

Rolling Stock PPP

Double Deck Trains

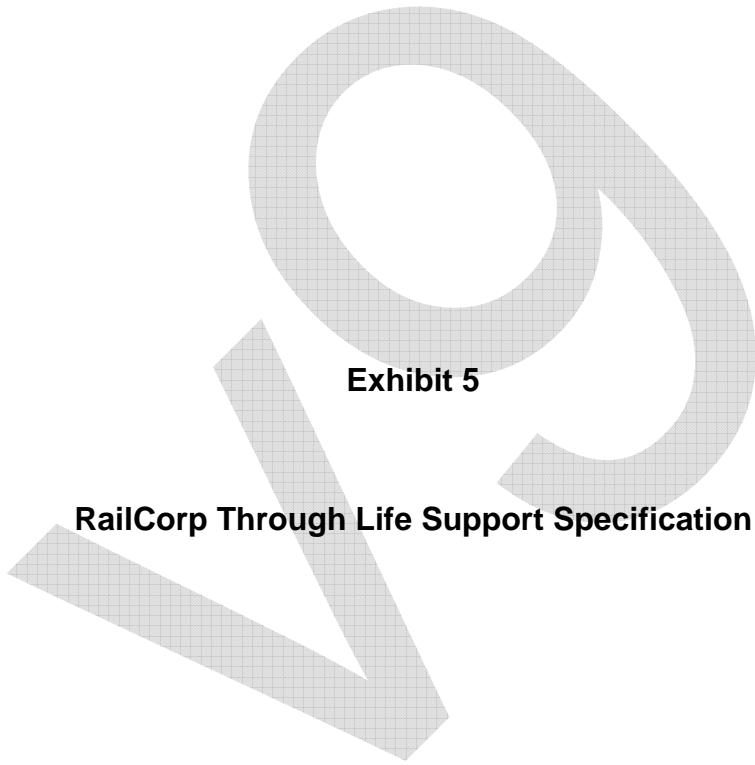


Exhibit 5

RailCorp Through Life Support Specification



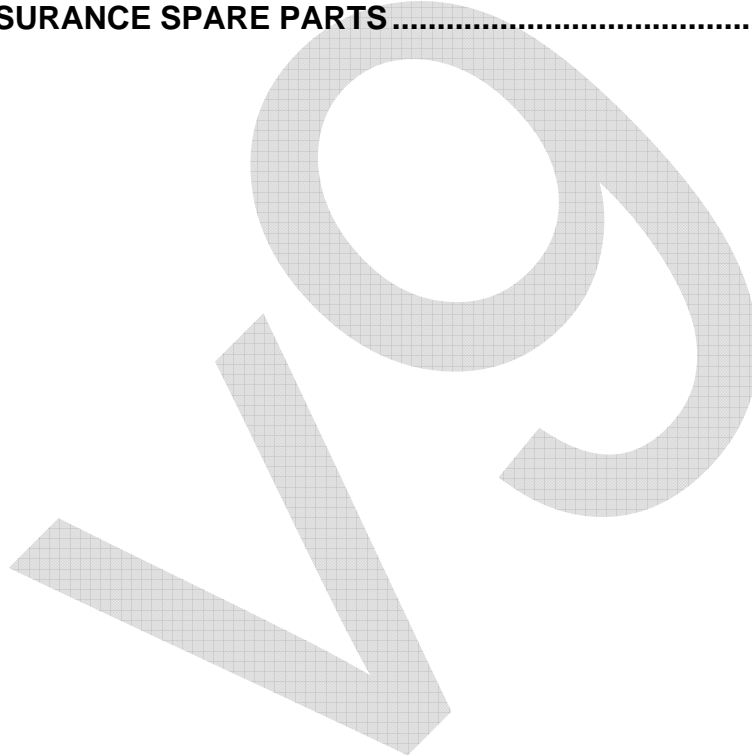
Change Log

Issue	Date	Author	Change
v7	Contract		
v8	17/03/2009	ARJS	Addition of text changes from RFTA Group 8: 00237
v9	01/10/2010	ARJS	Addition of text changes from letter RC05366 updating Attachment 3: Interface Protocols

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1 INTRODUCTION

PPP Co must provide Through Life Support (TLS) for the Sets, the Maintenance Facility, the Simulators, the Unfixed Maintenance Plant and Equipment and the Maintenance Parts and Materials, throughout the TLS Phase in accordance with the requirements of this RailCorp Through Life Support Specification and the other requirements of clause 23 of the Conditions of Contract.

PPP Co must describe how it intends to fulfil its obligation to provide Through Life Support in the Project Plans referred to in clauses 2 (Contract Management Plan), 3 (Safety Management Plan), 4 (Systems Assurance Plan), 5 (Configuration Management Plan) and 9 (Through Life Support Plan) of the Contract Management Requirements.

