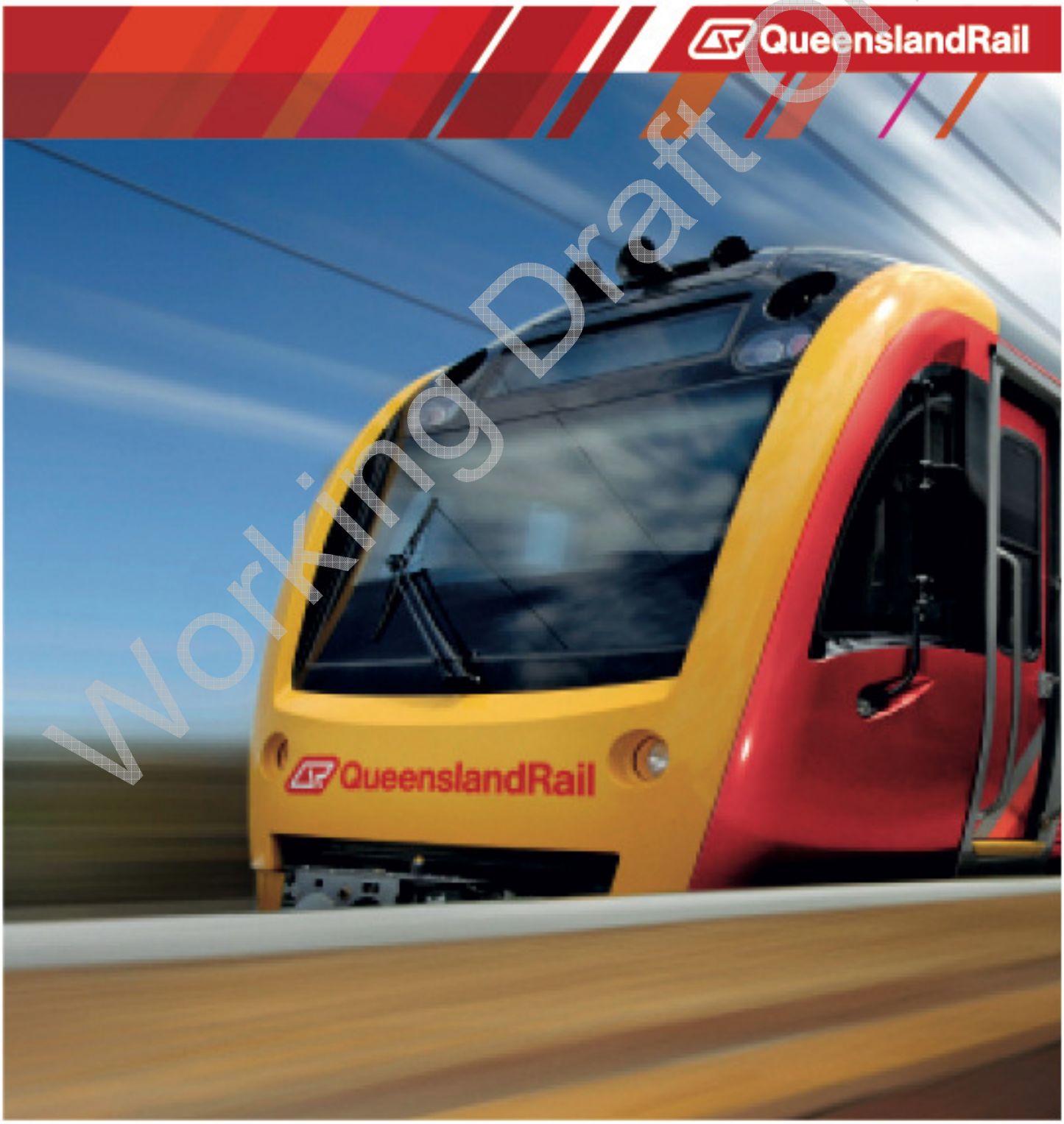
Operating Requirements Manual
May 2012

Version 1



Contents

1 Introduction

This document sets out practices, standards, systems, protocols, requirements, rules, policies and other information in relation to or in connection with Train Control and the access to and use of the Network by Operators (including interface management and coordination requirements, safeworking procedures, safety standards, emergency and investigation procedures, requirements for the management of Network Incidents and environmental requirements).

The Glossary in section 9 sets out how this document should be interpreted and the meaning of certain terms and acronyms.

Where this document refers to standards or other documents that belong to Queensland Rail, Queensland Rail will make the relevant standard or document available to Operators.

This document will be updated by Queensland Rail from time to time. Operators should always refer to the current version of this document. Queensland Rail will maintain the current version of this document on its website.

2 Interface Risk Management

2.1 Interface Risk Management Plan

An **IRMP**, in relation to an Operator, is an interface risk management plan. An IRMP typically:

(a) identifies the Interface Risks associated with the Operator's proposed operations;

(b) specifies the control measures agreed between Queensland Rail and the Operator to manage those Interface Risks to an acceptable level, including:

(i) the standards, procedures and systems relevant to the management of the Interface Risks;

(ii) the relevant Interface Standards;

(iii) requirements for monitoring, awareness, competence and complaint handling; and

(iv) the audit, inspection and review regime;

(c) identifies the party responsible for implementing each control measure under the IRMP; and

(d) addresses requirements relevant to an interface agreement between Rail Transport Operators under the TRSA and the requirements under all other Laws relevant to the management of Interface Risks.

A reference above to "operations" includes "railway operations" as defined in the TRSA.

Typically, an Interface Risk Assessment will be undertaken, and an IRMP will be developed, as part of the negotiation of an Access Agreement. The Standard Access Agreement, for example, assumes this position.

2.2 Interface Risk Management Process

For the purposes of any review or amendment (or, if applicable, any undertaking or development) of an Interface Risk Assessment or an IRMP:

(a) Queensland Rail and the Operator must:

(i) each nominate appropriately qualified and experienced representatives;

(ii) make all relevant information available to the other on a timely basis; and

(iii) use best endeavours to ensure that the information is accurate; and

(b) Queensland Rail and the Operator will each provide relevant information to the other to assist with the identification of risks, for example:

(i) Queensland Rail will provide the Operator with:

(A) a copy of any relevant environmental authorities held by Queensland Rail;

(B) a copy of any relevant environmental reports;

(C) a copy of Queensland Rail's Code of Practice for Railway Noise Management;

(D) any currently applicable noise levels or limits;

(E) particulars of noise complaints and enforcement actions; and

(F) any other information from Queensland Rail's Environmental Management System that Queensland Rail considers relevant to the management of environmental risks; and

(ii) the Operator will provide Queensland Rail with:

(A) details of any additional hazards, risks and non-compliances;

(B) the types of products or commodities to be transported;

(C) details of any environmentally sensitive areas (including waterways) that may potentially be affected by the Operator's activities on the Network;

(D) the locations of any waterways;

(E) the anticipated environmental impact of the Operator's proposed activities;

(F) any approved or proposed environmentally relevant activities (as defined under the *Environmental Protection Act 1994* (Qld)); and

(G) any information in relation to any thing referred to in section 4.

2.3 Risks to the environment

Without limitation to the matters that must be considered and addressed in any Interface Risk Assessment and any IRMP, an Interface Risk Assessment and an IRMP must, in relation to risks to the environment:

(a) comply with Queensland Rail's Code of Practice for Railway Noise Management and all other relevant noise management standards, regulations and other relevant Laws including any currently applicable noise levels or limits;

(b) where noise from the Operator's Train Services may cause or contribute to applicable noise levels being exceeded, specify measures that the Operator must comply with to prevent that occurring and, if applicable, other relevant measures agreed to by Queensland Rail;

(c) include provisions requiring the Operator to comply with any community liaison requirements of any Law or Authority or of Queensland Rail;

(d) where the IRMP requires community meetings, include a provision requiring the Operator to invite Queensland Rail to be represented at those meetings;

(e) include provisions requiring each of Queensland Rail and the Operator:

(i) to notify the other of any noise or other complaints pertaining to the environment in relation to or in connection with the Operator's Train Services as soon as practicable after such a complaint is received; and

(ii) to cooperate in investigating and responding to such complaints;

(f) include provisions requiring the Operator to address Contamination, including:

(i) an assessment of the impact of the Operator's operations on Contamination;

(ii) detailed control measures to prevent Contamination; and

(iii) a requirement to comply with all relevant Contamination standards, regulations and other relevant Laws; and

(g) include provisions requiring the Operator to have an Environmental Management System in place prior to commencing Train Services, that:

(i) addresses the issues raised in the IRMP and contains procedures for implementing the control measures set out in the IRMP;

(ii) addresses all relevant Laws including the requirements of all Authorisations held by Queensland Rail that are relevant to the Operator's Train Services; and

(iii) identifies systems (including audit systems) and procedures to address all relevant risks to the environment and compliance with all relevant Laws.

(iv) include provisions requiring the Operator:

(A) to consider the likelihood of its Train Services causing or contributing to Environmental Harm or nuisance, setting out measures and processes to prevent such Environmental Harm and nuisance and to comply with all relevant environmental Laws (including the *Environmental Protection Act 1994* (Qld); and

(B) to conduct baseline monitoring where it is necessary to establish benchmarks that will allow for a comparison of environmental values pre and post access to the Network by the Operator.

Where Queensland Rail has baseline data available:

(a) Queensland Rail may provide the baseline data to the Operator; and

(b) if no further baseline monitoring is undertaken by the Operator, Queensland Rail's baseline data will be taken to be accurate baseline data.

To the extent that no baseline data is available, the Network will be taken to currently meet all environmental standards for the purpose of determining cause of any future environmental affects.

3 Safeworking Procedures and Safety Standards

3.1 Interface Standards and Safeworking Procedures

In addition to the safeworking procedures, safety standards and other requirements indentified in any IRMP applicable to an Operator, the Operator must comply with all instructions and authorities issued by Queensland Rail from time to time in relation to the safety of any person or property or the environment.–

Queensland Rail's safeworking procedures and safety standards form part of Queensland Rail's safety management system and may be altered by Queensland Rail from time to time in accordance with document control procedures (see section 7.3).

3.2 Safeworking Forms

After execution of an Access Agreement with an Operator, Queensland Rail will provide that Operator with copies of all safeworking forms that must be completed and lodged with Queensland Rail from time to time in order for the Operator to operate on the Network.

If the Operator requires additional copies of safeworking forms, electronic copies can be downloaded from Queensland Rail's website.

3.3 High Visibility Clothing

The Operator must ensure that the Operator's Associates and its visitors comply with Queensland Rail Standard MD-12-129 High Visibility Clothing.

3.4 Access to the Rail Corridor

(a) An Operator must, and must ensure that the Operator's Associates and its visitors, comply with Accessing the Rail Corridor – SAF/STD/0144/SWK.

(b) For clarity, and without limitation to the requirements set out in Accessing the Rail Corridor – SAF/STD/0144/SWK, the Operator must not allow any person to access the "Rail Corridor" unless:

(i) the CASF submitted by the Operator in accordance with Accessing the Rail Corridor– SAF/STD/0144/SWK is approved by Queensland Rail's Network Planning section; and

(ii) the Operator conducts a worksite safety briefing, which communicates the approved controls from the CASF to all of the Operator's Associates.

3.5 En Route Locomotive Provisioning

An Operator must ensure that no En Route Locomotive Provisioning occurs in respect of the Operator's Trains except as otherwise agreed between Queensland Rail and the Operator.

3.6 Competence of Workers

(a) The Operator must ensure that each of the Operator's Associates holds and maintains all qualifications, accreditations and competencies required under any Law or under an IRMP in relation to any entry on any railway corridor managed or controlled by Queensland Rail.

(b) On request by Queensland Rail, the Operator must provide to Queensland Rail the names and position titles of all of the Operator's Associates who, from time to time, enter on any railway corridor managed or controlled by the Queensland Rail.

4 Incident and Emergency Response

4.1 Incident/Emergency Management

(a) The Operator must not, by act or omission, do or fail to do anything inconsistent with, or that would cause or contribute to Queensland Rail failing to comply with, Emergency Management Standard – MD-12-208.

(b) The Operator's Emergency Management Plan must be consistent with Emergency Management Standard – MD-12-208 and must include:

(i) detailed procedures for the management of Incidents and emergencies, including all actions that must be taken to prevent, minimise or mitigate any threat or danger to any person, property or the environment;

(ii) specific action plans for preventing or, if not preventable, minimising and mitigating Environmental Harm caused or contributed to by an Incident;

(iii) requirements for immediate and appropriate action to prevent or, if not preventable, minimise and mitigate the adverse affects caused or contributed to by any Incident;

(iv) requirements for relevant Authorities to be informed immediately of any Incident;

(v) the method for the clean up of any substance or thing the release of which is caused or contributed to by an Incident and may have adverse affects on any person, property or the environment; and

(vi) requirements for all Incidents and all measures taken in response to Incidents to be recorded on a central register.

4.2 Incident/Emergency Response

(a) Queensland Rail is responsible for the overall coordination and management of the response to a Network Incident (including notifying all relevant emergency services) so that Recovery and Restoration are effected as soon as practicable. For clarity, the Operator must comply with all directions given by Queensland Rail during the Recovery and Restoration.

(b) Without limitation to the terms of the Operator's Access Agreement, in relation to an Incident, the Operator:

(i) must ensure a timely Recovery in accordance with the Operator's Emergency Management Plan; and

(ii) must assist Queensland Rail with Restoration.

(c) During Recovery and Restoration, the Operator must do everything necessary to prevent or, if not preventable, minimise and mitigate any property damage or delays to the recommencement of Train Movements.

4.3 Assistance in investigations

If Queensland Rail undertakes an investigation in respect of a Major Incident or a General Incident (as defined in the Incident Investigation Standard – MD-12-135), then the relevant

Operators must provide Queensland Rail with information and assistance as is reasonably required by Queensland Rail for the purpose of that investigation.

5 Authorisation of Rolling Stock and Train Configurations

(a) The Operator must ensure that any Certification provided to Queensland Rail complies with the requirements set out in Rolling Stock Authorisation for the Queensland Rail Network – NBOI/INF/001.

(b) Queensland Rail may take into account any matters referred to in Rolling Stock Authorisation for the Queensland Rail Network – NBOI/INF/001 in deciding whether Queensland Rail is satisfied with any Certification provided to Queensland Rail by an Operator for the purpose of seeking Queensland Rail's authorisation of Rolling Stock or a Train Configuration.

6 Train Control and Network Planning

6.1 Responsibility for compliance

The Operator must ensure the Operator's Controller and the Operator's Train crew comply with this section 6.

6.2 Operator Requirements

6.2.1 Operator's Controller

(a) The Operator must provide to Queensland Rail (and keep current at all times) the details for the Operator's Controller including name, position and contact details (including mobile and after-hours contact details). The Operator must not operate Train Services unless Queensland Rail has current details for the Operator's Controller.

(b) The Operator must ensure, and not operate Train Services unless, the Operator's Controller is:

(i) contactable by Queensland Rail Train Controllers; and

(ii) able to fully comply with this section 6,

at all times when any of the Operator's Trains are on the Network and at least 2 hours prior to any such Train entering the Network.

6.2.2 Consultation between Queensland Rail Train Controller and the Operator's Train crew

(a) The relevant Queensland Rail Train Controller and the Operator's Train crew must consult and seek to agree upon the location of meal breaks and personal needs breaks for the Train crew.

(b) If the Operator's Train crew requires relief, the Train crew must only request relief from the Operator's Controller.

(c) Prior to a Train reaching its destination, the Operator's Controller must:

(i) determine whether the Train crew on the Train requires relief;

(ii) consult with the relevant Queensland Rail Train Controller to determine an appropriate time and location for relief;

(iii) arrange relief for the Train crew; and

(iv) advise the Train crew of the relief arrangements.

(d) If members of an Operator's Train crew:

(i) are rostered on "change jobs";[1] or

(ii) need to change during a Train Service,

[1] A Train crew is rostered on "change jobs" where, for example, the Train crew of Train A (which is travelling from X to Z) swaps Trains with the Train crew of Train B (which is travelling from Z to X) at some appropriate point between X and Z, with the result that the relevant Train crews start and end their shifts at the same location.

then the Train crew must notify the relevant Queensland Rail Train Controller of this requirement prior to the Train entering the Network. The Queensland Rail Train Controller must notify the Train crew of the time and location for that change.

