Standard

Train Route Acceptance

MD-10-170

QUEENSLAND RAIL OFFICIAL

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Policy: Safety Policy

QueenslandRail

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1 Purpose

This standard sets the requirements for requesting, authorising and registering train route acceptances for the operation of Rollingstock on Queensland Rail infrastructure.

1.1 Scope

1.1.1 What is in scope

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

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

A TRA for train services proposed for operation on the network must only be in effect if:

1. a valid access agreement and Queensland Rail approved operating plan is in place (for Third Party Rolling stock operators)
2. a risk management plan (RMP) accepted by Queensland Rail is in place;
    a. for Third Party operators in the form of an Interface Risk Management Plan
    b. for Queensland Rail operations, in a form complying with Queensland Rails risk management framework
3. the risks associated with the operation are accepted by the relevant risk owner in accordance with Risk Assessment Criteria MD-13-561,
4. the rollingstock is certified in accordance with Rollingstock Operator certification processes.

Train route acceptance may be issued subject to restrictions or conditions.

The Queensland Rail Train Control and Planning Interface team shall have procedures in place to engage the relevant Discipline Head regarding non-compliances or requirements for operational restrictions where required.

Restrictions and conditions must be recorded on the TRA and in the associated operating plan, and treatment referenced as appropriate in the RMP. A train service or configuration that exceeds the restrictions, conditions or other limits imposed must not operate on the Queensland Rail network.

For temporary or short term operations, an Authority to Travel may be provided in lieu of a Train Route Acceptance. Requirements for acceptance of risk and approval for operations must still be met.

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.

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

2.2.2 Rolling stock standards

Rolling stock must be certified by the rolling stock operator against Interface Standards Standard MD-10-194.

Any non-compliances must be clearly documented and included in, or attached to, the certification documentation provided to Queensland Rail for review and assessment by the Train Operations and Planning Interface team.

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.

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.

2.3.2 Route standards

Train services must either:

- comply with Interface Standards Standard MD-10-194 ; or
- have non-compliances assessed and documented for review and assessment by the Train Operations and Planning Interface team.

2.3.3 Train configurations

Rolling stock must be marshalled within a train to enable operation such that the following risks are managed to a level that is safe So Far As Is Reasonably Practicable (SFAIRP):

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

Train configuration must be in accordance with the operators SMS, the RMP and the operating plan.

2.4 Train Route Acceptance process

2.4.1 General

The process steps to obtain a train route acceptance may be undertaken concurrently or may be dependent on the results of other steps. The process is as follows:

1) have, or apply for, network access, or (for QR operations) approval to operate
2) develop or review (and amend if required) an interface risk management plan
3) register rollingstock
4) if required, carry out on-track testing in accordance with an Authority to Travel
5) develop or review (and amend if required) an environmental investigation and risk management report (EIRMR)
6) finalise interface risk management plan and access agreement

2.4.2 Application requirements

Rolling stock operators seeking train route acceptance must apply to Queensland Rail. The form of application for Train Route Acceptance may be an operating plan or any other form specified by Queensland Rail as required on a case by case basis.

The application must contain 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).

2.4.3 Risk Management Plan

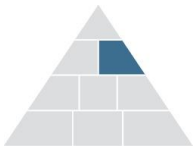
The RMP must detail how the identified risks will be managed and include controls for approved non-compliances.

RMP's must be updated or renewed when operations change, or new operations are proposed.

The 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, the agreed control measures and the responsibility for implementing each agreed control measure. The risk management plan will be supported by subordinate documents, which may be referenced to avoid duplication.

The plan and supporting documents 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.
- 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.

The RMP shall be read in conjunction with the Operating Plan and TRA where details of treatments are contained in those supporting documents.

Third Party Operators must undertake a joint risk assessment with Queensland Rail.

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 detail how the non-compliances will be addressed.

2.4.5 Environmental investigation and risk management report

The 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 manage the issues, the rolling stock operator must submit a proposal that demonstrates how Queensland Rail's concerns will be addressed.

2.4.6 Required day of operations preparations

A rolling stock operator must have processes in place for:

- ensuring all train services entering the network 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 Authority to Travel;
- validating each train service as complying with the train route acceptance or Authority to Travel prior to commencing its journey.

2.4.7 Documentation

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.

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 suitably competent personnel to perform necessary audit functions, 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 initially be referred 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 the relevant requirement owner .

2.5 Registration of Train Route Acceptance

The Queensland Rail Train Control and Planning Interface team 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.

2.6 Validity of Train Route Acceptance

2.6.1 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.

2.6.2 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.