PPP Co shall ensure that the Project Plans developed during the Delivery Phase that are relevant to the TLS Activities are updated to reflect the requirements of this RailCorp Through Life Support Specification and clearly integrated with the Through Life Support Plan in the Contract Management Requirements (CMR).

1.1 *Through Life Support Elements*

The Through Life Support will include the following service elements:

- (a) Car maintenance services in accordance with clause 2.3 (Car Maintenance Services) of this RailCorp Through Life Support Specification;
- (b) presentation services in accordance with clause 2.4 (Presentation Services) of this RailCorp Through Life Support Specification;
- (c) operations services in accordance with clause 2.5 (Operations Services) of this RailCorp Through Life Support Specification;
- (d) technical services in accordance with clause 2.6 (Technical Services) of this RailCorp Through Life Support Specification;
- (e) logistics support services in accordance with clause 2.7 (Logistics Support Services) of this RailCorp Through Life Support Specification;
- (f) simulator support services in accordance with clause 2.8 (Simulator Support Services) of this RailCorp Through Life Support Specification;
- (g) Maintenance Facility support services in accordance with clause 2.9 (Maintenance Facility Support Services) of this RailCorp Through Life Support Specification; and
- (h) Reimbursable Through Life Support services in accordance with clause 2.10 (Reimbursable Through Life Support Services) of this RailCorp Through Life Support Specification.

Unless expressly provided otherwise, PPP Co's sole entitlement to payment for Through Life Support will be remuneration by way of Availability Payments.

2 RAILCORP THROUGH LIFE SUPPORT SPECIFICATION OF REQUIREMENTS

2.1 Introduction

The Through Life Support provided by PPP Co must deliver the capability to operate and maintain the Sets in a safe, planned and systematic manner and ensure that PPP Co can provide the Required Availability in each Availability Period.

PPP Co warrants that the Minimum Operating Standards for Available Sets required to be achieved under this Contract (which comprise the more stringent of the Minimum Standards and the Performance Operating Standards) will allow the Sets to satisfy the necessary safety requirements and Required Availability required by the Conditions of Contract. RailCorp will apply the more stringent of the Minimum Standards and the Performance Operating Standards when determining whether a Set is at an appropriate operational and presentational level to satisfy the requirements of being Available for service.

PPP Co shall ensure that all TLS Documentation and, in particular, Service Limits and frequencies and the Minimum Operating Standards for Available Sets meet the requirements of the Risk Management Plan and Safety Management Plan specified in the Contract Management Requirements, which include the HAZOP, ALARP and FMECA analysis outcomes.

Prior to Practical Completion of Set 1, PPP Co shall review this RailCorp Through Life Support Specification and the planned operation of the new Sets. PPP Co must advise RailCorp of the Variations which it recommends be made to existing RailCorp Minimum Standards and the Performance Operating Standards due to changes or advances in the Sets and their intended operations. PPP Co is to provide this advice to RailCorp prior to the completion of the Critical Design Review. This review must also include an examination of the interfaces with RailCorp (e.g. passengers, crew, stations, wheel profiling, stabling, existing maintenance facilities and network infrastructure) to ensure that RailCorp standards and procedures for the new Sets address the As Low As Reasonably Practicable (ALARP) principle. The review shall be based on the HAZOP analysis and any other safety or failure analysis completed by PPP Co during the Delivery Phase in accordance with the requirements of the CMR. PPP Co must bear the cost of carrying out this review. Any changes accepted by RailCorp will be treated as a RailCorp initiated Variation.

2.2 RailCorp Policies, Procedures, Standards & Fleet Management

2.2.1 Policies and Procedures

PPP Co must ensure that PPP Co personnel working on the RailCorp Network or within RailCorp stabling yards or facilities comply with all the requirements of RailCorp's policies and procedures relating to those sites.

2.2.2 ICT Standards**(a) Standards**

RailCorp has identified the following standards as appropriate to the development and introduction of ICT equipment. PPP Co must ensure that its ICT systems are compliant with the following standards (except to the extent that RailCorp agrees otherwise):

ICT Area	Standard
Architecture Methodology	DoDAF
Service Management Infrastructure	ITIL
System Life Cycle Process	EIA 632
Systems Engineering Practice	CMMI
Risk Management	AS 4360
Security Management	ISO/IEC 27001
Systems Integration	EIA 632, EN 50126 and EN50129
Software Safety	EN 50128
Software Requirements Specification	MIL-STD-498
Business Continuity Management	HB 221:2004

(b) Avoidance of Proprietary Technologies

All ICT systems, subsystems, equipment and components shall exhibit the following characteristics:

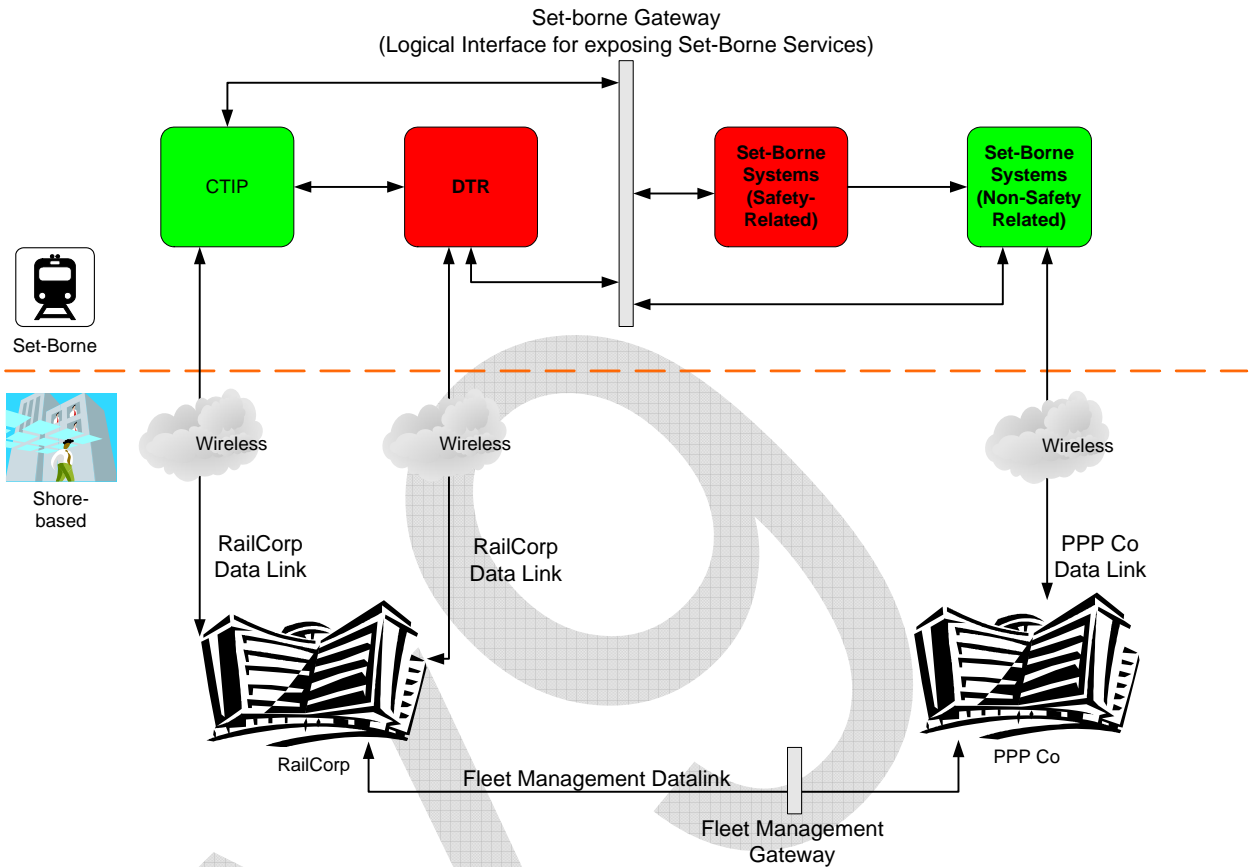
- (i) have publicly and readily available specifications for all aspects related to interoperability in multi-vendor ICT environments;
- (ii) are in current active maintenance and are generally regarded as good practice for the relevant purpose;
- (iii) are founded on underlying technology that is in widespread use and for which development/support/maintenance skills and training are broadly available in the Australian ICT market place;

-
- (iv) have more than one commercial source, so that reasonable competition exists in the market place for supply;
 - (v) shall be based on industry standard equipment and software that will remain supportable during the Contract Term;
 - (vi) shall remain certified, supported and maintained on the Upgrade Path through the life of the Contract Term, regardless of enhancements that may be required; and
 - (vii) access to embedded Source Code for ICT systems, subsystems, equipment and components shall be provided in accordance with clause 37 (Intellectual Property Rights) of the Conditions of Contract.
- (c) **Connectivity to Public Systems**
- No ICT systems, subsystems, equipment and components shall interfere with or otherwise impact on the use of public mobile communication systems, while in normal coverage areas.
- (d) **Safety Systems**
- All ICT systems, subsystems, equipment and components that have safety attributes, or have interfaces to RailCorp ICT systems (whether explicitly related to safety or not), shall be identified and shall comply with EN 50128 or a recognised equivalent international, national or industry standard approved by RailCorp. Any safety-related data transferred from any ICT systems, subsystems, equipment or components to any RailCorp ICT system, by any means, shall also be clearly identified.
- (e) **Business Continuity Management**
- For the purposes of effective corporate governance, RailCorp requires PPP Co to develop and implement adequate Business Continuity Management practices and ensure that PPP Co's Business Continuity Management plans are compliant with HB 221:2004. The establishment of effective business continuity management requires the use of recognised risk management processes as described in AS4360.
- PPP Co shall, as part of PPP Co's Business Continuity Management plans, identify what infrastructure and resources are required to achieve and sustain the minimum standards for operation, as defined through the Business Continuity Management processes.