(e) If the Operator's Controller or the Train crew is unable to contact the other directly, a Queensland Rail Train Controller may (but is not obliged) to relay a message from one to the other.

6.2.3 Procedures for entering and exiting the Network

(a) The Operator's Controller must notify the relevant Queensland Rail Train Controller of the anticipated departure time of the Operator's Train at least two hours before the scheduled departure time of that Train. If the anticipated departure time changes, the Operator's Controller must, immediately on becoming aware of the change, notify the Queensland Rail Train Controller of the revised anticipated departure time.

(b) The Operator's Train crew must notify the relevant Queensland Rail Train Controller when the Operator's Train is ready to enter the Network.

(c) Prior to the Train entering the Network, the Operator's Controller must give the Train crew:

(i) the scheduled times for that Train Service for that day; and

(ii) any Train Notices relevant to that Train Service.

(d) The Operator must comply with the procedures for shunting, entering and exiting yards and any other terminating yard procedures provided to the Operator by Queensland Rail from time to time.

6.2.4 Radio Procedures

(a) Queensland Rail will make the Train Control Radio Channel Coverage Maps listed below available to the Operator on the Queensland Rail's website:

(i) http://xsite/InetDocs/ICSSearch/PDF/tel/TF00935_001.pdf;

(ii) http://xsite/InetDocs/ICSSearch/PDF/tel/TF02840_001.pdf;

(iii) http://xsite/InetDocs/ICSSearch/PDF/Tel/TF02846_001.pdf; and

(iv) http://xsite/InetDocs/ICSSearch/PDF/tel/TF02838_001.pdf.

(b) For the purposes of the Operator ensuring that its Train drivers are contactable by Queensland Rail Train Controllers, the Operator must ensure that the relevant communications system used by its Train drivers complies with the relevant requirements set out in the relevant IRMP.

6.3 Operator's notifications to Queensland Rail Train Controller

(a) If the Operator's Controller or the Train crew become aware of any event or circumstance that may affect the performance of the Operator's Train, regardless of whether the Train has entered the Network, the Operator's Controller or the Train crew must notify the relevant Queensland Rail Train Controller of the event or circumstance, including the following details:

(i) the Train number;

(ii) the nature of the event or circumstance;

(iii) the likely impact on the Train's performance.

(b) At least 15 minutes prior to the departure of the Operator's Train, the Operator's Controller must:

(i) provide the relevant Queensland Rail Train Controller with the following information:

(A) information regarding the Train crew, including planned relief locations and details of any mandatory breaks;

(B) any En Route Locomotive Provisioning requirements, but only if those requirements have previously been agreed in writing with Queensland Rail;

(C) if the Train will be in Direct Traffic Control Territory, the start-up code[2] of the leading locomotive; and

(ii) enter the following information about the Train (**Train List**) into Queensland Rail's nominated information system in accordance with any procedures specified by Queensland Rail from time to time:

(A) the Rolling Stock operator for the Train Service who is "accredited" under the TRSA;

(B) the Access Agreement under which the Train is operating;

(C) the identification number for the applicable TRA or ATT;

(D) the number of the Train;

(E) the origin of the Train;

(F) the comparison Train length in metres (including locomotives);

(G) the number of items of Rolling Stock in the Train;

(H) the gross mass of the Train in tonnes;

(I) the gross trailing load of the Train in tonnes;

(J) the motive power employed by the Train; and

(K) the following information on each item of Rolling Stock in the Train (in the order in which the items of Rolling Stock will be placed, leading end first):

(1) the Rolling Stock classification;

(2) the Rolling Stock number;

(3) the Rolling Stock type (if a locomotive, whether hauling or otherwise);

(4) the gross mass of the Rolling Stock in tonnes;

(5) a description of the goods carried in the Rolling Stock (including any Dangerous Goods) by class and location on the Train;

[2] The start-up code for a locomotive that is subject to Direct Traffic Control is a unique code determined and allocated by Queensland Rail for the purposes of Direct Traffic Control.

(6) the destination of each item of Rolling Stock; and

(7) any known issues or defects, for example Rolling Stock that is 'out-of-gauge' or that has had its brakes cut out.

(c) If the Operator's Controller cannot comply with section 6.3(b)(ii) because the nominated information system is not accessible by the Operator's Controller, then the Operator's Controller must:

(i) at least 15 minutes prior to the departure of the Operator's Train, notify the relevant Queensland Rail Train Controller of at least the following information:

(A) the Rolling Stock operator for the Train Service who is "accredited" under the TRSA;

(B) the Access Agreement under which the Train is operating;

(C) the identification number for the applicable TRA or ATT;

(D) the number of the Train;

(E) the comparison Train length in metres (including locomotives);

(F) the gross trailing load of the Train in tonnes;

(G) the following information on each item of Rolling Stock in the Train (in the order in which the items of Rolling Stock will be placed, leading end first);

(1) the Rolling Stock classification; and

(2) the Rolling Stock number;

(H) any known issues or defects, for example Rolling Stock that is 'out-of-gauge' or that has had its brakes cut out; and

(I) details of any Dangerous Goods; and

(ii) as soon as possible after the nominated information system becomes accessible by the Operator's Controller, enter the Train List for the relevant Train into Queensland Rail's nominated information system in accordance with any procedures specified by Queensland Rail from time to time.

(d) If the mass, length or configuration of the Train alters during the course of a journey, the Operator's Controller must notify the relevant Queensland Rail Train Controller of the new mass, length and configuration. The Operator's Controller must ensure any changes in a Train List are updated in Queensland Rail's nominated information system in accordance with any procedures specified by Queensland Rail from time to time.

6.4 Provision of information by Queensland Rail Train Controller

(a) If a Queensland Rail Train Controller becomes aware of any event or circumstance that will materially adversely affect the performance of the Operator's Train, the Queensland Rail Train Controller must notify the Operator's Controller of the event or circumstance, including the following details:

(i) the Train number;

(ii) the nature of the event or circumstance; and

(iii) the likely impact on the Train's performance.

(b) The Queensland Rail Train Controllers located in Brisbane and Townsville must provide the Operator's Controller with a current ETA, for each of the Operator's Train Services, at the relevant Operator's depot station or destination, as applicable, in that Queensland Rail Train Controller's relevant Network Control Region:

(i) every two hours; and

(ii) at additional points in time, when reasonably requested by the Operator or an Operator's Associate (including the Operator's Controller).

(c) If, for whatever reason, the ETA of a Train Service varies by more than 20 minutes during a two hourly interval between notifications given under section 6.4(b), the relevant Queensland Rail Train Controller must inform the Operator's Controller of the variation as soon as reasonably practicable.

(d) Whenever reasonably requested by the Operator's Train crew or the Operator's Controller, the relevant Queensland Rail Train Controller must provide information to the Operator regarding events that will materially adversely impact on the performance of the Operator's Train to the extent that such information is known and available to the Queensland Rail Train Controller.

6.5 Train Control Centres

Queensland Rail will provide Train Control for the Operator's Trains through the Network Control Centres and Network Control Regions. A map showing the Network Control Centres and Network Control Regions can be viewed at:

*https://*portal.qr.com.au/ResourceCentre/BusinessProcess/NetworkSystems/Maps%20%20Schema/Network%20Management/Network%20Information%20Booklet.pdf

6.6 Network Interface Points between QR National and Queensland Rail

A map showing the Network Interface Points between the QR National and the Queensland Rail rail networks can be viewed at:

https://portal.qr.com.au/ResourceCentre/BusinessProcess/NetworkSystems/Maps%20%20Schema/Network%20Management/Network%20Information%20Booklet.pdf

6.7 Train Control Boards - Rail Centre 1 Network Control Centre and Townsville Network Control Centre

(a) Train Operations, Traffic Management or Incident Management

Enquiries by Operators regarding train operations, traffic management or Network Incident management in relation to line sections that are controlled by Rail Centre 1 Network Control Centre must be directed to:

Regional Transit Manager Brisbane Railcentre 1

Phone: 81-1662 (Rail)

External: (07) 3235 1662

Emergency Mobile Contact: 0409 499 829

Enquiries by Operators regarding train operations, traffic management or Network Incident management in relation to line sections that are controlled by Townsville Network Control Centre must be directed to:

Regional Transit Manager Townsville

Phone: (07) 4772 8207

Emergency Mobile Contact: 0428 878 545

(b) Scheduling & Infrastructure Planning

Scheduling and infrastructure planning requirements for line sections that are controlled by Rail Centre 1 Network Control Centre or Townsville Network Control Centre are set out in the following documents:

(i) Network Business Master Train Plan Protocols NA-PRO-001;

(ii) Network Business Daily Train Plan Protocols NA-PRO-002; and

(iii) Network Business Possession Planning Protocols NA-PRO-003.

The Operator must comply with the above documents.

Enquiries by Operators regarding scheduling or infrastructure planning in relation to line sections that are controlled by Rail Centre 1 Network Control Centre must be directed to:

Manager Freight Planning

Freight Business, Queensland Rail

5th floor, Rail Centre 1, Brisbane

Phone: (07) 3235 1613

Enquiries by Operators regarding scheduling or infrastructure planning in relation to line sections that are controlled by Townsville Network Control Centre must be directed to:

Manager Freight Planning

Network Business, Queensland Rail

5th floor, Rail Centre 1, Brisbane

Phone: (07) 3235 1613

6.8 Train Control Boards - Mayne Network Control Centre

(a) Train Operations, Traffic Management or Incident Management

Enquiries by Operator regarding train operations, traffic management or Network Incident management in relation to line sections that are controlled by Mayne Network Control Centre should be directed to:

Network Control and Service Delivery Supervisor Mayne

Phone: (07) 3606 5970

Emergency Mobile Contact: 0408 703 227

(b) Scheduling

Scheduling requirements for line sections that are controlled by Mayne Network Control Centre are described in the following documents:

(i) Network Business Master Train Plan Protocols NA-PRO-001; and

(ii) Network Business Daily Train Plan Protocols NA-PRO-002.

The Operator must comply with the above documents.

Enquiries by Operators regarding scheduling in relation to line sections that are controlled by Mayne Network Control Centre must be directed to:

(i) for scheduling enquiries relating to MTPs:

Manager Service Planning

A Block Mayne Rail Complex

33 Lanham Street, Bowen Hills

Phone: (07) 3606 5125

(ii) for scheduling enquiries relating to DTPs:

Senior Train Planner

A Block Mayne Rail Complex

33 Lanham Street, Bowen Hills

Phone: (07) 3606 5178

(iii) for scheduling enquiries relating to infrastructure maintenance:

Manager Possession Planning Unit

D Block Mayne Rail Complex

33 Lanham Street, Bowen Hills

Phone: (07) 3606 5111

(iv) for all other scheduling enquiries:

Manager Freight Planning

Network Business, Queensland Rail

5th floor, Rail Centre 1, Brisbane

Phone: (07) 3235 1613

7 Commercial Consideration

7.1 Forecasts

(a) Within 30 days after receiving a written request from Queensland Rail, the Operator must provide Queensland Rail with a forecast of the Train Services that the Operator proposes to run on the Network in addition to its current contracted services, representing the Operator's best estimate, on a monthly basis for the 12 month period specified by Queensland Rail in its request, of:

(i) the number and frequency of those Train Services;

(ii) the gross tonnage that the Operator will transport;

(iii) the average number of gross tonnes per Train that the Operator will transport; and

(iv) any changes in Rolling Stock or Train Configuration that may vary one or more of the above estimates.

(b) Queensland Rail must not make a request referred to in section 7.1(a) more than once in any six month period.

(c) Within 30 days after receiving a request from the Operator, Queensland Rail must use reasonable endeavours to provide the Operator with a forecast of any construction or maintenance work proposed to be carried out on the Network in the next 12 months that may, in Queensland Rail's opinion, materially adversely affect the Operator's operations.

(d) The Operator must not make a request referred to in section 7.1(c) more than once in any six month period.

7.2 Safety Notices

7.2.1 Safety Alerts

(a) If, in Queensland Rail's opinion, a safety incident has or may occur that affects, or may affect, Queensland Rail or any Operator, then Queensland Rail may give the relevant Operator(s) notice of that incident (**Safety Alert**).

(b) A Safety Alert will provide details of the relevant safety incident and indicate any requirements that must be complied with by the Operator(s).

(c) On receipt of a Safety Alert, the Operator must ensure that the relevant Operator's Associates are aware of the contents of the Safety Alert.

7.2.2 Weekly Notices

(a) Queensland Rail gives Weekly Notices to its employees. Amongst the information set out in those Weekly Notices is information about permanent or temporary changes to safety requirements (including information relevant to safety matters). Such a change is published in a Weekly Notice prior to the date on which the change takes effect.

(b) However, if Queensland Rail is not issuing a Weekly Notice prior to a time when Queensland Rail considers that a relevant change needs to take effect, then Queensland Rail will include that change in the relevant Train Notice(s) and will subsequently publish the change in the next Weekly Notice.

(c) On the same day that a Weekly Notice is given to Queensland Rail's employees, Queensland Rail will also make available to the Operator an abridged Weekly Notice that extracts information about permanent or temporary changes to safety requirements (including information relevant to safety matters).

(d) The Operator must ensure that each Operator's Associate is aware of, and complies with, the information in each abridged Weekly Notice relevant to that Operator's Associate's responsibilities and activities.

7.2.3 Train Notices

(a) Queensland Rail may issue operational and safety instructions, information, requirements and messages to Operators (**Train Notices**). Typically Train Notices will be issued daily, but can be issued as determined by Queensland Rail.

(b) The Operator must ensure that each Operator's Associate is aware of, and complies with, the information in each Train Notice relevant to that Operator's Associate's responsibilities and activities.

7.3 Document Control Procedures

(a) Each Operator must notify Queensland Rail of the name, position and contact details for the Operator's Associate who, on behalf of the Operator, is responsible for document control in connection with the Operator's Access Agreement.

(b) The Operator must ensure the ongoing distribution of this document, and all documents referred to in this document, to the relevant Operator's Associates.

7.4 Cooperation between Parties

7.4.1 Operational Meetings

(a) Each Operator must notify Queensland Rail of the name, position and contact details of the Operator's Associate who, on behalf of the Operator, will be the Operator's representative for operational meetings.

(b) The Queensland Rail representative for an operational meeting is either or both of the following persons, as applicable:

- GM Customer Service South

  Ph: (07) 3235 7679

  Fax: (07) 3235 7634
- GM Customer Service North

  Ph: (07) 4772 8872

  Fax: (07) 4772 8495

(c) The Operator's representative and Queensland Rail's representative for operational meetings are required to meet, at a time and place agreed between the Operator and Queensland Rail, for the purposes of:

(i) reviewing matters relating to the performance of the Operator's Train Services to identify any remedial actions to prevent, minimise or mitigate any problems;

(ii) reviewing the reliability of the Operator's Trains;

(iii) reviewing any relevant Operational Constraints;

(iv) investigating or reviewing breaches of any relevant safeworking procedures or safety standards (including those referred to in either the relevant IRMP or section 3); and

(v) reviewing any other relevant operational matters in relation to the exercise of rights or compliance with obligations under the Operator's Access Agreement.

(d) Either the Operator or Queensland Rail may, with the prior consent of the other (which consent is not to be unreasonably withheld), invite a guest to an operational meeting.

7.4.2 Contractual Meetings

(a) The Operator must notify Queensland Rail of the name, position and contact details of the Operator's Associate who, on behalf of the Operator, will be the Operator's representative for contractual meetings.

(b) The Queensland Rail representative for contractual meetings is:

Network Business Commercial Manager

Ph: (07) 3235 3609

Fax: (07) 3235 7634

(c) The Operator's representative and Queensland Rail's representative for contractual meetings are required to meet, at a time and place agreed between the Operator and Queensland Rail, for the purposes of discussing or reviewing commercial and contractual matters.

(d) Either the Operator or Queensland Rail may, with the prior consent of the other (which consent is not to be unreasonably withheld), invite a guest to a contractual meeting.

7.5 Government Supported Infrastructure

The parts of the Network that are highlighted in red in Diagrams 1 and 2 below are supported by government funding.

