will affect train criteria for a given route.

Such advice of infrastructure changes must be in sufficient time for rolling stock operators to review the parameters of the existing train service, and plan and implement any desirable changes at the time of the introduction of the infrastructure changes. This will require amendments to the train route acceptance, and the relevant access agreement.

The rolling stock operator must manage any changes as indicated above as per the requirements of this standard.

2.7.2 En-route

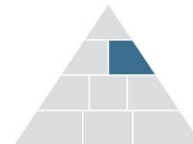
When a train service is detected en-route to be non-compliant with its train route acceptance, Queensland Rail must assess its non-compliance.

If the non-compliance is determined to be not safety critical (e.g. loss of engine power), the train may proceed providing it is safe to do so and other train services are not affected.

If the non-compliance is determined to be safety critical (e.g. load moved out-of-gauge, brake failure), the train must be stopped, and repairs carried out before continuing.

If it is necessary to clear a section before repairs can be completed, the train may proceed to the next siding or crossing loop where it can be stabled providing:

- it is safe to move the train;



- authority to move the train has been given by Queensland Rail;
- maximum speed is limited depending on the extent of non-compliance of the train service with the train route acceptance.

2.7.3 Emergencies

When an emergency involving a train occurs and it is necessary to clear the train or part of the train before repairs to the rail infrastructure or rolling stock can be completed, the train or part of the train may travel to the next siding or crossing loop where it can be stabled providing:

- it is safe to move the train;
- authority to move the train has been given by Queensland Rail;
- maximum speed is limited depending on the extent of damage to the rolling stock or infrastructure;

When an emergency occurs on the route that a train service is using and the rail infrastructure condition is changed (such as overhead wires down or a temporary deviation), Queensland Rail must assess the effect of the changed rail infrastructure on the train route acceptance.

Approval of an emergency Train Route Acceptance or Authority to Travel or variation to an existing Train Route Acceptance or Authority to Travel may only be approved by the General Manager (or their delegate) for the relevant Network Control Centre.

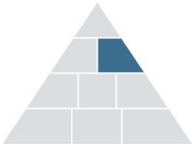
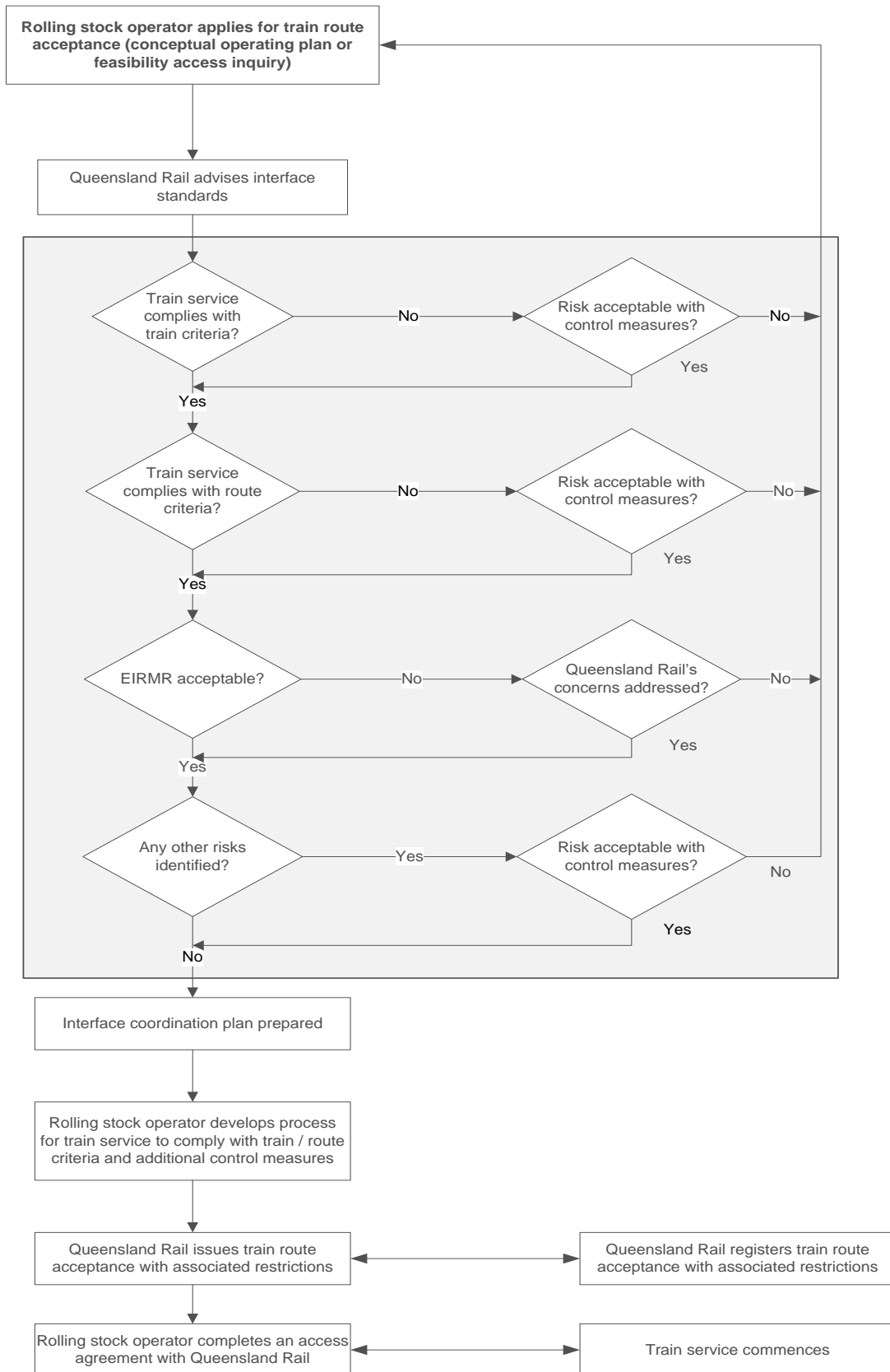