2.2.3 RailCorp Fleet Management

- (a) **General**
- RailCorp's Fleet Management Systems require fleet management information that is complete, current, and in certain circumstances, updated in Near-real-time, on all aspects of rolling stock assets, irrespective of the ownership or commercial arrangements under which the vehicle is operated and maintained.

The diagram below illustrates the conceptual network access and integration points between the PPP Co, RailCorp and Set-borne ICT systems.



(b) Fleet Management Gateway

The Fleet Management Gateway shall be provided and supported by the PPP Co and implemented before the Delivery Testing. PPP Co shall construct the Fleet Management Gateway, in consultation with, and at no additional cost to, RailCorp. PPP Co shall ensure the Fleet Management Gateway is implemented as the common message-oriented gateway through which any PPP Co-to-RailCorp (business-to-business) ICT system interaction will occur.

(c) Transaction Model

PPP Co shall ensure the Fleet Management Gateway complies with the defined business-to-business Fleet Management Transaction Model.

PPP Co shall define the business-to-business Fleet Management Transaction Model supporting the RailCorp and PPP Co requirements regarding Fleet Management information sourced from each other's Fleet Management systems.

PPP Co shall document and maintain, for each identified transaction within the Transaction Model, details including, the identification and description of:

- (i) systems involved with the transaction and each involved system's responsibility in ensuring successful execution;
- (ii) business objects manipulated by the transaction and the type of manipulation (for example: update, copy, read-only); and
- (iii) service level characteristics to be supported by the transaction, such as: data volumes, timeliness of updates, scalability, responsiveness (or time to complete), and security requirements.

(d) Integration Platform

In support of the Fleet Management Gateway, PPP Co shall implement an Integration Platform. The PPP Co Integration Platform shall support:

- (i) guaranteed delivery of transiting messages;
- (ii) negligible negative impact to message transit time;
- (iii) high reliability sufficient to meet service levels required by RailCorp;
- (iv) routing of transiting messages based upon the content of a message header;
- (v) message oriented connectivity, including support for point-to-point and publish-subscribe channels;
- (vi) support for bi-directional message channels;
- (vii) threat detection and reporting capabilities to assure the security and integrity of transiting messages; and
- (viii) scalable connectivity through the addition of parallel channels.

(e) Fleet Management Data Link

PPP Co shall establish and maintain a Fleet Management Data Link that will provide the physical network connectivity between the RailCorp and PPP Co IT networks and over which the Fleet Management Gateway will operate.

PPP Co will be entitled to payment for the provision and usage by RailCorp of the Fleet Management Data Link in accordance with the PPP Co Schedule of Rates.

PPP Co shall:

- (i) conduct an analysis to determine the appropriate level of service that will cater for the expected operating data volume, security, reliability, and performance requirements of the Fleet Management Gateway; and

- (ii) ensure the Fleet Management Data Link at all times meets the service levels identified in accordance with subparagraph (i).

(f) Transaction Management

PPP Co shall implement a comprehensive Transaction Management framework that will make maintenance easier and improve the service level capabilities of the Fleet Management Gateway.

Transaction Management shall include features to support the Fleet Management Gateway, such as:

- (i) tracking the progress, successful or otherwise, of messages passing through the interface;
- (ii) logging of all messages as an audit record and maintain the message history for later review and analysis; and
- (iii) audit samples of messages passing through the interface for pro-active detection of increased error rates and other faults.

2.3 Car Maintenance Services

2.3.1 Maintenance and repairs

PPP Co must maintain and repair the Cars:

- (a) in accordance with:
 - (i) this RailCorp Through Life Support Specification;
 - (ii) the Technical Maintenance Plan;
 - (iii) the other relevant Project Plans;
 - (iv) industry best practice;
 - (v) all applicable RailCorp, Australian and international standards;
 - (vi) all applicable laws; and
 - (vii) the other requirements of the Contract;
- (b) so that it is able to provide the Required Availability;
- (c) so that the requirements of the Specifications and the Final Design Documentation are at all times met during the TLS Phase;

- (d) so that all Defects are corrected in accordance with the requirements of the Contract; and
- (e) so that they remain, at all times during the TLS Phase, fit for their intended purpose ascertainable from the RailCorp Project Agreements.