Diagram 1:

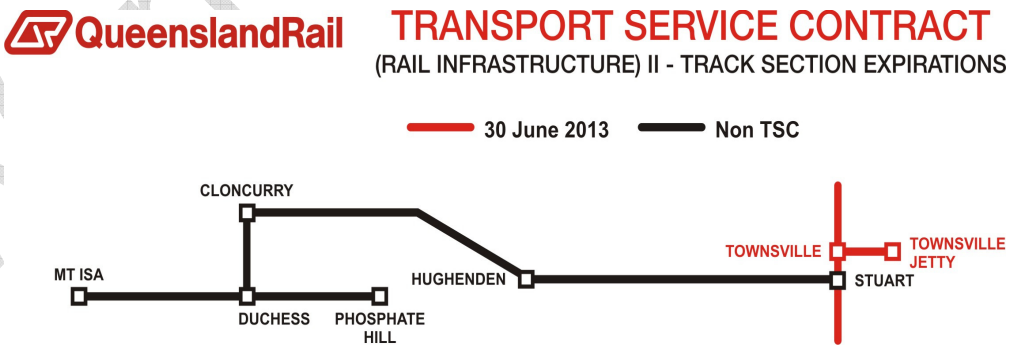
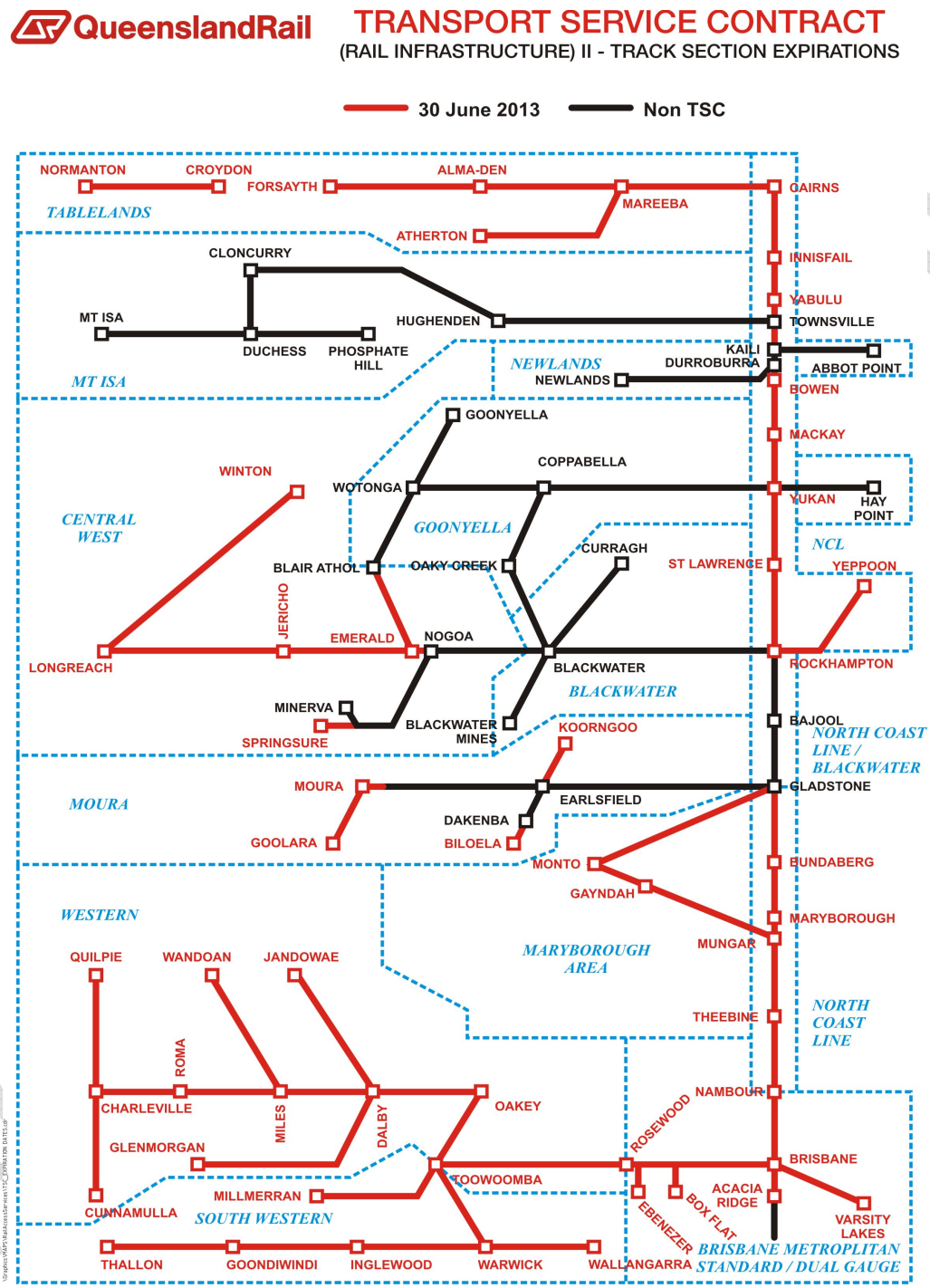


Diagram 2:


QueenslandRail
TRANSPORT SERVICE CONTRACT
(RAIL INFRASTRUCTURE) II - TRACK SECTION EXPIRATIONS
30 June 2013
Non TSC
NORMANTON
CROYDON
FORSAYTH
ALMA-DEN
MAREEBA
GAIRNS
TABLELANDS
ATHERTON
CLONCURRY
INNISFAIL
YABULU
MT ISA
HUGHENDEN
TOWNSVILLE
DUCHESS
PHOSPHATE HILL
KAILI
DURROBURRA
ABBOT POINT
NEWLANDS
NEWLANDS
BOWEN
MT ISA
GOONYELLA
MACKAY
WINTON
COPPABELLA
WOTONGA
YUKAN
HAY POINT
CENTRAL WEST
GOONYELLA
NCL
CURRAGH
BLAIR ATHOL
OAKY CREEK
ST LAWRENCE
YEPPOON
JERICHO
EMERALD
NOGOA
LONGREACH
BLACKWATER
ROCKHAMPTON
BLACKWATER
MINERVA
BAJOOL
BLACKWATER MINES
SPRINGSURE
KOORNGOO
NORTH COAST LINE / BLACKWATER
MOURA
EARLSFIELD
GLADSTONE
MOURA
DAKENBA
GOOLARA
BILOELA
MONTO
BUNDABERG
GAYNDAH
WESTERN
MARYBOROUGH
MUNGAR
QUILPIE
WANDOAN
JANDOWAE
MARYBOROUGH AREA
THEEBINE
NORTH COAST LINE
ROMA
NAMBOUR
CHARLEVILLE
MILES
DALBY
OAKEY
ROSEWOOD
GLENMORGAN
BRISBANE
TOOWOOMBA
ACACIA RIDGE
MILLMERRAN
EBENEZER
BOX FLAT
VARSITY LAKES
CUNNAMULLA
SOUTH WESTERN
THALLON
GOONDIWINDI
INGLEWOOD
WARWICK
WALLANGARRA
BRISBANE METROPLITAN STANDARD / DUAL GAUGE

8 Further information

If you would like further information on, or have queries regarding the information in, this manual, please contact Queensland Rail, Network Business Commercial Manager on ph. 07-3235 3609.

9 Glossary

Access Agreement	An agreement between Queensland Rail and an Operator for the provision of a right to use a specified section of the Network for the purposes of operating Train Services.
Access Undertaking	Queensland Rail's access undertaking as approved by the Queensland Competition Authority under the *Queensland Competition Authority Act 1997* (Qld) from time to time.
ATT	Authority to Travel
Authority	(a) The Crown or any minister of the Crown; (b) any government, federal, state or local government department or other governmental, semi-governmental or judicial body or authority including local government, a court or a tribunal; (c) any corporation, authority, body or force constituted for a public purpose (including any police service or force); (d) any holder of an office for a public purpose; (e) any governmental, semi-governmental or judicial person; and (f) any person (whether autonomous or not) who is charged with the administration or enforcement of a Law, including any officer or agent of the foregoing acting in that capacity.
Authorisation	Any consent, accreditation, authorisation, registration, filing, lodgement, notification, agreement, licence, certification, commission, permit, approval, exemption, ruling or other permission from, by or with an Authority required by any Law or lawfully required by any Authority.
BSA	Brisbane Suburban Area
CASF	Corridor Access Safety Form
Certification	(a) A certificate by a suitably qualified person, who is approved by Queensland Rail and appointed by and at the cost of the relevant Operator, that the Operator's Rolling Stock and Train Configurations comply with the IRMP; accompanied by (b) relevant documentation (including reports on trials and/or commissioning tests) demonstrating to the satisfaction of Queensland Rail that the Operator's Rolling Stock and Train Configurations comply with the IRMP.
Contamination	Contamination as defined by the *Environmental Protection Act 1994* (Qld) where such contamination is likely to cause or does cause material environmental harm, serious environmental harm or environmental nuisance as those terms are defined in the *Environmental Protection Act 1994* (Qld).

Dangerous Goods	Any substance or thing defined as dangerous goods, explosives or radioactive material under: (a) the Australian Code for the Transport of Dangerous Goods by Road and Rail; (b) the Australian Code for the Transport of Explosives by Road and Rail; or (c) the Code of Practice for the Safe Transport of Radioactive Material, as published from time to time, including any substance or thing specifically identified as such in the Access Agreement entered into between Queensland Rail and the relevant Operator.
Direct Traffic Control Territory	That part of the Network for which Direct Traffic Control – SAF/STD/0041/SWK applies as set out in Operational Route Manual – SAF/STD/0071/INF.
DTMR	Queensland Department of Transport and Main Roads
DTP	Daily Train Plan
Emergency Management Plan	A plan (including any amendments from time to time) developed and maintained by the relevant Operator which: (a) details procedures that are adequate to manage an Incident, including all actions to be taken to prevent, minimise or mitigate any threat or danger to any person or property including: (i) the matters outlined in this document that are relevant to the management of Network Incidents; and (ii) any matters otherwise referred to in the Access Agreement for inclusion in a plan that details procedures to manage an Incident (whether or not referred to as an Emergency Management Plan); (b) is, at all times, compatible with the relevant Access Agreement and this document; and (c) is consistent with the degree of diligence, care, foresight, prudence and skill that would reasonably be expected from a competent, skilled and experienced person in the same type of undertaking in the same or similar circumstances, for which the Operator has received a notice from Queensland Rail that Queensland Rail has no objection to the plan (including any amendments).
En Route Locomotive Provisioning	The provisioning of a Train on the Network.
Environmental Harm	Environmental harm as defined in the *Environmental Protection Act 1994* (Qld).
Environmental Management System	A management system that addresses all environmental risks and ensures compliance with all environmental Laws.
ETA	Estimated Time of Arrival

Incident	Any Network Incident involving the activities of the Operator.
Interface Risk Assessment	An assessment to: (a) identify, to the extent reasonably practicable, all Interface Risks; (b) assess the likelihood and consequences of those Interface Risks occurring and any factors relevant to the management of those Interface Risks; and (c) nominate suitable control mechanisms to manage the Interface Risks within a risk management framework.
Interface Risk	All risks to the safety of persons or property or to the environment arising from the interaction between the Operator's proposed operations and any one or more of: (a) the Network; (b) operations on the Network (including those of other Operators and Queensland Rail); and (c) persons using the Network, persons on or near the Network or members of the public (including any activities on the Network that may affect those matters), provided that a reference to operations in this definition includes railway operations as defined in the TRSA.
Interface Standards	Queensland Rail's minimum requirements or standards relating to the interface between a Train and the Network (including to maintain agreed operating parameters – for example, axle load) with which the applicable Rolling Stock and Train Configurations must comply in order to operate on the Network. This includes the Interface Standards (SAF/STD/0145/INF), unless otherwise agreed or specified by Queensland Rail.
IRMP	Interface Risk Management Plan (see section 2.1 for a general description of such a plan)
Law	Includes: (a) any statute, ordinance, code, law, by-law, proclamation, rule or regulation or any other subordinate legislation, whether State, Commonwealth or otherwise; (b) the terms of any Authorisation; (c) common law and equity; and (d) any order, circular, requirement, condition, notice, decree, decision, direction or guidelines of any Authority with which the Operator or Queensland Rail (as the case may be) is legally required to comply including any requirement to pay fees and charges, whether now, or at any time in the future, in effect.
MTP	Master Train Plan
Network	The rail transport infrastructure (as defined in the TIA) for which Queensland Rail is the accredited rail infrastructure manager (as

	defined in the TRSA).
Network Incident	Any Rolling Stock derailment, Rolling Stock disablement or breakdown, accident, collision or any other unplanned occurrence on the Network which causes or could cause death or injury to any person, damage to property or Environmental Harm or a disruption to or cancellation by Queensland Rail of any Train Movement.
Notifiable Occurrence	A notifiable occurrence as defined in the TRSA.
Obstruction	Any circumstance relating to the whole or any part of the Network or private siding, including debris or other objects on the Network, which has the potential to cause a disruption to or cancellation by Queensland Rail of Train Services or Train Movements and includes any Network Incident but does not include an Operational Constraint imposed by Queensland Rail.
Operational Constraints	Any temporary or permanent constraint on the operation or use of any part of the Network imposed by Queensland Rail as it considers necessary in relation to the proper, efficient or safe operation or management of the Network, including: (a) speed restrictions; (b) load restrictions; (c) signalling or overhead restrictions; (d) Planned Possessions (as defined in the Access Undertaking); (e) Urgent Possessions (as defined in the Access Undertaking); and (f) Emergency Possessions (as defined in the Access Undertaking).
Operator	A person: (a) to whom Queensland Rail has granted the right to use a specific section of the Network for the purposes of operating Train Services; or (b) who operates or manages, or will operate or manage, Train Services for or on behalf of a person referred to in paragraph (a) above or who has been granted a right to do so by Queensland Rail.
Operator's Associate	Any director, officer, employee, contractor, agent or consultant of the Operator and any other person under the control or supervision of, or acting for or on behalf of, the Operator.
Operator's Controller	The person nominated in compliance with section 6.2.1(a) from time to time.
Queensland Rail Train Controller	A person appointed by Queensland Rail from time to time to perform Train Control for a relevant part of the Network.
Recovery	Action to be taken in respect of any derailed, malfunctioning or immobilised Rolling Stock for which a relevant Operator is responsible to enable prompt recommencement of Train

	Movements, including the subsequent retrieval of any such Rolling Stock.
Restoration	The removal of any Obstruction, the rectification of any Network Incident and the prompt recommencement of Train Movements including all requisite repairs to the Network but does not include Recovery.
Rolling Stock	Locomotives, carriages, wagons, rail cars, rail motors, light rail vehicles, light inspection vehicles, rail/road vehicles, trolleys and any other vehicle that operates on or uses Track.
Standard Access Agreement	The pro forma access agreement attached to the Access Undertaking.
TIA	*Transport Infrastructure Act 1994* (Qld)
TOR	Terms of Reference
TPO	Track Protection Officer
TRA	Train Route Acceptance
Track	That part of the Network comprising the rail, ballast, sleepers and associated fittings.
Train	A self-propelled configuration of Rolling Stock operating as a unit on Track.
Train Configuration	The description of the combination of Rolling Stock comprising a Train including the identification number, gross mass and tare mass of individual items of Rolling Stock and the order in which those Rolling Stock items are placed in the Train.
Train Control	The control, management and monitoring (including, as applicable, scheduling) of: (a) all Train Movements; (b) all other operations of Rolling Stock on the Network; and (c) any activities affecting or potentially affecting such Train Movements or Rolling Stock operation or the proper, efficient and safe operation and management of the Network.
Train Movement	The operation of a Train on the Network by any Operator.
Train Notice	A notice referred to in section 7.2.3.
Train Service	The operation of a Train in accordance with a relevant Access Agreement.
TRSA	*Transport (Rail Safety) Act 2010* (Qld)

Unless expressed to the contrary, in this document:

(a) "includes" means includes without limitation, and "including" means including without limitation;

(b) a reference to:

(i) a person includes a partnership, joint venture, unincorporated association, corporation and a government or statutory body or authority;

(ii) any legislation includes subordinate legislation under it and includes that legislation and subordinate legislation as modified or replaced; and

(iii) this or any other document includes the document as varied or replaced; and

(c) where time is to be calculated by reference to a day or event, that day or the day of that event is excluded.