Figure 1 Overview of Train Route Acceptance Process





3 Terms and definitions

Please refer to the [Business Glossary](#) for terms and definitions used in this Standard.

4 Document History

Document Information

Current Version	4.1
First Released	01 July 2010
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Audience	All employees, contractors and consultants

*Contact for further information

Document Amendment History

Version	Date	Section(s) Amended	Summary of Amendment
4.1	31/08/2020	Whole document	Title changes for responsible personnel due to Accelerate structure.
4.0	14/01/2019	Whole document	Transfer of content to Core SEMS template
3.0	04/09/2017	2.4.1	Clarity for the requirements of the risk assessment
		2.4.3	Dot point moved from 2.4.1 to correct location
		2.4.5	Added requirements for environmental issues and the controls to manage this
		Appendix 1	Updated reference from Rail Safety Act 2010 to Rail Safety National (Queensland) Act 2017

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5 Appendices

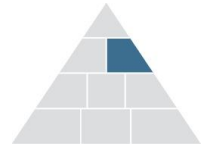
Appendix 1 – Related documents

Legal, regulatory and other obligation sources

Jurisdiction	Title
Commonwealth	N/A
State	Rail Safety National (Queensland) Act 2017
Other (Voluntarily adopted by Queensland Rail)	Various Australian Standards, Codes of Practice, Memoranda of Understanding / Agreement and Government Policies are also applicable.

Queensland Rail documents

Document type	Document title
Policy	MD-10-69 Safety Policy MD-11-1337 Risk Management Policy
Principle	MD-12-21 Rail Safety Principle
Standard	MD-11-1338 Risk Management Standard MD-12-219 Safety Change Management MD-10-194 Interface Standards MD-10-533 Operational Route Manual MD-11-1324 Safety Interface Coordination
Strategy / Plan	N/A
Specification / Framework	MD-13-561 Specification Risk Assessment Criteria
Procedure	N/A

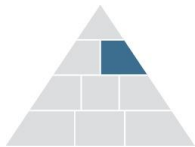


Appendix 2 – Train Criteria Factors

Train criteria factors to be considered by a rolling stock operator in its application for train route acceptance must include but not be limited to the following:

- Rolling stock brake systems;
- Rolling stock compatibility with the electrical traction system;
- Rolling stock compatibility with the signalling system;
- train safety systems;
- maximum speed;
- forces on the track (including out-of-balance forces such as hammer blow or lateral forces induced by excessive buff or draft forces);
- static axle loads;
- rolling stock maintenance requirements;
- audible warning devices;
- communication systems and processes;
- compatibility with other rolling stock operator's rolling stock (in an emergency);
- wheel profiles;
- draw-gear strength.

Queensland Rail must advise the rolling stock operator of the interface standards for the proposed train service.



Appendix 3 – Route Criteria Factors

Route criteria factors to be considered by a rolling stock operator in its application for train route acceptance must include but not be limited to the following:

- train brake systems and stopping distances;
- rolling stock compatibility with the electrical traction system (including pantograph separation and generation of harmonics);
- rolling stock compatibility with the signalling system;
- train safety systems;
- allowable rolling stock outline;
- allowable loading outline;
- allowable axle loads;
- grades and the ability of the train to stop, hold and start;
- train marshalling;
- length of crossing loops;
- facilities for passengers (including emergency detraining);
- facilities for freight handling;
- detection and/or removal of overloads;
- contamination of ballast (eg oil, fuel, ashes, load spillage);
- safeworking system;
- communication systems and processes;
- locomotive load tables;
- loading security;
- dangerous goods;
- speed of trains;
- draft and buff forces;
- track standards (for example - rail profile and hardness, longitudinal resistance to train braking forces, rail gauge, maintenance tolerances);
- track curve and cant;
- operation of signalling / track circuits;
- ability to maintain train path;
- train handling (risk of derailment);
- legislative requirements;
- noise;
- environment;
- water quality;
- waste management;
- air pollution;
- rolling stock limitations.
- stowage requirements/ locations

Queensland Rail must advise the rolling stock operator of the interface standards for the proposed train service.