2.3.2 Maintenance and repair services

- (a) Without limiting clause 2.3.1 (Maintenance and repairs) of this RailCorp Through Life Support Specification, PPP Co must provide the following maintenance and repair services in relation to the Cars:
 - (i) the provision of trained, competent and certified personnel to perform maintenance and repairs;
 - (ii) maintenance management;
 - (iii) routine inspection and servicing;
 - (iv) Defect finding and testing;
 - (v) Unscheduled repairs;
 - (vi) in service Defect rectification and trouble shooting;
 - (vii) repair and/or replacement of components consumed, worn or damaged through operation of the Sets;
 - (viii) ongoing maintenance and cleaning;
 - (ix) provision of Certificates of Readiness for each Set;
 - (x) supply, storage and maintenance of all Maintenance Parts and Materials;
 - (xi) periodic component change out;
 - (xii) repair and overhaul of all components in or on the Sets;
 - (xiii) support for Car and Set recovery services;
 - (xiv) collision repairs;
 - (xv) maintaining passenger amenity standards;
 - (xvi) refurbishment services;
 - (xvii) updating documentation in accordance with the Configuration Management Plan (including Design Documentation);

- (xviii) collecting, analysing and maintaining data concerning the maintenance and operation of each Set and updating the RailCorp MMIS accordingly, via the Fleet Management Gateway;
 - (xix) reporting to RailCorp on the maintenance undertaken on all Sets; and
 - (xx) any other items or work (other than Reimbursable Through Life Support) which are required for PPP Co to fulfil its obligations under the Conditions of Contract, including clause 23 Through Life Support.
- (b) At the Maintenance Facility, PPP Co's responsibilities shall also include:
- (i) maintenance and repair of Sets;
 - (ii) ensuring Sets meet the operational, presentation and passenger amenity standards as specified in the Performance Operating Standards and Train Presentation Manual prior to returning to service;
 - (iii) delivering Sets to the Pick-up Point for collection by RailCorp;
 - (iv) inspecting all Sets prior to delivery to the Pick-up Point to verify that they meet the Minimum Operating Standards for Available Sets;
 - (v) issuing a Certificate of Readiness as set out in Attachment 2;
 - (vi) ensuring that the emergency equipment locker is sealed once the content has been inspected and confirmed as complete;
 - (vii) notifying RailCorp when Sets will be Available and providing notice to RailCorp if a Set will not be Available such that Required Availability will not be achieved;
 - (viii) notifying RailCorp of any known condition with the Sets that does not comply with the Minimum Operating Standards for Available Sets prior to the Sets entering service;
 - (ix) providing Help Desk support (as referred to in clause 2.6 of the Interface Protocols) for 24 hours per day, 7 days per week, to RailCorp including Mechanical Control, Equipment Examiners, Drivers and Guards to expedite attention to Defects 'in service' and minimise 'in service' delays;
 - (x) identifying Defects within each Set; and
 - (xi) reporting information as required by clause 2.7.6 (Maintenance Management Information) of this RailCorp Through Life Support Specification by the commencement of the next Business Day to RailCorp.

- (c) At other RailCorp sites, PPP Co's responsibilities shall include:
- (i) responding to Defects on Sets that do not meet the Minimum Operating Standards for Available Sets and rectifying Defects that may prevent Sets from being Available; and
 - (ii) attending to Incidents that require intervention by PPP Co personnel.
- (d) PPP Co must maintain a higher standard of operational performance than the Minimum Standards to meet the relevant Key Performance Indicators (KPIs) for Passenger Amenity Defects Overdue or Other Defects Overdue.
- (e) The Performance Operating Standards define a measure, a tolerance and a time limit for outstanding Defects to remain on Sets before triggering the KPI for Passenger Amenity Defects Overdue or Other Defects Overdue and/or declaring a Set Not into Service (NIS). Where a Set is declared NIS it will be deemed not to have met the Minimum Operating Standards for Available Sets.
- (f) Without limiting clause 26.4 (RailCorp's right to monitor) of the Conditions of Contract, RailCorp may audit a sample of Sets regularly to assess their presentation and compliance with the Minimum Operating Standards for Available Sets.
- (g) RailCorp reserves the right to require PPP Co to institute corrective action for any unsatisfactory aspect within a time scale to be nominated by RailCorp.

2.3.3 RailCorp to deliver Sets for maintenance

RailCorp shall deliver Sets that are due for Scheduled Maintenance to the Handover Point at the times determined in accordance with the Interface Protocols.

Sets that do not meet the Minimum Operating Standards for Available Sets will be either Stabled at the nearest Out Depot, returned to the Maintenance Facility or worked out of service as determined by RailCorp. RailCorp will endeavour to deliver Sets that require Unscheduled Maintenance to the Handover Point within the time periods specified in the Interface Protocols.

2.3.4 PPP Co to operate Sets within Maintenance Facility

PPP Co is responsible for:

- (a) collection of Sets from the Handover Point;
- (b) the operation of Sets within the Maintenance Facility; and
- (c) delivering Sets to the Pick-up Point for collection by RailCorp.