10 Queensland Rail Documents

The following Queensland Rail documents are referred to in this document:

- Accessing the Rail Corridor – SAF/STD/0144/SWK
- Emergency Management Standard – MD-12-208
- Incident Investigation Standard – MD-12-135
- Interface Standards – SAF/STD/0145/INF
- Network Business Master Train Plan Protocols NA-PRO-001
- Network Business Daily Train Plan Protocols NA-PRO-002
- Network Business Possession Planning Protocols NA-PRO-003
- Operational Route Manual – SAF/STD/0071/INF
- Queensland Rail Standard MD-12-129 High Visibility Clothing
- Queensland Rail's Code of Practice for Railway Noise Management
- Queensland Rail's Environmental Management System
- Rolling Stock Authorisation for the Queensland Rail Network – NBOI/INF/001

For clarity, a reference to any of the above documents in this document includes a reference to that document as varied or replaced from time to time.

Safety and Environment Interface Risk Management Plan

Queensland Rail Limited and (Rolling Stock Operator)

Document No. NBOI-IRMP-AA-XXX

Context (Scope):	This interface risk management plan covers the XXXX operations on the Queensland Rail Limited nominated network and includes identifying all reasonably foreseeable interface risks relating to the following interfaces and agreeing controls appropriate to the identified interface risks: (i) between the proposed operations and the rail infrastructure; (ii) between the proposed operations and the existing operations on the rail infrastructure; (iii) between the proposed operations and Queensland Rail Limited workers and other operator's workers; and (iv) between the proposed operations and Queensland Rail Limited and other operator's interfaces with members of the public.
Network Manager:	Queensland Rail Limited
Access Holder:	XXXX
Rolling Stock Operator:	XXXX
Accreditation:	As attached in Schedule 9 of the Access Agreement **NOTE:** To be provided by the Access Holder
Nominated Network:	As defined in Schedule 2 of the Access Agreement
Train Services:	As defined in Schedule 1 of the Access Agreement
Rolling Stock:	As defined in Schedule 4 of the Access Agreement **NOTE:** Where the rolling stock operator is operating rolling stock which has been authorised for another rolling stock operator, the hauling operator must, in addition to complying with this IRMP, liaise with the other rolling stock operator and comply with all conditions agreed between the other rolling stock operator and Queensland Rail relating to the operation of that rolling stock.
Rolling Stock Configurations:	As defined in Schedule 4 of the Access Agreement
Methodology:	This risk assessment has been carried out consistent with the Queensland Rail Limited Risk Management Framework.
Reviews:	Reviews will be conducted at least annually consistent with the Queensland Rail Limited Risk Management Framework.
Audits:	When required an audit can be requested by either party. Audits will be conducted by Queensland Rail Limited and/or the Access Holder/Rolling Stock Operator

Version Control		
Date	**Version**	**Details**
	Draft v1.0	Draft compiled for workshop.

Workshop Register

Workshop 1

Forum Date:
Forum Venue:
Forum Facilitator:

Attendees	Title	Business	Responsibilities

Apologies	Title	Business	Responsibilities

Workshop 2

Forum Date:
Forum Venue:
Forum Facilitator:

Attendees	Title	Business	Responsibilities

Apologies	Title	Business	Responsibilities

Hazard		General Hazardous Event (GHE)		Specific Hazardous Event (SHE)			
Identifier	**Description**	**Identifier**	**Description**	**Identifier**	**Description**	**Relevant? Yes/No**	**Risk Assessment Item**
H1	Moving train	GHE1	Collision	SHE1.1	Collision between two passenger trains	Yes	1
H1	Moving train			SHE1.2	Collision between passenger train and freight train / OTV	Yes	1
H1	Moving train			SHE1.3	Collision between freight trains / OTVs	Yes	1
H1	Moving train			SHE1.4	Train collision with infrastructure	Yes	3
H1	Moving train			SHE1.5	Train collision with road vehicle at level crossing	Yes	2
H1	Moving train			SHE1.6	Train collision with object on line (not resulting in derailment)	Yes	4
H3	Structure and/or unstable material over/under			SHE1.7	Train impacted by structural collapse, landslide or material loading	Yes	3
H1	Moving train			SHE1.8	Collision between mainline train and cane railway train	Yes	14
H1	Moving train			SHE1.9	Collision with road vehicles not at level crossings ((eg machinery / motor vehicles working trackside)	Yes	3
H1	Moving train			SHE1.10	Train collision with native wildlife	Yes	4
H1	Moving train	GHE2	Derailment	SHE2.1	Passenger train derailment (not involving level crossing collision)	Yes	5
H1	Moving train			SHE2.2	Freight train / OTV derailment (not involving level crossing collision)	Yes	5
H4	Heat and/or flammable material	GHE3	Fire	SHE3.1	Passenger train fire	Yes	7
H4	Heat and/or flammable material			SHE3.2	Freight train or OTV fire	Yes	7
H4	Heat and/or flammable material			SHE3.3	Station fire	Yes	7
H4	Heat and/or flammable material			SHE3.4	Lineside fire	Yes	7
H4	Heat and/or flammable material			SHE3.5	Depot / yard / siding / other rail associated buildings / assets fire	Yes	7
H4	Heat and/or flammable material			SHE3.6	Non-rail associated buildings fire	Yes	7
H4	Heat and/or flammable material			SHE3.7	Tunnel fire	Yes	7
H6	Gas/Air under pressure	GHE4	Explosion / pressure rupture	SHE4.1	Passenger train explosion / pressure rupture	Yes	6
H6	Gas/Air under pressure			SHE4.2	Freight train or OTV explosion / pressure rupture	Yes	6
H6	Gas/Air under pressure			SHE4.3	Station explosion / pressure rupture	Yes	6
H6	Gas/Air under pressure			SHE4.4	Rail corridor explosion / pressure rupture	Yes	6
H6	Gas/Air under pressure			SHE4.5	Depot / yard / siding / other rail associated buildings pressure rupture	Yes	6
H6	Gas/Air under pressure			SHE4.6	Non-rail associated buildings pressure rupture	Yes	6
H6	Gas/Air under pressure			SHE4.7	Tunnel pressure rupture	Yes	6
H7	High voltage electricity	GHE5	Electric shock	SHE5.1	Electric shock at station	Yes	8
H7	High voltage electricity			SHE5.2	Electric shock at depot / yard / siding / rail corridor	Yes	8
H30	Low voltage electricity			SHE5.4	Electric shock from trackside infrastructure	Yes	10
H9	Misaligned physical interfaces	GHE6	Safety Incident while entering/leaving or on train	SHE6.2	Person falls between train and platform at station	Yes	10
H10	Uneven/unstable surfaces			SHE6.3	Slip / trip / fall while entering / leaving train not at stations	Yes	10
H1	Moving train			SHE6.4	Person dragged by train	Yes	9
H12	Object thrown at train			SHE6.6	Struck by object projected at train	Yes	10
H10	Uneven/unstable surfaces	GHE7	Safety incident in rail corridor	SHE7.1	Rail corridor slip / trip / fall	Yes	10
H14	Noise			SHE7.2	Rail corridor exposure to noise above harmful level	Yes	16
H15	Breathing inhibitor			SHE7.3	Rail corridor asphyxiation	Yes	16
H18	Operating machinery			SHE7.6	Rail corridor machinery incident	Yes	16
H24	Unsecured/out of gauge objects on rolling stock			SHE7.10	Worker struck by objects from the railway	Yes	10
H1	Moving train	GHE8	Safety incident in station	SHE8.1	Passenger / general public struck by train	Yes	13
H23	Suicidal individual			SHE8.2	Passenger / general public self harm	Yes	13
H24	Unsecured/out of gauge objects on rolling stock			SHE8.3	Passenger / general public struck by objects from the railway	Yes	13
H20	Crowding			SHE8.1	Passenger / general public struck by train	Yes	13
H10	Uneven/unstable surfaces	GHE9	Worker safety incident in depot / yard / siding	SHE9.1	Worker slip / trip / fall	Yes	10
H18	Operating machinery			SHE9.2	Worker depot machinery incident	Yes	16
H1	Moving train			SHE9.3	Worker struck by train / OTV / road vehicle	Yes	9
H4	Heat and/or flammable material			SHE9.5	Worker exposure to surfaces heated above harmful levels	Yes	16
H14	Noise			SHE9.6	Worker exposure to noise above harmful level	Yes	16
H1	Moving train	GHE10	General public safety incident in rail corridor / depot / yard / siding	SHE10.1	General public struck by train	Yes	13
H23	Suicidal individual			SHE10.2	General public self harm	Yes	13
H24	Unsecured/out of gauge objects on rolling stock			SHE10.3	General public struck by objects from the railway	Yes	10
H13	Hazardous substance	GHE11	Exposure to hazardous substances and/or dangerous goods	SHE11.1	Rail corridor exposure to hazardous substances / dangerous goods	Yes	15
H13	Hazardous substance			SHE11.2	Exposure to hazardous substances / dangerous goods at station	Yes	15
H13	Hazardous substance			SHE11.3	Worker exposure to hazardous substances / dangerous goods	Yes	15
H13	Hazardous substance			SHE11.4	General public exposure to hazardous substances / dangerous goods leakage on railway corridor / depot / yard / siding	Yes	15
H14	Noise	GHE12	Noise emissions	SHE12.1	Excessive noise emissions	Yes	12
H16	Contaminating material	GHE13	Escape of contaminating material into environment	SHE13.1	Pollution	Yes	11

RISK DESCRIPTION CODE: (Refer Hazard - Event List)
H - Hazard
GHE - General Hazardous Event
SHE - Specific Hazardous Event

RESIDUAL RISK NOTE
Residual risk is after consideration of all proposed controls.
Ratings are determined by the stakeholder participants collective experience and knowledge.

C = Consequence, L = Likelihood, R = Risk Rating

RISK RATING CODE
E = Extreme, H = High, M = Medium, L = Low, V = Very Low

HIERARCHY OF CONTROL:
1 - Eliminate
2a - Substitute
2b - Isolate
2c - Minimise
2d - Administrative
2e - Personal Protective Equipment

CONTROL EFFECTIVENESS CODE
FE = Fully effective
SE = Substantially effective
PE = partially effective
LI = Largely ineffective

JUSTIFICATION NOTE:
Elimination Note:
1. Cannot eliminate the use or movement of rolling stock.
2. Cannot eliminate operating on a rail infrastructure network. Queensland Rail will assess options for infrastructure changes when possible.
3. Cannot eliminate mechanical or material failure.
4. Cannot eliminate force majeure.
5. Cannot eliminate human error.
Control Justification:
a. The agreed controls have accepted processes and/or procedures that support the Safety Management System.
b. The hazard is in the current Queensland Rail risk register.
c. The control is part of the overall safe systems of work. All administrative controls support both people and engineering controls.

ITEM	RISK DESCRIPTION						CONTROLS *Unless non-compliances are documented in the attached worksheet, all rolling stock is considered to comply with the interface requirements.*	REFERENCE DOCUMENTS *(Including but not limited to)*	HIERARCHY						JUSTIFICATION	CONTROL EFFECTIVENESS	RESPONSIBILITY *(Control Owner)*
									1 Yes/No	2a	2b	2c	2d	2e			
1A	**H1 - Moving train**																
1B	**GHE1 - Collision**																
1C	**SHE1.1: Collision between two passenger trains** **SHE1.2: Collision between passenger train and freight train / OTV** **SHE1.3: Collision between freight trains / OTVs**																
1.1	***Risk Category***	***Consequence***	***Residual Risk***	***C***	***L***	***R***	***Recovery (Mitigating)***										
1.1.1	Safety	Injury or death					Reportable incidents are managed in accordance with emergency response procedures. Operator rolling stock will carry adequate emergency equipment. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator Emergency Response Plan	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Operator
1.1.2	Safety	Injury or death					Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Queensland Rail
1.2	***Cause - Substandard Act/Condition***						***Preventative / Detective***										
1.2.1	Lack of worker competence (Operator)						Operator workers will be competent in the applicable Queensland Rail standards required to manage train operations	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.2	Lack of worker competence (Queensland Rail)						Queensland Rail workers will be competent in the applicable Queensland Rail standards required to manage train operations	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
1.2.3	Distractions to the driver (Operator)						Operator has developed business instructions to manage the number of persons in locomotive/driving unit cabs and their interaction with train crew. Driver distractions to be managed by Operator.	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.4	Distractions to Area Controller/Network Controller (Queensland Rail)						Queensland Rail has procedures to manage distractions in the workplace	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
1.2.5	Unsafe work practices (Operator)						Operator has supervisory presence and competency checks. Where the Operator is transporting and/or operating rolling stock for which they are have not undertaken the rolling stock certification process, the hauling operator must consult the rolling stock certifier and agree to operate under all restrictions agreed between the rolling stock certifier and Queensland Rail.	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.6	Unsafe work practices (Queensland Rail)						Queensland Rail has supervisory presence and competency checks in place	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
1.2.7	Insufficient braking capability						Rolling stock maintained to relevant rolling stock standards and specifications. Brake performance of rolling stock consists to comply with interface requirements.	SAF/STD/0145/INF - Interface Standards - Module 2 - Rolling Stock	No			x	x		Elimination: 1 - 5 Control: a, b, c	FE	Operator
1.2.8	Train unable to hold on grade						Operator will determine the maximum trailing load and supply load tables to Queensland Rail. Operator to certify train capable of stopping and holding on any grade on the route indefinitely.	SAF/STD/0145/INF - Interface Standards - Section 2.16 - Brake System requirements	No			x	x		Elimination: 1 - 5 Control: a, b, c	FE	Operator
1.2.9	Brakes cut-out - Rolling stock not able to stop if train breaks apart						The number of items of rolling stock with isolated brakes is limited such that the braking performance of the train is not reduced below the required level. Sufficient vehicles with working brakes are marshalled behind rolling stock with isolated brakes so that if the consist breaks apart, the separated portion of the consist will stop and hold on any grade on the route.	SAF/STD/0145/INF - Interface Standards - Sect 2.16 - Brake System Requirements, Sect 3.1 - Train Route Acceptance	No			x	x		Elimination: 1 - 5 Control: a, b, c	FE	Operator
1.2.10	Incompatible operational procedures (Operator)						Business instructions and procedures have been developed by the Operator with Queensland Rail. Where changes to specific business instructions and procedures impact on other stakeholders, that document must be reviewed and agreed by the affected stakeholder before being issued. Operator will use radio communications compliant with the relevant Queensland Rail Standards. Regular management level meetings are conducted between Operator and Queensland Rail.	SAF/STD/0145/INF - Interface Standards - Sect 1.3 - Mobile Voice Radio Communications Systems	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.11	Incompatible operational procedures (Queensland Rail)						Business instructions and procedures have been developed by Queensland Rail with Operator. Where changes to specific business instructions and procedures impact on other stakeholders, that document must be reviewed and agreed by the other stakeholder before being issued. Queensland Rail will use radio communications compliant with the relevant Queensland Rail Standards. Regular management level meetings are conducted between Operator and Queensland Rail.	SAF/STD/0145/INF - Interface Standards - Sect 1.3 - Mobile Voice Radio Communications Systems	No				X		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
1.2.12	Train not stopped in clear at crossing loop/siding						Operator will use competent crews. Operator to develop suitable driving methodologies.	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.13	Comparison Train Length exceeds length of crossing loops						Train list submitted to Network Control. Operator will comply with authorised train length as determined in Train Route Acceptance process.	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.14	Train operates at excessive speed						Operator will use competent crews. Supervisory systems are fitted to the locomotive/driving units.	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.15	Train does not operate signalling/track circuits (Operator)						Operator will enable the detection of rolling stock by track circuits and/or axle counters. Operator to identify rolling stock that does not reliably operate track circuits and advise Queensland Rail. If the rolling stock cannot reliably operate track circuits for any reason, the Operator must have procedures for the safe operation of the rolling stock.	SAF/STD/0145/INF - Interface Standards - Sect 2.15 - Wheelsets, Sect 2.20 - Signalling of Trains	No		x	x	x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.16	Train does not operate signalling/track circuits (Queensland Rail)						Operator to identify rolling stock that does not reliably operate track circuits. If the rolling stock cannot reliably operate track circuits for any reason, the rolling stock must be operated under the blocking facilities in the train protection systems.	SAF/STD/0145/INF - Interface Standards - Sect 2.15 - Wheelsets, Sect 2.20 - Signalling of Trains	No		x	x	x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
1.2.17	Driver fatigue						Operator has a fatigue management program. Locomotive/driving units are fitted with supervisory systems.	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.18	Rolling stock or equipment is stowed on or not clear of the network (Operator)						Operator workers will comply with Queensland Rail safeworking procedures. Operator will advise Queensland Rail where rolling stock is stowed and/or stored and agree stowage and storage locations.	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator

1.2.19	Rolling stock or equipment is stowed on or not clear of the network (Queensland Rail)	Queensland Rail will agree with Operator on where rolling stock can be stowed and/or stored on the nominated network	SAF/STD/0145/INF - Interface Standards - Sect 3.2 - Rolling Stock Authorisation SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
1.2.20	Rolling stock not being secured correctly (Operator)	Rolling stock will be secured when stowed on the network by Operator. Rolling stock is certified for compliance with the interface standards. Operator is competent in the operation of braking systems.	SAF/STD/0145/INF - Interface Standards - Sect 3.2 - Rolling Stock Authorisation SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking Operator SMS	No				x	x	Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.21	Rolling stock not being secured correctly (Queensland Rail)	Queensland Rail requires all Operators to secure rolling stock when stowed	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x	x	Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
1.2.22	Inadequate communications (Operator)	Operator will have communication systems compatible with Queensland Rail's communication infrastructure and abide by mobile voice communication protocols.	SAF/STD/0145/INF - Interface Standards - Sect 1.3 - Mobile Voice Radio Communications Systems	No				x	x	Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.23	Inadequate communications (Queensland Rail)	Queensland Rail will have communication systems compliant with Queensland Rail's communication infrastructure and abide by mobile voice communication protocols.	SAF/STD/0145/INF - Interface Standards - Sect 1.3 - Mobile Voice Radio Communications Systems	No				x	x	Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
1.2.24	Rolling stock mechanical failure	Operator will maintain rolling stock in accordance with maintenance standards. Operator will develop contingency procedures including for failures.	SAF/STD/0145/INF - Interface Standards - Overview Sect 4	No				x	x	Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.25	Rolling stock not compatible with infrastructure	Operator rolling stock will comply to interface requirements	SAF/STD/0145/INF - Interface Standards - Module 1 - Infrastructure, Module 2 - Rolling Stock	No			x	x	x	Elimination: 1 - 5 Control: a, b, c	FE	Operator
1.2.26	Safeworking systems fail to maintain train separation	Queensland Rail will provide safeworking systems to maintain train separation	Queensland Rail SMS	No				x	x	Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
1.2.27	Exceeding limit of authority. (Operator)	Onboard train protection systems comply with interface requirements	SAF/STD/0145/INF - Interface Standards - Sect 2.21 - Train Safety Systems	No				x	x	Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.28	Exceeding limit of authority. (Queensland Rail)	Track side infrastructure to facilitate required train protection systems are located in nominated areas of the network	SAF/STD/0145/INF - Interface Standards - Sect 1.6 - Signalling of Trains	No				x	x	Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
1.2.29	Lack of competence to operate trackside infrastructure	Operator workers who are required to operate equipment and/or infrastructure are competent to do so	Operator SMS	No					x	Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.30	Inadequate access to the nominated network for training and assessment (Queensland Rail)	Queensland Rail will provide access to the Nominated Network for training purposes and relevant network information (eg route maps, safeworking manuals, etc.) as identified with Operator		No					x	Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
1.2.31	Field of vision from rolling stock (Operator)	Operator locomotive/driving units will comply with the interface rolling stock cab layout sighting requirements	SAF/STD/0145/INF - Interface Standards - Sect 2.4 - Cab Layout	No				x	x	Elimination: 1 - 5 Control: a, b, c	FE	Operator
1.2.32	Field of vision from rolling stock (Queensland Rail)	Queensland Rail will position signals in accordance with the signalling positioning principles.	Queensland Rail SMS	No				x	x	Elimination: 1 - 5 Control: a, b, c	FE	Queensland Rail
1.2.33	Electromagnetic field on rolling stock interfering with equipment	Operator to comply with the interface requirements for rolling stock electromagnetic compatibility	SAF/STD/0145/INF - Interface Standards - Sect 2.16 - Rolling Stock Electromagnetic Capability (EMC)	No				x	x	Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.34	Unknown rolling stock characteristics	On track testing to validate rolling stock characteristics, will be negotiated with Queensland Rail prior to commencement. Joint risk assessment will be conducted, if required, with Queensland Rail. Operator will comply with the relevant Train Route Acceptance Process and the Rolling Stock Certification Process.	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance, Sect 3.2 - Rolling Stock Authorisation	No				x	x	Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.35	Inadequate rolling stock visibility and audibility	Operator rolling stock meets requirement for headlights, marker lights, visibility lights and livery to improve the visibility of the rolling stock from trackside and technical requirements for horns to provide adequate audible warning of trains to person's trackside as required in interface standards.	SAF/STD/0145/INF - Interface Standards - Sect 2.1 - Visibility and Audibility	No				x	x	Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.36	Uneven loading or loading profile exceeds allowable loading outline	Operator to have rolling stock loaded to comply with interface clearance requirements. Loading to be secured to prevent moving.	SAF/STD/0145/INF - Interface Standards - Sect 3.1.3 - Route Criteria Factors	No					x	Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.37	Lack of clearance between rolling stock on adjacent tracks (Operator)	Operator will follow the relevant Train Route Acceptance process	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance	No					x	Elimination: 1 - 5 Control: a, b, c	SE	Operator
1.2.38	Lack of clearance between rolling stock on adjacent tracks (Queensland Rail)	Queensland Rail will assess the train operation according to the Train Route Acceptance process	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance	No					x	Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail

ITEM	RISK DESCRIPTION		CONTROLS Unless non-compliances are documented in the attached worksheet, all rolling stock is considered to comply with the interface requirements.	REFERENCE DOCUMENTS (Including but not limited to)	HIERARCHY						JUSTIFICATION	CONTROL EFFECTIVENESS	RESPONSIBILITY (Control Owner)
					1 Yes/No	2a	2b	2c	2d	2e			
2A	H1 - Moving train												
2B	GHE1 - Collision												
2C	SHE1.5: Train collision with road vehicle at level crossing												
2.1	Risk Category	Consequence	Recovery (Mitigating)										
			C L R										
2.1.1	Safety	Injury or death	Reportable incidents are managed in accordance with emergency response procedures. Operator rolling stock will carry adequate emergency equipment. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator Emergency Response Plan	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Operator
2.1.2	Safety	Injury or death	Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Queensland Rail
2.2	Cause - Substandard Act/Condition		Preventative / Detective										
2.2.1	Rolling stock does not operate signalling/track circuits (Operator)		Operator will enable the detection of rolling stock by track circuits and/or axle counters. If the rolling stock cannot reliably operate track circuits for any reason, the rolling stock must be operated under the blocking facilities in the train protection systems and Operator must have procedures for the safe passage of the rolling stock across level crossings. Check level crossing flashing lights are operating, if lights not operating than key operate the signal.	SAF/STD/0145/INF - Interface Standards - Sect 2.20 - Signalling of Trains	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
2.2.2	Rolling stock does not operate signalling/track circuits (Queensland Rail)		If the rolling stock cannot reliably operate track circuits for any reason, the rolling stock must be operated under the blocking facilities in the train protection systems.	SAF/STD/0145/INF - Interface Standards - Sect 2.20 - Signalling of Trains Queensland Rail SMS	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
2.2.3	Inadequate rolling stock visibility and audibility		Operator rolling stock meets interface requirement for headlights, marker lights, visibility lights and livery to improve the visibility of the rolling stock from trackside and technical requirements for horns to provide adequate audible warning of trains to person's trackside.	SAF/STD/0145/INF - Interface Standards - Sect 2.3 - Visibility and Audibility	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
2.2.4	Unsafe level crossing design or environmental conditions		Level crossings will be built and maintained to Australian standards	AS 1742.7 - 2007: Manual of Uniform Traffic Control Devices - Railway Crossings	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
2.2.5	Level crossing users ignore level crossing rules (Operator)		Operator train crew will be vigilant and report any near miss to Queensland Rail	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x		Elimination: 1 - 5 Control: a, b, c	PE	Operator
2.2.6	Level crossing users ignore level crossing rules (Queensland Rail)		Queensland Rail will investigate any near miss and advise law enforcement of outcomes	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	PE	Queensland Rail

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				1 Yes/No	2a	2b	2c	2d	2e			
3A	H1 - Moving train H3 - Structure and/or unstable material over/under railway											

3B	**GHE1 - Train collision**																
3C	**SHE1.4: Train collision with infrastructure SHE1.7: Train impacted by structural collapse, landslide or material loading accident SHE1.9: Collision with road vehicles not at level crossings (eg machinery / motor vehicles working trackside)**																
3.1	***Risk Category***	***Consequence***	***Residual Risk***			***Recovery (Mitigating)***											
			C	***L***	***R***												
3.1.1	Safety	Injury or death				Reportable incidents are managed in accordance with emergency response procedures. Operator rolling stock will carry adequate emergency equipment. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator Emergency Response Plan	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Operator
3.1.2	Safety	Injury or death				Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Queensland Rail
3.2	***Cause - Substandard Act/Condition***					***Preventative / Detective***											
3.2.1	Damaged infrastructure (Operator)					Operator train crew report infrastructure irregularities to relevant Network Control	SAF/STD/0145/INF - Interface Standards - Sect 1.4.1.1 - Track Monitoring - Hazard Location	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
3.2.2	Damaged infrastructure (Queensland Rail)					Infrastructure maintained to appropriate standards by competent workers	Queensland Rail SMS	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
3.2.3	Infrastructure incompatible for operation (Operator)					Operator will follow the relevant Train Route Acceptance process. Operator will review any infrastructure changes to Queensland Rail infrastructure advised by Queensland Rail that may impact its operations.	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
3.2.4	Infrastructure incompatible for operation (Queensland Rail)					Queensland Rail will assess the train operation according to the Train Route Acceptance process Queensland Rail will advise and consult with Operator regarding any infrastructure changes to Queensland Rail infrastructure that may impact the Operator's operations.	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
3.2.5	Incompatible operational procedures (Operator)					Business instructions and procedures have been developed by the Operator with Queensland Rail. Where changes to specific business instructions and procedures impact on other stakeholders, that document must be reviewed and agreed by the affected stakeholder before being issued. Operator will use radio communications compliant with the relevant Queensland Rail Standards. Regular management level meetings are conducted between Operator and Queensland Rail.	SAF/STD/0145/INF - Interface Standards - Sect 1.3 - Requirements for Mobile Voice Radio Communications	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
3.2.6	Incompatible operational procedures (Queensland Rail)					Business instructions and procedures have been developed by Queensland Rail with Operator. Where changes to specific business instructions and procedures impact on other stakeholders, that document must be reviewed and agreed by the other stakeholder before being issued. Queensland Rail will use radio communications compliant with the relevant Queensland Rail Standards. Regular management level meetings are conducted between Operator and Queensland Rail.	SAF/STD/0145/INF - Interface Standards - Sect 1.3 - Requirements for Mobile Voice Radio Communications	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
3.2.7	Lack of worker competence (Operator)					Operator workers will be competent in the applicable Queensland Rail standards	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
3.2.8	Lack of worker competence (Queensland Rail)					Queensland Rail workers will be competent in the applicable Queensland Rail standards	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
3.2.9	Unauthorised rolling stock (Operator)					Train list submitted to Network Control. Operator to use only authorised rolling stock. Operator to advise Queensland Rail of required rolling stock.	SAF/STD/0145/INF - Interface Standards - Sect 3.2 - Rolling Stock Authorisation	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
3.2.10	Unauthorised rolling stock (Queensland Rail)					Queensland Rail compares submitted train list to authorised rolling stock list (Vizirail)	SAF/STD/0145/INF - Interface Standards - Sect 3.2 - Rolling Stock Authorisation	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
3.2.11	Rolling stock profile exceeds allowable rolling stock outline.					Operator rolling stock complies with Queensland Rail allowable rolling stock outlines and has appropriate authorities in accordance with the relevant Train Route Acceptance process. Operator rolling stock to comply with nominated rolling stock outlines for the defined routes.	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance	No			x	x		Elimination: 1 - 5 Control: a, b, c	FE	Operator
3.2.12	Defective rolling stock					Operator has procedures for pre-departure checks for compliance with Operator standards. Operator has procedures for tracking defective rolling stock. Operator rolling stock maintained in accordance with Operator's maintenance standards.	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
3.2.13	Rolling stock not securely stabled and/or stowed on the Nominated Network					Operator workers will comply with Queensland Rail safeworking procedures. Operator will advise Queensland Rail where rolling stock is stowed and/or stored. Operator will agree with Queensland Rail stowage and storage locations.	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
3.2.14	Uneven loading or loading profile exceeds allowable loading outline.					Operator to have rolling stock loaded to comply with the interface clearance requirements. Loading to be secured to prevent moving.	SAF/STD/0145/INF - Interface Standards - Sect 3.1.3 - Route Criteria Factors	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator

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					1 Yes/No	***2a***	***2b***	***2c***	***2d***	***2e***			
4A	**H1 - Moving train**												
4B	**GHE1 - Collision**												
4C	**SHE1.6 - Train collision with object on line (not resulting in derailment) SHE1.10 - Train collision with native wildlife**												
4.1	***Risk Category***	***Consequence***	***Recovery (Mitigating)***										
4.1.1	Safety	Injury or death	Reportable incidents are managed in accordance with emergency response procedures. Operator rolling stock will carry adequate emergency equipment. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator Emergency Response Plan	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Operator
4.1.2	Safety	Injury or death	Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Queensland Rail
4.1.3	Environment	Environmental harm	Operator to have a procedure outlining how to identify general animal details and to report wildlife to Network Control. Operator to report any train hits of native fauna to Network Control in accordance with the emergency response procedures.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.								SE	Operator
4.1.4	Environment	Environmental harm	Following notification of native fauna being hit, Network Control will report the incident to Queensland Rail's Environmental Hotline (3072 5000) and/or EPA Hotline (1300 130 372) and follow their instructions.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.								SE	Queensland Rail
4.2	***Cause - Substandard Act/Condition***		***Preventative / Detective***										
4.2.1	Equipment left on track (Operator)		Safe work practices and trackside safety awareness adopted by workers	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
4.2.2	Equipment left on track (Queensland Rail)		Safe work practices and trackside safety awareness adopted by workers	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
4.2.3	Vandalism (Operator)		Operator crews and other workers will be vigilant. All incidents and unusual occurrence will be reported to the relevant Network Controller.	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Operator

4.2.4	Vandalism (Queensland Rail)	Queensland Rail will implement an appropriate corridor security and trespass strategy	Queensland Rail SMS	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
4.2.5	Landslides, rock falls, floods, etc (Operator)	Operator crews and other workers will be vigilant. All incidents and unusual occurrence will be reported to the relevant Network Controller. Operator to have locomotive/driving units designed to control the risk of derailment if the train strikes an object on the	Operator SMS SAF/STD/0145/INF - Interface Standards - Sect 2.5.4 - Train Obstacle Deflector	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
4.2.6	Landslides, rock falls, floods, etc (Queensland Rail)	Maintenance and Inspections to applicable standard. Pre-trip infrastructure inspection arranged by Queensland Rail where appropriate.	Queensland Rail SMS	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
4.2.7	Object on track (Operator) Animals stray onto track	Operator crews and other workers will be vigilant. All incidents and unusual occurrence will be reported to the relevant Network Controller. Operator to have locomotive/driving units designed to control the risk of derailment if the train strikes an object on the track.	Operator SMS SAF/STD/0145/INF - Interface Standards - Sect 2.5.4 - Train Obstacle Deflector	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
4.2.8	Objects on track (Queensland Rail) Animals stray onto track	All incidents that may impact on the operator will be reported to Operator. Appropriate fencing and barriers will be installed and maintained to applicable standards.	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail

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								1 Yes/No	***2a***	***2b***	***2c***	***2d***	***2e***			
5A	**H1 - Moving train**															
5B	**GHE2 - Train derailment**															
5C	**SHE2.1: Passenger train derailment (not involving level crossing collision)** **SHE2.2: Freight train / OTV derailment (not involving level crossing collision)**															
5.1	***Risk Category***	***Consequence***	***Residual Risk***	***C***	***L***	***R***	***Recovery (Mitigating)***									
5.1.1	Safety	Injury or death					Reportable incidents are managed in accordance with emergency response procedures. Operator rolling stock will carry adequate emergency equipment. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator Emergency Response Plan	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Operator
5.1.2	Safety	Injury or death					Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Queensland Rail
5.2	***Cause - Substandard Act/Condition***						***Preventative / Detective***									
5.2.1	Unknown rolling stock characteristics						On track testing to validate rolling stock characteristics, will be negotiated with Queensland Rail prior to commencement. Joint risk assessment will be conducted, if required, with Queensland Rail. Operator will comply with the relevant Train Route Acceptance Process and the Rolling Stock Certification Process.	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance SAF/STD/0145/INF - Interface Standards - Sect 3.2 - Rolling Stock Authorisation	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.2	Train operating at a speed exceeding the mechanical capability of the rolling stock						Operator uses competent train crews. Supervisory systems fitted to locomotive/driving units.	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.3	Rolling stock not compatible with infrastructure - eg train exceeds specific infrastructure restrictions such as axle loads (Operator)						Operator will follow the relevant Train Route Acceptance process. Train list submitted to relevant Network Control.	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.4	Rolling stock not compatible with infrastructure - eg train exceeds specific infrastructure restrictions such as axle loads (Queensland Rail)						Queensland Rail will assess the train operation according to the Train Route Acceptance process. Queensland Rail to provide advice on day of operation for unplanned situations.	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
5.2.5	Unauthorised rolling stock configuration (Operator)						Train list submitted to relevant Network Control. Operator to use only authorised rolling stock configurations. Operator to advise Queensland Rail of required rolling stock configurations and provide load tables. Operator to certify rolling stock configurations in accordance with relevant Train Route Acceptance process.	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance SAF/STD/0145/INF - Interface Standards - Sect 3.2 - Rolling Stock Authorisation	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.6	Unauthorised rolling stock configuration (Queensland Rail)						Rolling stock configurations authorised in accordance with Train Route Acceptance process and load tables provided	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
5.2.7	Train collides with object on track (Operator)						Cowcatcher or other approved device fitted to control the risk of derailment if the locomotive/driving unit strikes an object on the track. Train crew vigilance.	SAF/STD/0145/INF - Interface Standards - Sect 2.5.4 - Train Obstacle Deflector	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.8	Train collides with object on track (Queensland Rail)						Queensland Rail will advise of any reported objects on track. Queensland Rail will assess the train operation according to the Train Route Acceptance process. Appropriate fencing and barriers will be installed and maintained to applicable standards.	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
5.2.9	Incompatible operational procedures (Operator)						Business instructions and procedures have been developed by the Operator with Queensland Rail. Where changes to specific business instructions and procedures impact on other stakeholders, that document must be reviewed and agreed by the affected stakeholder before being issued. Operator will use radio communications compliant with the relevant Queensland Rail Standards. Regular management level meetings are conducted between Operator and Queensland Rail.	SAF/STD/0145/INF - Interface Standards - Sect 1.3 - Mobile Voice Radio Communications Systems	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.10	Incompatible operational procedures (Queensland Rail)						Business instructions and procedures have been developed by Queensland Rail with Operator. Where changes to specific business instructions and procedures impact on other stakeholders, that document must be reviewed and agreed by the other stakeholder before being issued. Queensland Rail will use radio communications compliant with the relevant Queensland Rail Standards. Regular management level meetings are conducted between Operator and Queensland Rail.	SAF/STD/0145/INF - Interface Standards - Sect 1.3 - Mobile Voice Radio Communications Systems	No				X		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
5.2.11	Infrastructure incompatible for operation (Operator)						Operator will follow the relevant Train Route Acceptance process. Operator will be advised and consulted regarding any infrastructure changes that may impact its operations.	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.12	Infrastructure incompatible for operation (Queensland Rail)						Queensland Rail will assess the train operation according to the Train Route Acceptance process. Operator will be advised and consulted regarding any infrastructure changes that may impact its operations.	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
5.2.13	Damage/failure of infrastructure						Queensland Rail will maintain infrastructure to appropriate standards. Queensland Rail will implement operational restrictions for hot/adverse weather conditions and damaged infrastructure.	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
5.2.14	Defective rolling stock						Operator has procedures for pre-departure checks for compliance with Operator standards. Operator has procedures for tracking defective rolling stock. Operator rolling stock maintained in accordance with Operator's maintenance standards.	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.15	Altered infrastructure						Infrastructure altered for testing rolling stock shall be returned to operational condition after testing		No				x		Elimination: 1 - 5 Control: a, b, c	FE	Queensland Rail
5.2.16	Excessive in train forces						Operator to certify rolling stock configuration. Drivers will be competent to operate trains to minimise in train forces taking into account marshalling of rail vehicles.	SAF/STD/0145/INF - Interface Standards - Sect 3.2 - Rolling Stock Authorisation Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.17	Vandalism (Operator)						Operator crews and other workers will be vigilant All incidents and unusual occurrence will be reported to the relevant Network Controller	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.18	Vandalism (Queensland Rail)						Queensland Rail will implement an appropriate corridor security and trespass strategy	Queensland Rail SMS	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
5.2.19	Gauge spreading forces						Operator rolling stock to comply with interface requirements	SAF/STD/0145/INF - Interface Standards - Sect 2.13 - Dynamic Performance	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Operator

5.2.20	Wheelset geometry incompatible with track	Operator to have rolling stock wheelset geometry compliant with the interface requirements	SAF/STD/0145/INF - Interface Standards - Sect 2.15 - Wheelsets	No			x	x		Elimination: 1 - 5 Control: a, b, c	FE	Operator
5.2.21	Small wheel diameter and or tread width causes excessive wheel/rail contact stresses including rapid wheel and rail fatigue	Operator to have rolling stock wheelset geometry compliant with the interface requirements	SAF/STD/0145/INF - Interface Standards - Sect 2.15 - Wheelsets	No			x	x		Elimination: 1 - 5 Control: a, b, c	FE	Operator
5.2.22	Wheel profiles incompatible with rail profiles and points and crossings in new and/or fully worn condition	Operator to have wheel profile compliant with the interface requirements	SAF/STD/0145/INF - Interface Standards - Sect 2.15 - Wheelsets	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.23	Wheel defects	Operator will monitor and address inspection and management of wheel defects	SAF/STD/0145/INF - Interface Standards - Sect 2.11 - Wheel Defect Identification and Rectification	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.24	Remote locomotive continues to feed air to brake pipe when in emergency brake application mode	Operator rolling stock to comply with interface requirements. Operator will maintain rolling stock to appropriate standards. Operator uses competent train crews.	Operator SMS SAF/STD/0145/INF - Interface Standards - Sect 2.16 - Brake System Requirements, Sect 2.16.1 - General	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.25	Axle loads exceed allowable axle loads for the route	Operator must have a process to comply with allowable axle loads	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance, Sect 1.1.4 - Axle Loads	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.26	Train speed exceeds capability of the infrastructure (Operator)	Train crew will be competent. Supervisory systems fitted to locomotive/driving units.	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.27	Train speed exceeds capability of the infrastructure (Queensland Rail)	Queensland Rail is responsible for track design and installation of speed boards. Track side infrastructure to facilitate required train protection systems are located in nominated areas of the network.	Queensland Rail SMS	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
5.2.28	Incompatible and unauthorised train configurations during recovery	Operator will have an approved process for the recovery of a disabled train. Train configuration during recovery must comply with the relevant Train Route acceptance.	SAF/STD/0145/INF - Interface Standards - Sect 3.1 - Train Route Acceptance Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.29	Adverse weather conditions (eg heat, flood, high winds) affect rolling stock/operational performance (Operator)	Operator will consider likelihood of extreme weather conditions occurring on the Nominated Network and advise Queensland Rail of any limitations of rolling stock caused by extreme weather conditions	Operator Emergency Management Plans Operator SMS SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
5.2.30	Adverse weather conditions (eg heat, flood, high winds) affect rolling stock/operational performance (Queensland Rail)	Queensland Rail will consider likelihood of extreme weather conditions occurring on the Nominated Network and advise the Operator of any limitations of rail infrastructure caused by extreme weather conditions	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
5.2.31	Uneven loading	Operator to have rolling stock loaded evenly to minimise the variation in axle loads and wheel loads. Loading to be secured to prevent moving.	SAF/STD/0145/INF - Interface Standards - Sect 3.1.3 - Route Criteria Factors	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator

ITEM	RISK DESCRIPTION	CONTROLS Unless non-compliances are documented in the attached worksheet, all rolling stock is considered to comply with the interface requirements.	REFERENCE DOCUMENTS (Including but not limited to)	HIERARCHY 1 Yes/No	2a	2b	2c	2d	2e	JUSTIFICATION	CONTROL EFFECTIVENESS	RESPONSIBILITY (Control Owner)
6A	H6 - Gas under pressure											
6B	GHE4 - Explosion / pressure rupture											
6C	SHE4.1: Passenger train explosion / pressure rupture SHE4.2: Freight train or OTV explosion / pressure rupture SHE4.3: Station explosion / pressure rupture SHE4.4: Rail corridor explosion / pressure rupture SHE4.5: Depot / yard / siding / other rail associated buildings pressure rupture SHE4.6: Non-rail associated buildings pressure rupture SHE4.7: Tunnel pressure rupture											

	Risk Category	Consequence	Residual Risk C	L	R	Recovery (Mitigating)									
6.1.1	Safety	Injury or death				Reportable incidents are managed in accordance with emergency response procedures. Operator rolling stock will carry adequate emergency equipment. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator Emergency Response Plan	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Operator
6.1.2	Safety	Injury or death				Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Queensland Rail
6.2	Cause - Substandard Act/Condition					Preventative / Detective									
6.2.1	Mechanical failure of pressure vessels					Pressure vessels built and maintained to technical requirements	Operator SMS	No			x			Elimination: 1 - 5 Control: a, b, c	SE	Operator
6.2.2	Train operating in confined space					Operator has procedures in place to avoid stopping in tunnels and confined spaces where possible	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator

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7A	H4 - Heat and/or flammable material											
7B	GHE3 - Fire											
7C	SHE3.1: Passenger train fire SHE3.2: Freight train or OTV fire SHE3.3: Station fire SHE3.4: Lineside fire SHE3.5: Depot / yard / siding / other rail associated buildings / assets fire SHE3.6: Non-rail associated buildings fire SHE3.7: Tunnel fire											

	Risk Category	Consequence	Residual Risk C	L	R	Recovery (Mitigating)									
7.1.1	Safety	Injury or death				Reportable incidents are managed in accordance with emergency response procedures. Operator rolling stock will carry adequate emergency equipment. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator Emergency Response Plan	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Operator
7.1.2	Safety	Injury or death				Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Queensland Rail
7.1.3	Environment	Environmental harm				Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Queensland Rail
7.2	Cause - Substandard Act/Condition					Preventative / Detective									

7.2.1	Trackside fire (Operator)	Operator will incorporate appropriate fire management procedures in operating plan. All incidents of fire will be reported to the relevant Network Controller and managed in accordance with emergency response procedures. Fire fighting equipment (eg fire extinguisher) carried on-board and Operator workers will be competent to use them. Operator has procedures in place to avoid stopping in tunnels and confined spaces.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
7.2.2	Trackside fire (Queensland Rail)	Corridor fire management. All incidents of fire will be reported to Operator and managed in accordance with emergency response procedures.	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
7.2.3	Fire on train	Operator will incorporate appropriate fire management procedures in Operating Plan. Operator to comply with design and maintenance requirements for rolling stock. All incidents of fire will be reported to the relevant Network Controller and managed in accordance with emergency response procedures. Fire fighting equipment (eg fire extinguisher) carried on-board and Operator workers will be competent to use them. Operator has procedures in place to avoid stopping in tunnels and confined spaces.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
7.2.4	Infrastructure faults (Queensland Rail)	Queensland Rail will maintain infrastructure to appropriate standards	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
7.2.5	Infrastructure activities (Queensland Rail)	Queensland Rail will manage trackside activities to prevent the outbreak of fire	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
7.2.6	Wildfire caused by locomotive/driving units (Operator)	All existing locomotive/driving units must be monitored on an on-going basis and maintained to a standard to minimise spark emissions under all load and speed conditions. Where spark emissions are occurring, systems must be developed and implemented to effectively manage these occurrences in both the short and the long term. Appropriate modifications must be made to minimise the incidence of spark emission. Locomotive/driving units emitting sparks that may cause wildfire must be managed to minimise the fire risk, or in extreme cases withdrawn from service. The timing of this withdrawal will depend on the severity of the fire risk, assets at risk, curing rate of the trackside vegetation and the topography of the area. Systems must be developed for locomotive/driving units withdrawn from service to not re-enter traffic prior to passing an engine inspection, load box test, or on track test.	SAF/STD/0145/INF - Interface Standards - Sect 2.9 - Rolling Stock Fire Performance	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator

ITEM	RISK DESCRIPTION					CONTROLS Unless non-compliances are documented in the attached worksheet, all rolling stock is considered to comply with the interface requirements.	REFERENCE DOCUMENTS (Including but not limited to)	HIERARCHY						JUSTIFICATION	CONTROL EFFECTIVENESS	RESPONSIBILITY (Control Owner)
								1 Yes/No	2a	2b	2c	2d	2e			
8A	H7 - High voltage electricity															
8B	GHE5 - Electric shock															
8C	SHE5.1: Electric shock at station SHE5.2: Electric shock at depot / yard / siding / rail corridor															
8.1	Risk Category	Consequence	Residual Risk C	Residual Risk L	Residual Risk R	Recovery (Mitigating)										
8.1.1	Safety	Injury or death				Reportable incidents are managed in accordance with emergency response procedures. Operator rolling stock will carry adequate emergency equipment. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator Emergency Response Plan	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Operator
8.1.2	Safety	Injury or death				Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Queensland Rail
8.2	Cause - Substandard Act/Condition					Preventative / Detective										
8.2.1	Unsafe work practices near overhead line equipment (Operator)					Operator workers are competent to work in the vicinity of overhead line equipment. Safety signage on rolling stock.	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
8.2.2	Dewirement (Operator)					Operator workers will be competent in emergency response procedures for dewirements	Operator Emergency Response Procedures	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
8.2.3	Dewirement (Queensland Rail)					Queensland Rail will design and maintain overhead line equipment to appropriate standards	Queensland Rail SMS	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
8.2.4	Contact with live electrical equipment on rolling stock / rolling stock electrical faults					Operator will design and maintain rolling stock to agreed standards	SAF/STD/0145/INF - Interface Standards - Module 2 - Rolling Stock.	No			x	x		Elimination: 1 - 5 Control: a, b, c	FE	Operator
8.2.5	Damaged infrastructure (Operator)					Operator train crew report infrastructure irregularities to relevant Network Control	SAF/STD/0145/INF - Interface Standards - Sect 1.4.1.1 - Track Monitoring - Hazard Location	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
8.2.6	Damaged infrastructure (Queensland Rail)					Infrastructure maintained to appropriate standards by competent workers	Queensland Rail SMS	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail

ITEM	RISK DESCRIPTION					CONTROLS Unless non-compliances are documented in the attached worksheet, all rolling stock is considered to comply with the interface requirements.	REFERENCE DOCUMENTS (Including but not limited to)	HIERARCHY						JUSTIFICATION	CONTROL EFFECTIVENESS	RESPONSIBILITY (Control Owner)
								1 Yes/No	2a	2b	2c	2d	2e			
9A	H1: Moving train															
9B	GHE6: Safety incident while entering / leaving or on train GHE9: Worker safety incident in depot / yard / siding															
9C	SHE6.4: Person dragged by train SHE9.3: Worker struck by train / OTV / road vehicle															
9.1	Risk Category	Consequence	Residual Risk C	Residual Risk L	Residual Risk R	Recovery (Mitigating)										
9.1.1	Safety	Injury or death				Reportable incidents are managed in accordance with emergency response procedures. Operator rolling stock will carry adequate emergency equipment. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator Emergency Response Plan	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Operator
9.1.2	Safety	Injury or death				Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
9.2	Cause - Substandard Act/Condition					Preventative / Detective										
9.2.1	Workers who work and operate equipment (eg road vehicles, plant) on or near the nominated network are not competent to do so (Operator)					All workers will be competent with trackside safety and wear appropriate PPE. Train crew will be vigilant.	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
9.2.2	Workers who work and operate equipment (eg road vehicles, plant) on or near the nominated network are not competent to do so (Queensland Rail)					All workers will be competent in trackside safety and wear appropriate PPE. Toolbox talks onsite (pre-commencement of work).	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
9.2.3	Trackside access by Operator workers is not carried out safely					Operator workers will be competent in trackside safety.	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
9.2.4	Worker fatigue (Operator)					Operator has a fatigue management program.	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator

9.2.5	Worker fatigue (Queensland Rail)	Queensland Rail has a fatigue management program.	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
9.2.6	Worker not aware of surroundings (Operator)	Operator workers are competent in trackside safety including the use of personal continual vigilance.	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
9.2.7	Worker not aware of surroundings (Queensland Rail)	Queensland Rail workers are competent in trackside safety including the use of personal continual vigilance.	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
9.2.8	Worker incapacitated (Operator)	Operator has a fitness to work program.	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
9.2.9	Worker incapacitated (Queensland Rail)	Queensland Rail has a fitness to work program.	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail

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10A	**H1: Moving train** **H10: Uneven/unstable surfaces** **H12: Object thrown at train** **H24: Unsecured/out of gauge objects on rolling stock** **H30: Low voltage electricity**											
10B	**GHE5: Electric shock** **GHE6: Safety incident while entering / leaving or on train** **GHE7: Safety incident in rail corridor** **GHE9: Worker safety incident in depot / yard / siding** **GHE10: General public safety incident in rail corridor / depot / yard / siding**											
10C	**SHE5.4: Electric shock from trackside infrastructure** **SHE6.2: Person falls between train and platform at station** **SHE6.3: Slip / trip / fall while entering / leaving train not at stations** **SHE6.6: Struck by object projected at train** **SHE7.1: Rail corridor slip / trip / fall** **SHE7.10: Worker struck by objects from the railway** **SHE9.1: Worker slip / trip / fall** **SHE10.3: General public struck by objects from the railway**											

10.1	Risk Category	Consequence	Residual Risk C	L	R	Recovery (Mitigating)									
10.1.1	Safety	Injury or death				Reportable incidents are managed in accordance with emergency response procedures. Operator rolling stock will carry adequate emergency equipment. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator Emergency Response Plan	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Operator
10.1.2	Safety	Injury or death				Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
10.2	*Cause - Substandard Act/Condition*					*Preventative / Detective*									
10.2.1	Workers who work and operate equipment (eg road vehicles, plant) on or near the nominated network are not competent to do so (Operator)					All workers will be competent in trackside safety and wear appropriate PPE. Train crew will be vigilant.	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
10.2.2	Workers who work and operate equipment (eg road vehicles, plant) on or near the nominated network are not competent to do so (Queensland Rail)					All workers will be competent in trackside safety and wear appropriate PPE. Toolbox talks onsite (pre-commencement of work).	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
10.2.3	Worker fatigue (Operator)					Operator has a fatigue management program	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
10.2.4	Worker fatigue (Queensland Rail)					Queensland Rail has a fatigue management program	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
10.2.5	Worker not aware of surroundings (Operator)					Operator workers are competent in trackside safety including the use of personal continual vigilance	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
10.2.6	Worker not aware of surroundings (Queensland Rail)					Queensland Rail workers are competent in trackside safety including the use of personal continual vigilance	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
10.2.7	Worker incapacitated (Operator)					Operator has a fitness to work program	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
10.2.8	Worker incapacitated (Queensland Rail)					Queensland Rail has a fitness to work program	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
10.2.9	Unauthorised entry (Operator)					Drivers and workers vigilance. All incidents will be reported to the relevant Network Controller.	SAF/STD/0145/INF- Interface Standards - Sect 3.3 - Safeworking Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
10.2.10	Unauthorised entry (Queensland Rail)					Queensland Rail will have appropriate fencing and signage of the right of way. Queensland Rail will implement an appropriate corridor security and trespass strategy.	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
10.2.11	Vandalism (Operator)					Operator crews and other workers will be vigilant All incidents and unusual occurrence will be reported to the relevant Network Controller	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
10.2.12	Vandalism (Queensland Rail)					Queensland Rail will implement an appropriate corridor security and trespass strategy	Queensland Rail SMS	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail

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11A	**H16: Contaminating material**											
11B	**GHE13: Escape of contaminating material into environment**											
11C	**SHE13.1: Pollution**											

11.1	Risk Category	Consequence	Residual Risk C	L	R	Recovery (Mitigating)									
11.1.1	Environment	Environmental harm				Reportable incidents are managed in accordance with emergency response procedures. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary. Operator agrees to use Queensland Rail's preferred Environmental Emergency contractors in the event of any spillage of fuel and/or product during derailment, collision, etc. Operator to dispose of waste products including wastewater, sewage, fuel off the corridor in compliance with any required statutory approvals (eg contaminated land). Wastewater, sewage, fuel, etc disposal locations will be agreed with Queensland Rail. Operator will undertake water quality testing in accordance with ANZECC guidelines.	Queensland Rail's list of preferred Environmental Emergency contractors in North Queensland SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3 ANZECC (Australian and New Zealand Environment and Conservation Council) - Australian Guidelines for Water Quality Monitoring & Reporting GM005 Internal Environmental Audits & Environmental Authority Renewal Operator Emergency Response Plan								SE	Operator
11.1.2	Environment	Environmental harm				Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.								SE	Queensland Rail
11.2	*Cause - Substandard Act/Condition*					*Preventative / Detective*									

11.2.1	Spillage of load, fuel, etc					Rolling stock is designed and maintained to prevent contamination of the infrastructure by dropping or leaking of oil, fuel, sewage or other contaminating material. Rolling stock is to be loaded to prevent spillage of such material. Operators to obtain and comply with any statutory approvals required for their fuelling and train maintenance activities on Queensland Rail corridor land. All wagons carrying dangerous goods must be designed and maintained in accordance with the corresponding statutory dangerous goods code.	SAF/STD/0145/INF - Interface Standards								SE	Operator
11.2.2	Land Contamination (excluding item 11.2.3)					Operator to dispose of waste products including wastewater, sewage, fuel off the corridor in compliance with any required statutory approvals (eg contaminated land) or seek Queensland Rail approval to dispose of on corridor. Operator to obtain and comply with any statutory approvals required for its activities on the Queensland Rail corridor. If loading or unloading is to occur on Queensland Rail's corridor land, the operator shall carry out this activity in accordance with requirements of Queensland Rail's Transfer Facility Requirements document.	Queensland Rail's Transfer Facility Requirements Document								SE	Operator
11.2.3	Ballast and corridor contamination caused by product dust					If loading or unloading of product is to occur on Queensland Rail's corridor land, the operator shall carry out this activity in accordance with requirements of Queensland Rail's Transfer Facility Requirements document. All wagons are to be fitted with properly maintained lids or otherwise treated to control dust emissions. At all points along its haul route, Operator shall comply with the minimum Total Moisture Levels (TMLs) specified in the MSDS.	Queensland Rail's Transfer Facility Requirements Document Product's MSDS								SE	Operator
11.2.4	Air pollution affecting adjoining neighbouring properties					Operators to obtain and comply with any statutory approvals required for their fuelling and train maintenance activities on Queensland Rail corridor. Operators to comply with any statutory approvals required for the transport of goods, in particular goods that may pose a dust hazard. All wagons are to be fitted with properly maintained lids or otherwise treated to control dust emissions. At all points along its haul route, Operator shall comply with the minimum Total Moisture Levels (TMLs) specified in the MSDS.									SE	Operator
11.2.5	Dust pollution					If loading or unloading of the product is to occur on Queensland Rail's corridor land, the operator shall carry out this activity in accordance with requirements of Queensland Rail's Transfer Facility Requirements document. At all points along its haul route, Operator shall comply with the minimum Total Moisture Levels (TMLs) specified in the MSDS. All wagons are to be covered by lids or otherwise treated to control dust emissions.	Queensland Rail Transfer Facility Requirements Document Product's MSDS								SE	Operator
11.2.6	Littering and dumping					Operator to establish and enforce procedures to prevent littering or dumping of any materials on Queensland Rail or adjoining land									SE	Operator
11.2.7	Greenhouse gas emissions					Operator to take operational control for statutory greenhouse and energy related reporting									SE	Operator

ITEM	***RISK DESCRIPTION***					***CONTROLS*** ***Unless non-compliances are documented in the attached worksheet, all rolling stock is considered to comply with the interface requirements.***	***REFERENCE DOCUMENTS*** ***(Including but not limited to)***	***HIERARCHY***						***JUSTIFICATION***	***CONTROL EFFECTIVENESS***	***RESPONSIBILITY (Control Owner)***
								1 Yes/No	***2a***	***2b***	***2c***	***2d***	***2e***			
12A	**H14: Noise**															
12B	**GHE12: Noise emissions**															
12C	**SHE12.1: Excessive noise emissions**															
12.1	***Risk Category***	***Consequence***	***Residual Risk***	***C***	***L***	***R***	***Recovery (Mitigating)***									
12.1.1	Environment	Environmental harm					Operator will investigate and respond to all environmental complaints in the Operator's Line of Business responsibility circle outlined in the agreed "Complaints Responsibility' worksheet.	Agreed "Complaint Responsibility" IRMP worksheet							SE	Operator
12.1.2	Environment	Environmental harm					Queensland Rail will investigate and respond to all environmental complaints in the Railway Manager's Line of Business responsibility circle outlined in the agreed "Complaints Responsibility' worksheet.	Agreed "Complaint Responsibility" IRMP worksheet							SE	Queensland Rail
12.2	***Cause - Substandard Act/Condition***						***Preventative / Detective***									
12.2.1	General Noise (Operator)						Operator to comply with above-rail obligations outlined in Queensland Rails EMS/STD/46/004 - Code of Practice for Railway Noise Management, in particular, section 6.2 meaning the Operator will conduct a desktop noise assessment prior to increasing the number of train services. This desktop assessment shall calculate the magnitude of noise level increases for any new increase in rail traffic the Operator proposes. Potential increases in noise will be assessed against any current grandfathered paths. If Operator's rail traffic volumes double on average over a 24 hour period and/or the train configurations change to increase the number of locomotives per train, the Operator will carry out a more detailed assessment against Queensland Rail's priorities for noise barrier implementation.	Queensland Rails EMS/STD/46/004 - Code of Practice for Railway Noise Management							SE	Operator
12.2.2	General Noise (Queensland Rail)						Queensland Rail is implementing its noise barrier prioritisation program based on rolling stock noise levels complying with the Railway of Australia (RoA) Manual of Engineering Standards and Practices requirements over time. When the Operator proposes increased train services and requires to carry out a desktop or more detailed noise assessment, Queensland Rail will assist by supplying the total number of train services operating on each part of the network.	Railway of Australia (RoA) Manual of Engineering Standards and Practices Queensland Rails EMS/STD/46/004 - Code of Practice for Railway Noise Management							SE	Queensland Rail
12.2.3	Locomotive Noise						Operator locomotives will comply with the Railway of Australia (RoA) Manual of Engineering Standards and Practices Section No. 13.4.1 (ie compliance with Queensland Rail's Noise Code's planning level of 87 dB(A) measured in accordance with AS2377).	Railway of Australia (RoA) Manual of Engineering Standards and Practices Section 13.4.1 Queensland Rails EMS/STD/46/004 - Code of Practice for Railway Noise Management AS2377 (Australian Standard - Acoustics - Methods for the Measurement of Railbound Vehicle Noise)							SE	Operator
12.2.4	Wheel - rail noise (eg squeal)						Operator to have rolling stock wheelset geometry compliant with the interface requirements. Wheel wear should not exceed interface requirements. Operator to manage wheel defects in accordance with interface requirements. Operator will monitor and address inspection and management of wheel defects.	SAF/STD/0145/INF - Interface Standards - Sect 2.11 - Wheel Defect Identification and Rectification SAF/STD/0145/INF - Interface Standards - Sect 2.15 - Wheelsets							SE	Operator

ITEM	***RISK DESCRIPTION***					***CONTROLS*** ***Unless non-compliances are documented in the attached worksheet, all rolling stock is considered to comply with the interface requirements.***	***REFERENCE DOCUMENTS*** ***(Including but not limited to)***	***HIERARCHY***						***JUSTIFICATION***	***CONTROL EFFECTIVENESS***	***RESPONSIBILITY (Control Owner)***
								1 Yes/No	***2a***	***2b***	***2c***	***2d***	***2e***			
13A	**H1: Moving train** **H20: Crowding** **H23: Suicidal individual** **H24: Unsecured/out of gauge objects on rolling stock**															
13B	**GHE8: Safety incident in station** **GHE10: General public safety incident in rail corridor / depot / yard / siding**															
13C	**SHE8.1: Passenger / general public struck by train** **SHE8.2: Passenger / general public self harm** **SHE8.3: Passenger / general public struck by objects from the railway** **SHE10.1: General public struck by train** **SHE10.2: General public self harm**															
13.1	***Risk Category***	***Consequence***	***Residual Risk***	***C***	***L***	***R***	***Recovery (Mitigating)***									

13.1.1	Safety	Injury or death				Reportable incidents are managed in accordance with emergency response procedures. Operator rolling stock will carry adequate emergency equipment. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator Emergency Response Plan	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Operator
13.1.2	Safety	Injury or death				Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Queensland Rail
13.2	***Cause - Substandard Act/Condition***					***Preventative / Detective***													
13.2.1	Unauthorised entry (Operator)					Drivers and workers vigilance. All incidents will be reported to the relevant Network Controller.	SAF/STD/0145/INF- Interface Standards - Sect 3.3 - Safeworking Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
13.2.2	Unauthorised entry (Queensland Rail)					Queensland Rail will have appropriate fencing and signage of the right of way. Queensland Rail will implement an appropriate corridor security and trespass strategy.	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
13.2.3	Level crossing users ignore level crossing rules (Operator)					Drivers and workers vigilance. All incidents will be reported to the relevant Network Controller.	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
13.2.4	Level crossing users ignore level crossing rules (Queensland Rail)					Queensland Rail will investigate any near miss and advise law enforcement of outcomes	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
13.2.5	Attempted/suspected suicide or injuries (Operator)					Drivers and workers vigilance. All incidents will be reported to the relevant Network Controller and managed in accordance with emergency response procedures.	SAF/STD/0145/INF- Interface Standards - Sect 3.3 - Safeworking Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
13.2.6	Attempted/suspected suicide or injuries (Queensland Rail)					All incidents will be reported to Operator and managed in accordance with emergency response procedures	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
13.2.7	Passengers / general public not aware of surroundings (Operator)					Drivers and workers vigilance. All incidents will be reported to the relevant Network Controller.	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
13.2.8	Passengers / general public not aware of surroundings (Queensland Rail)					Queensland Rail will implement an appropriate passenger / general public management strategy at stations.	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail

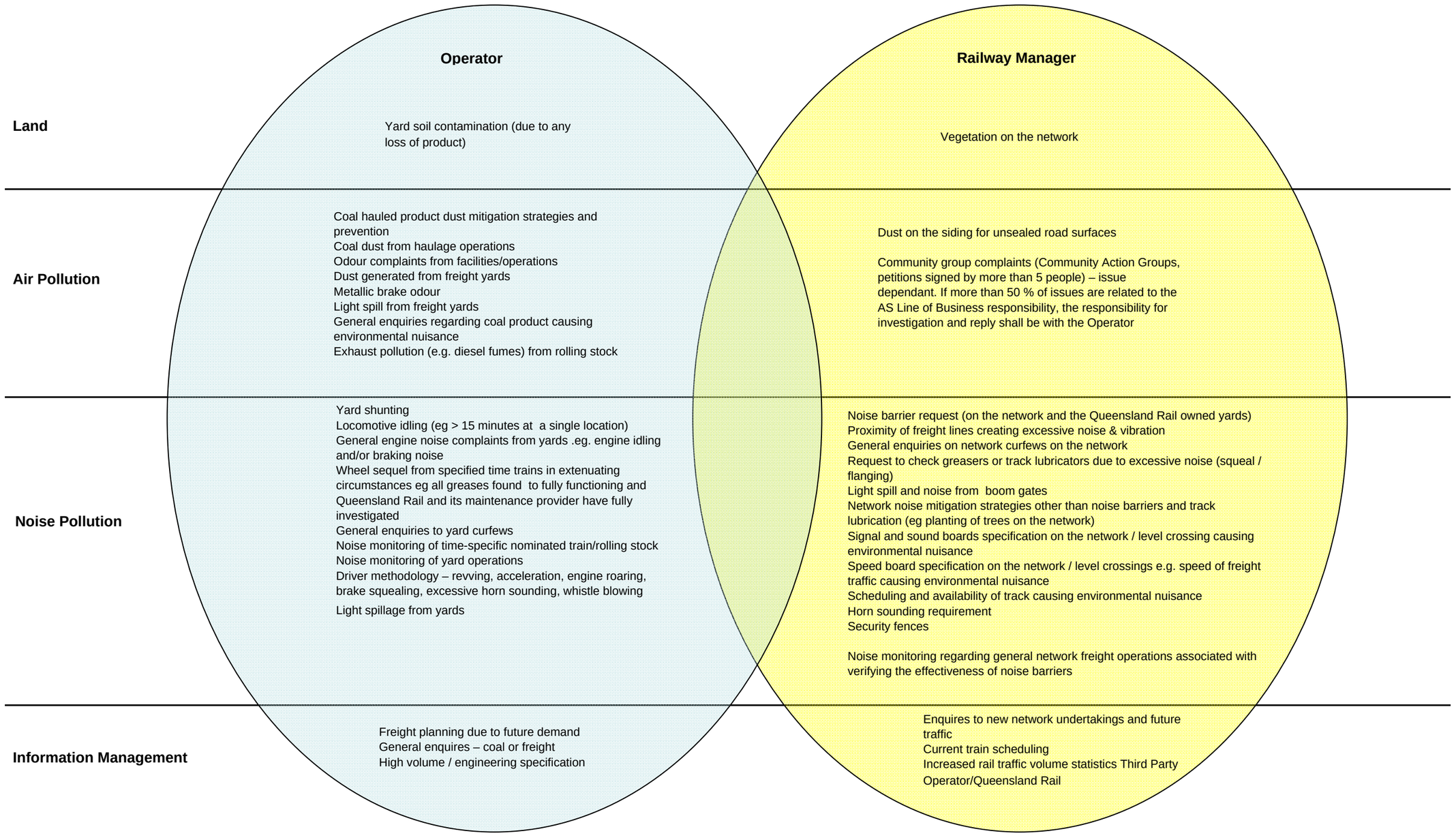
ITEM	***RISK DESCRIPTION***					***CONTROLS*** ***Unless non-compliances are documented in the attached worksheet, all rolling stock is considered to comply with the interface requirements.***	***REFERENCE DOCUMENTS*** ***(Including but not limited to)***	***HIERARCHY***						***JUSTIFICATION***	***CONTROL EFFECTIVENESS***	***RESPONSIBILITY (Control Owner)***
								1 Yes/No	***2a***	***2b***	***2c***	***2d***	***2e***			
14A	**H1: Moving train**															
14B	**GHE1: Collision**															
14C	**SHE1.8: Collision between mainline train and cane railway train**															
14.1	***Risk Category***	***Consequence***	***Residual Risk***			***Recovery (Mitigating)***										
			C	***L***	***R***											
14.1.1	Safety	Injury or death				Reportable incidents are managed in accordance with emergency response procedures. Operator rolling stock will carry adequate emergency equipment. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator Emergency Response Plan	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Operator
14.1.2	Safety	Injury or death				Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Queensland Rail
14.2	***Cause - Substandard Act/Condition***					***Preventative / Detective***										
14.2.1	Inadequate signalling design (Queensland Rail)					Signalling to be designed appropriately for conditions	Queensland Rail SMS	No			x	x		Elimination: 1 - 5 Control: a, b		Queensland Rail
14.2.2	Inappropriate use of crossing by sugar mill (Queensland Rail)					Education of sugar mill workers	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b		Queensland Rail
14.2.3	Exceeding limit of authority					Operator drivers will be competent and vigilant	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b		Operator

ITEM	***RISK DESCRIPTION***					***CONTROLS*** ***Unless non-compliances are documented in the attached worksheet, all rolling stock is considered to comply with the interface requirements.***	***REFERENCE DOCUMENTS*** ***(Including but not limited to)***	***HIERARCHY***						***JUSTIFICATION***	***CONTROL EFFECTIVENESS***	***RESPONSIBILITY (Control Owner)***
								1 Yes/No	***2a***	***2b***	***2c***	***2d***	***2e***			
15A	**H13: Hazardous substance**															
15B	**GHE11: Exposure to hazardous substances and/or dangerous goods**															
15C	**SHE11.1: Rail corridor exposure to hazardous substances / dangerous goods** **SHE11.2: Exposure to hazardous substances / dangerous goods at station** **SHE11.3: Worker exposure to hazardous substances / dangerous goods** **SHE11.4: General public exposure to hazardous substances / dangerous goods leakage on railway corridor / depot / yard / siding**															
15.1	***Risk Category***	***Consequence***	***Residual Risk***			***Recovery (Mitigating)***										
			C	***L***	***R***											
15.1.1	Safety	Injury or death				Reportable incidents are managed in accordance with emergency response procedures. Operator rolling stock will carry adequate emergency equipment. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator Emergency Response Plan	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Operator
15.1.2	Safety	Injury or death				Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Queensland Rail
15.2	***Cause - Substandard Act/Condition***					***Preventative / Detective***										
15.2.1	Incorrect handling of dangerous goods by Operator.					Operator workers are competent in the management of dangerous and hazardous goods. Signage and placards attached where required.	Australian Dangerous Goods Code	No			x	x		Elimination: 1 - 5 Control: a, b	SE	Operator
15.2.2	Defective rolling stock					Operator has procedures for pre-departure checks for compliance with Operator standards. Operator has procedures for tracking defective rolling stock. Operator rolling stock maintained in accordance with Operator's maintenance standards.	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
15.2.3	Unauthorised entry (Operator)					Drivers and workers vigilance. All incidents will be reported to the relevant Network Controller.	SAF/STD/0145/INF- Interface Standards - Sect 3.3 - Safeworking Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
15.2.4	Unauthorised entry (Queensland Rail)					Queensland Rail will have appropriate fencing and signage of the right of way. Queensland Rail will implement an appropriate corridor security and trespass strategy.	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail

ITEM	***RISK DESCRIPTION***	***CONTROLS*** ***Unless non-compliances are documented in the attached worksheet, all rolling stock is considered to comply with the interface requirements.***	***REFERENCE DOCUMENTS*** ***(Including but not limited to)***	***HIERARCHY***						***JUSTIFICATION***	***CONTROL EFFECTIVENESS***	***RESPONSIBILITY (Control Owner)***
				1 Yes/No	***2a***	***2b***	***2c***	***2d***	***2e***			
16A	**H4: Heat and/or flammable material** **H14: Noise** **H15: Breathing inhibitor** **H18: Operating machinery**											
16B	**GHE7: Safety incident in rail corridor** **GHE9: Worker safety incident in depot / yard / siding**											

16C	**SHE7.2: Rail corridor exposure to noise above harmful levels** **SHE7.3: Rail corridor asphyxiation** **SHE7.6: Rail corridor machinery incident** **SHE9.2: Worker depot machinery incident** **SHE9.5: Worker exposure to surfaces heated above harmful levels** **SHE9.6: Worker exposure to noise above harmful levels**																
16.1	***Risk Category***	***Consequence***	***Residual Risk***			***Recovery (Mitigating)***											
			C	***L***	***R***												
16.1.1	Safety	Injury or death				Reportable incidents are managed in accordance with emergency response procedures. Operator rolling stock will carry adequate emergency equipment. Operator will have appropriate emergency response and recovery plans in place. Emergency procedure will include contact details of key personnel where necessary.	SAF/STD/0145/INF - Interface Standards Sect 2.14 - Emergency Requirements Operator Emergency Response Plan	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Operator
16.1.2	Safety	Injury or death				Reportable incidents are managed in accordance with Queensland Rail emergency response procedures. Emergency procedure will include contact details of key personnel where necessary.	SAF/SPC/0022/EMG - Rail Emergency Response Procedures Module EP1.01 and EP3.	No				x		Elimination: 1 - 5 Control: a, b, c Post event	SE	Queensland Rail
16.2	***Cause - Substandard Act/Condition***					***Preventative / Detective***											
16.2.1	Locomotive Noise (Operator)					Operator locomotives will comply with the Railway of Australia (RoA) Manual of Engineering Standards and Practices Section No. 13.4.1 (ie compliance with Queensland Rail's Noise Code's planning level of 87 dB(A) measured in accordance with AS2377). Operator workers to use appropriate PPE.	Railway of Australia (RoA) Manual of Engineering Standards and Practices Section 13.4.1 Queensland Rails EMS/STD/46/004 - Code of Practice for Railway Noise Management AS2377 (Australian Standard - Acoustics - Methods for the Measurement of Railbound Vehicle Noise)	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
16.2.2	Locomotive Noise (Queensland Rail)					Queensland Rail workers to use appropriate PPE if likely to be exposed to harmful noise	Queensland Rail SMS	No			x	x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
16.2.3	Workers who work and operate equipment (eg road vehicles, plant) on or near the nominated network are not competent to do so (Operator)					All workers will be competent in trackside safety and the operation of equipment and wear appropriate PPE. Train crew will be vigilant	SAF/STD/0145/INF - Interface Standards - Sect 3.3 - Safeworking	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
16.2.4	Workers who work and operate equipment (eg road vehicles, plant) on or near the nominated network are not competent to do so (Queensland Rail)					All workers will be competent in trackside safety and the operation of equipment and wear appropriate PPE. Toolbox talks onsite (pre-commencement of work)	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
16.2.5	Worker fatigue (Operator)					Operator has a fatigue management program	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
16.2.6	Worker fatigue (Queensland Rail)					Queensland Rail has a fatigue management program	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
16.2.7	Worker not aware of surroundings (Operator)					Operator workers will be competent in trackside safety including the use of personal continual vigilance	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
16.2.8	Worker not aware of surroundings (Queensland Rail)					Queensland Rail workers are competent in trackside safety including the use of personal continual vigilance	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail
16.2.9	Train operating in confined space					Operator has procedures in place to avoid stopping in tunnels and confined spaces where possible	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
16.2.10	Working trackside in confined space					Queensland Rail has procedures in place for working in tunnels and confined spaces	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
16.2.11	Hot surfaces not identified or protected (Operator)					Operator to have procedures in place for protecting hot surfaces	Operator SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Operator
16.2.12	Hot surfaces not identified or protected (Queensland Rail)					Queensland Rail has procedures in place for protecting hot surfaces	Queensland Rail SMS	No				x		Elimination: 1 - 5 Control: a, b, c	SE	Queensland Rail

Non Compliances						
	IRMP ref.	***Standard***	***Clause***	***Non-compliance detail***	***Mitigation***	***Implementation Date***
1						
XXXX Class						
1.1						
1.2						
1.3						
2						
XXXX Class						
2.1						
2.2						
2.3						


Operator
Railway Manager
Land
Yard soil contamination (due to any loss of product)
Vegetation on the network
Air Pollution
Coal hauled product dust mitigation strategies and prevention
Coal dust from haulage operations
Odour complaints from facilities/operations
Dust generated from freight yards
Metallic brake odour
Light spill from freight yards
General enquiries regarding coal product causing environmental nuisance
Exhaust pollution (e.g. diesel fumes) from rolling stock
Dust on the siding for unsealed road surfaces
Community group complaints (Community Action Groups, petitions signed by more than 5 people) – issue dependant. If more than 50 % of issues are related to the AS Line of Business responsibility, the responsibility for investigation and reply shall be with the Operator
Noise Pollution
Yard shunting
Locomotive idling (eg > 15 minutes at a single location)
General engine noise complaints from yards .eg. engine idling and/or braking noise
Wheel sequel from specified time trains in extenuating circumstances eg all greases found to fully functioning and Queensland Rail and its maintenance provider have fully investigated
General enquiries to yard curfews
Noise monitoring of time-specific nominated train/rolling stock
Noise monitoring of yard operations
Driver methodology – revving, acceleration, engine roaring, brake squealing, excessive horn sounding, whistle blowing
Light spillage from yards
Noise barrier request (on the network and the Queensland Rail owned yards)
Proximity of freight lines creating excessive noise & vibration
General enquiries on network curfews on the network
Request to check greasers or track lubricators due to excessive noise (squeal / flanging)
Light spill and noise from boom gates
Network noise mitigation strategies other than noise barriers and track lubrication (eg planting of trees on the network)
Signal and sound boards specification on the network / level crossing causing environmental nuisance
Speed board specification on the network / level crossings e.g. speed of freight traffic causing environmental nuisance
Scheduling and availability of track causing environmental nuisance
Horn sounding requirement
Security fences
Noise monitoring regarding general network freight operations associated with verifying the effectiveness of noise barriers
Information Management
Freight planning due to future demand
General enquires – coal or freight
High volume / engineering specification
Enquires to new network undertakings and future traffic
Current train scheduling
Increased rail traffic volume statistics Third Party Operator/Queensland Rail

Safety and Environment
Interface Risk Management Plan

Queensland Rail Limited and (Rolling Stock Operator)

Certificate of Compliance

This risk assessment has been carried out consistent with the Queensland Rail Limited Risk Management Framework.

Safety risks have been assessed and controls have been determined for implementation that will manage identified interface safety and environmental risks, and thereby ensure safety so far as is reasonably practicable in accordance with this interface risk management plan.

Railway infrastructure and railway operations relevant to this interface risk management plan will be managed in accordance with it throughout its life.

Queensland Rail Limited Approval

Name:

Position: GGM Network Business

Address: Level 5 Railcentre 1 GPO Box 1429 Brisbane 4001

Phone: 3235 3534

Email: _____

Signature _____

Date: _____

Safety and Environment
Interface Risk Management Plan

Queensland Rail Limited and (Rolling Stock Operator)

Certificate of Compliance

This risk assessment has been carried out consistent with the Queensland Rail Limited Risk Management Framework.

Safety risks have been assessed and controls have been determined for implementation that will manage identified interface safety and environmental risks, and thereby ensure safety so far as is reasonably practicable in accordance with this interface risk management plan.

Railway infrastructure and railway operations relevant to this interface risk management plan will be managed in accordance with it throughout its life.

Operator Approval

Name: _____

Position: _____

Address: _____

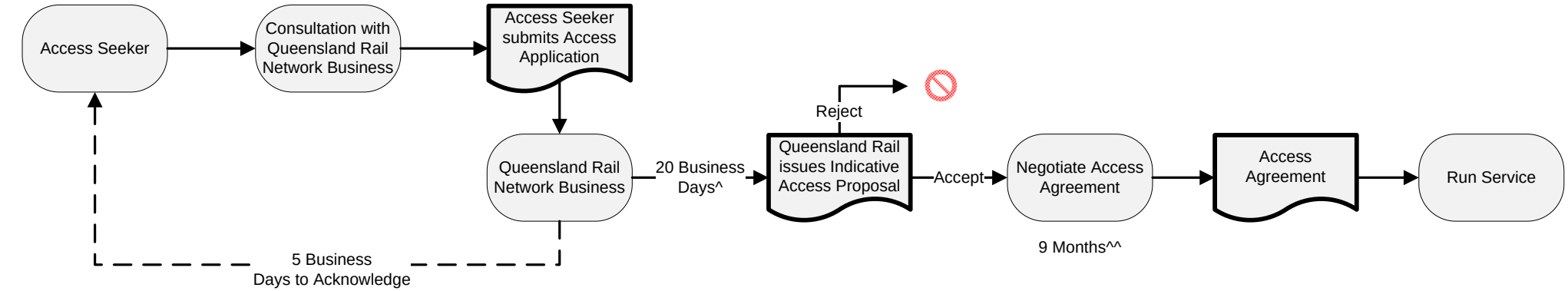
Phone: _____

Email: _____

Signature _____

Date: _____

Access Process



^ if due to the complexity of the request, Network Business may advise that a longer period is required
^^ if agreed by both parties, the negotiation period may be extended