2.6.3 Emergencies

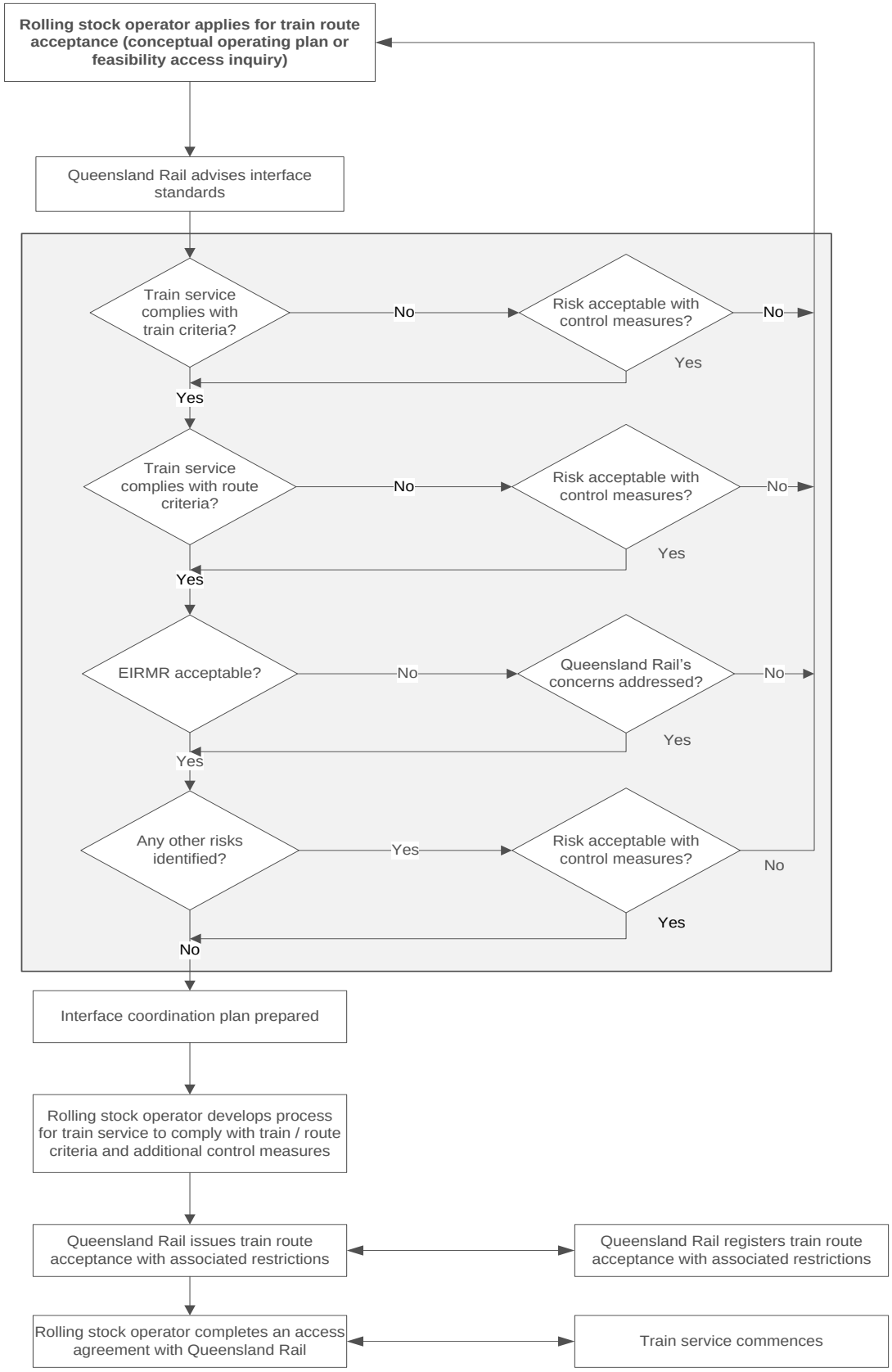
When an emergency involving a train occurs and it is necessary to clear the train or part of the train before repairs to the rail infrastructure or rolling stock can be completed, the train or part of the train may travel to the next siding or crossing loop where it can be stabled providing:

- 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 approved 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	5.0
First Released	01 July 2010
Last Updated	12 December 2022
Review Frequency	Every 3 years
Review Before	12 December 2025
Document Authoriser	Chief Executive Officer (CEO)
Functional Owner	Safeworking Discipline Head
Content Developer*	Principal Adviser Safeworking
Review Stakeholders	Supply Chain South Operational Performance, Rollingstock Engineering
Audience	All employees, contractors and consultants

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Document Amendment History

Version	Date	Section(s) Amended	Summary of Amendment
5.0	12/12/2022	1	Removal of irrelevant information to improve clarity
		2	Removal of duplicate requirements and erroneous process information. Inclusion of a requirement for Train Control and Planning and Interface team to have a process to engage the relevant Discipline Head where required. Combined various terms for risk documentation into requirement for a Risk Management Plan.
		3	Train Route Acceptance process moved to new section 3. Duplicate information removed and structured for ease of reading.
4.1	31/08/2020	Whole document	Title changes for responsible personnel due to Accelerate structure.

5 Appendices

Appendix 1 – Related documents

Legal, regulatory and other obligation sources

Jurisdiction	Title
Commonwealth	N/A
State	Rail Safety National Law (Queensland) 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 MD-18-393 Amendments to the Safety and Environment Management System
Strategy / Plan	N/A
Specification / Framework	MD-13-561 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.