2.3.5 Issue of train Certificate of Readiness

- (a) PPP Co must:
 - (i) issue a Certificate of Readiness with each Set it delivers to the Pick-up Point for collection by RailCorp;
 - (ii) issue a new Certificate of Readiness if any Unscheduled Maintenance is carried out on a Set before it is scheduled to return to the Maintenance Facility; and
 - (iii) ensure that a history of each Set's Certificate of Readiness is maintained within the PPP Co MMIS as part of its Configuration Management Plan.
- (b) The Certificate of Readiness must:
 - (i) advise the Driver and RailCorp's Representative of the condition of the Set leaving the Maintenance Facility;
 - (ii) include details of the work completed and an acknowledgment that the Set meets the Minimum Standards and is ready for service for a specified period (at least until it is scheduled for return to the Maintenance Facility);
 - (iii) identify the Set and Car numbers, date and time and date for re-certification; and
 - (iv) include agreed concessions from the Performance Operating Standards providing these are listed on the Certificate of Readiness and accepted by RailCorp (at its absolute discretion).

The KPI regime will apply to any agreed concessions.

A sample Certificate of Readiness is provided in Attachment 2.

2.3.6 RailCorp personnel attending to PPP Co Sets

PPP Co shall provide 24 hour by 7 day telephone support to RailCorp in attending to 'in service' Defects.

Mechanical Control may advise PPP Co of possible Defects on Sets when 'in service' or at an Out Depot. PPP Co may request assistance from RailCorp to resolve an 'in service' Defect by contacting Mechanical Control and requesting Equipment Examiner attendance at the defective Set. RailCorp may (but is not obliged to) provide Equipment Examiners to assist PPP Co. Such assistance will be provided to PPP Co free of charge.

PPP Co shall provide on-going certification and relevant retraining of the Mechanical Control and Equipment Examiners at PPP Co's cost.

Where communications with Mechanical Control or Equipment Examiners utilise the RailCorp Train Radio communications system, PPP Co shall comply with all RailCorp communications protocol and procedures.

PPP Co may need to respond itself to requests for assistance with defective Sets and must not rely on Equipment Examiners to attend to Set failures in service.

PPP Co shall issue those Equipment Examiners who have been deemed competent by PPP Co with a certificate of competency. Such Equipment Examiners may (but are not obliged to) perform support tasks on defective Sets in service. PPP Co must ensure that RailCorp personnel performing support tasks are fully trained and competent to perform that task, are provided with the test equipment, special tools, keys or passwords and other equipment required and have adequate Safe Working Method Statement (SWMS) knowledge for the task being requested.

RailCorp personnel, in performing any rectification task on a defective Set, will be acting as PPP Co's agent. The acts or omissions of RailCorp personnel, when so acting will not:

- (a) relieve PPP Co from, or alter or affect, PPP Co's obligations or Liabilities, whether under this Contract or otherwise according to law; or
- (b) prejudice RailCorp's rights against PPP Co, whether under this Contract or otherwise according to law, or void any warranties or other inspection certificates issued by PPP Co for that Set.

PPP Co must monitor the expiry date of the certificates of competency issued to RailCorp personnel to ensure that personnel working on the Sets remain competent and qualified.

PPP Co must also provide training and certification for 30 RailCorp maintenance personnel who RailCorp may (but is not obliged to) make available to provide assistance to PPP Co in attending to PPP Co Sets stabled at a RSD Maintenance Centre siding. The initial 30 RSD maintenance personnel are to be trained in the Equipment Examiner's training as a minimum, at PPP Co's cost. Training for additional RSD maintenance personnel, and re-training and/or re-certification of the initial 30 maintenance personnel, will be provided in accordance with the PPP Co Schedule of Rates.

RailCorp will charge for assistance provided by RSD maintenance personnel in accordance with the RailCorp Schedule of Rates.

When requested by RailCorp, PPP Co shall provide on-site assistance to RailCorp personnel in attending to defective Sets.

2.3.7 Incident Response

Where an Incident occurs in respect of a Set, PPP Co must:

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- (a) ensure all Incidents are recorded by PPP Co;
 - (b) provide Help Desk and other support to Mechanical Control, the Drivers and Equipment Examiners to expedite the Set's repairs/resets and minimise disruptions to services;
 - (c) ensure that all telephone Help Desk and other support adheres to the Interface Protocols;
 - (d) assist RailCorp to relocate the Set; and
 - (e) repair the Set at the Maintenance Facility or at another location approved by RailCorp.

If the Incident is a PPP Co Related Incident and RailCorp provides resources or equipment other than the Driver or the Guard to move the Set, PPP Co shall pay the costs incurred by RailCorp in providing such resources or equipment in accordance with the rates and prices specified in the RailCorp Schedule of Rates.

If the Incident involves damage to the Set resulting from coupler swing during collisions of up to and including 15 km/h, PPP Co shall repair this damage at no cost to RailCorp.

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2.3.8 Wheel Profiling

PPP Co must profile:

- (a) its Wheelsets; and
- (b) *[Not Used]*
- (c) the Wheelsets of other trains supplied by RailCorp.

PPP Co must profile the Wheelsets referred to in clause 2.3.8 (c) in accordance with the rates and prices specified in the PPP Co Schedule of Rates.

RailCorp will provide to PPP Co a schedule of wheel profiling requirements in accordance with clause 4.6 of the Interface Protocols. The draft procedure for booking Train Paths to the Underfloor Wheel Profiling Machine is in the Interface Protocols.

PPP Co agrees that the wheel profiling carried out by PPP Co for RailCorp will not in any way lessen or affect:

- (a) PPP Co's Liabilities or responsibilities, whether under this Contract or otherwise according to law; or
- (b) RailCorp's rights against PPP Co, whether under this Contract or otherwise according to law.

PPP Co will be responsible for any Defects in the work carried out using the Underfloor Wheel Profiling Machine or such other facilities.

Wheel profiling will be undertaken to RailCorp's approved drawings.

Suitable wheel profiler bogie clamps shall be supplied together with any special tools to be delivered.

PPP Co will be entitled to payment for these wheel profiling services in accordance with the PPP Co Schedule of Rates.

2.3.9 RailCorp assistance in returning a Set to service.

RailCorp at its sole discretion may assist PPP Co in returning a Set to service from a RailCorp Maintenance Centre or siding. PPP Co must pay RailCorp for work undertaken, other than by Equipment Examiners, on or about the Set in accordance with the rates and prices specified in accordance with the RailCorp Schedule of Rates.

2.3.10 Track possessions

Annually, RailCorp will provide to PPP Co an indicative 12-month schedule of planned track possessions. Track possessions on the adjacent suburban, main or relief lines may require the isolation of Overhead Wiring supply within the Maintenance Facility. PPP Co shall have contingency plans to cater for track possessions which may occur due to scheduled or unplanned events such as Incidents or corrective maintenance within the Maintenance Facility or on the adjacent suburban, main or relief lines.

Whether or not a track possession has been included in the indicative schedule, RailCorp's Representative may by giving notice to PPP Co at least 30 days prior to the commencement of the track possession (including the Special Timetable for the track possession) require PPP Co to update the schedule for Sets required to be delivered to the Maintenance Facility for maintenance, consistent with the requirements of the updated Timetable.

2.4 Presentation Services

PPP Co will be responsible for Major Cleans, Daily Cleans and Turnaround Cleans when the Sets are in the Maintenance Facility. Sets leaving the Maintenance Facility must be cleaned to a level suitable for the Sets to be considered Available and to return to service in accordance with the requirements of the Train Presentation Manual.

At every Major Inspection, PPP Co shall audit the Passenger Amenity KPI items in the Performance Operating Standards and record relevant details in the PPP Co MMIS as part of the Defect reporting requirements.

The presentation of the Cars cleaned by PPP Co may be monitored through a process of audit and customer feedback. RailCorp's Passenger Information Division conducts regular surveys across the RailCorp fleet for cleanliness and passenger amenity. As part of this survey process, Sets ready for departure from the Maintenance Facility may be randomly audited to ensure that the cleaning is being performed and that the passenger amenity meets the minimum standard specified in the Train Presentation Manual.

2.4.1 Provision of cleaning services for Sets in Maintenance Facility precincts

PPP Co shall be responsible for the internal cleaning of all Sets at the Maintenance Facility prior to their delivery to the Pick-Up Point.

PPP Co shall provide cleaning of Sets at the Maintenance Facility in accordance with the cleaning standards defined in the Train Presentation Manual as follows:

- (a) a Major Clean at least every 30 calendar days;
- (b) a Turnaround Clean for Sets returned to service on the same day (eg in and out between the AM and PM peaks); and
- (c) a Daily Clean for Sets exiting the Maintenance Facility after an overnight stay.

Where a Set is returned to the Maintenance Facility solely for the purpose of PPP Co carrying out Reimbursable Through Life Support, RailCorp will reimburse PPP Co for the cost of PPP Co carrying out the Daily Clean or Turnaround Clean in accordance with the PPP Co Schedule of Rates.

PPP Co cleaning is to include the removal of Minor Graffiti. Sets arriving at the Maintenance Facility with Minor Graffiti shall have the Graffiti removed by PPP Co prior to return to service.

Removal of Graffiti by PPP Co shall result in the Set showing no evidence of Graffiti and being suitable for return to service. Where necessary, any area of external Graffiti removed by PPP Co shall also be washed before the Set is returned to service.

For the purpose of counting and reporting Graffiti removal, PPP Co shall:

- (d) count the number of Graffiti Tags removed; and
- (e) report monthly on the number of Graffiti Tags removed.

2.4.2 Out Depot Cleaning

PPP Co is not responsible for any cleaning of Sets that are stored at Out Depots.

2.4.3 Provision of train external washes

External Washing of any trains sent to the Maintenance Facility will be the responsibility of PPP Co. External Washing of trains must be in accordance with the cleaning standards defined in the Train Presentation Manual.

Sets must be externally washed at a frequency of no more than seven (7) days. PPP Co will be responsible for externally washing any Sets sent to the Maintenance Facility that have not been washed within the last seven (7) days.

PPP Co will be entitled to payment for these train washing services in accordance with the PPP Co Schedule of Rates.

2.5 Operations Services

PPP Co must provide the following operations services:

- (a) updating the manuals and Timetable information stored in the Train Operating System in accordance with clause 2.5.1 (Updates to Manuals and Timetable Information Stored in the TOS) of this RailCorp Through Life Support Specification;
- (b) updating the train destination signage and codes in accordance with clause 2.4.2 (Updates to signage and codes for Train Destination Indicators) of this RailCorp Through Life Support Specification;
- (c) updating the network route maps, Passenger information posters and other RailCorp decals within the Sets in accordance with clause 2.5.3 (Updates to RailCorp decals, route maps and passenger information posters) of this RailCorp Through Life Support Specification;
- (d) updating the Digital Voice Annunciator in accordance with clause 2.5.4 (Updates to Digital Voice Annunciator) of this RailCorp Through Life Support Specification;
- (e) downloading data from the Event Recorders or the Train Operating System in accordance with clause 2.5.5 (Downloading of Event Recorder and Train information) of this RailCorp Through Life Support Specification; and
- (f) retrieval of image data from the CCTV recorder in accordance with clause 2.5.6 (Retrieval of CCTV Images) of this RailCorp Through Life Support Specification.

PPP Co will be entitled to payment for these operations services in accordance with the PPP Co Schedule of Rates.

2.5.1 Updates to Manuals and Timetable Information Stored in the TOS

From time to time RailCorp will update the Train Operations Manual and/or other manuals and procedures stored in the Train Operating System (TOS). PPP Co must update the manuals within the TOS at the next Scheduled Maintenance inspection or earlier if requested by RailCorp.

2.5.2 Updates to signage and codes for Train Destination Indicators

From time to time RailCorp will require updates to the signage and codes for the internal and external Train Destination Indicators. PPP Co must update this signage and codes at the next Scheduled Maintenance inspection or earlier if requested by RailCorp.

2.5.3 Updates to RailCorp decals, route maps and passenger information posters

From time to time RailCorp will require updates to the network route maps, Passenger information posters and other RailCorp decals on the Sets. PPP Co must install this signage at the next Scheduled Maintenance inspection.

2.5.4 Updates to Digital Voice Annunciator

From time to time RailCorp will require updates to the Digital Voice Announcements. PPP Co must update the Digital Voice Announcements for all Sets at the next Scheduled Maintenance inspection or earlier if requested by RailCorp. RailCorp will provide the digital recordings for loading into the Sets or earlier if requested by RailCorp.

2.5.5 Downloading of Event Recorder and Train information

From time to time, RailCorp, ITSRR, NSW or Federal Police or another Authority may require downloading of data from the Event Recorder and/or the Train Operating System to assist with the investigation of Incidents, train performance monitoring or other matters. PPP Co shall have the capability to download data in a secure way using authorised PPP Co personnel in accordance with the Interface Protocols.

PPP Co must ensure the correct operation of the Event Recorder as part of Scheduled Maintenance and include this as a specific item in the Technical Maintenance Plan. This must include verification of the functionality and calibration of the Event Recorder including the ability to download data for analysis to meet the requirements of the procedures for "Data Logger (Event Recorder) Information Management (Incidents)" which must be developed, as referenced in clause 5 of the Interface Protocols.

RailCorp will own all data created by the Event Recorder and the Train Operating System.

PPP Co may utilise Event Recorder data to assist with the analysis of Car Defects and Defect investigation. However, where stored information may be destroyed or corrupted by such action, PPP Co must first download all stored data in accordance with the Interface Protocols to ensure data integrity is maintained for at least 30 Business Days.

Similarly, if PPP Co removes or replaces a defective Event Recorder, PPP Co must download all stored data from the Event Recorder in accordance with the Interface Protocols and hold that data for at least 30 Business Days. If RailCorp requests 'in service' data for the Set during this 30 Business Day period, PPP Co must provide the data to RailCorp as if the Set had continued 'in service' without maintenance intervention.

Authorised RailCorp personnel may also retrieve, store and analyse information from Event Recorders in accordance with the Interface Protocols.

2.5.6 Retrieval of CCTV Images

From time to time, RailCorp, ITSRR, NSW or Federal Police or another Authority may require retrieval of image data from the CCTV recorder to assist with the investigation of Incidents or other matters. PPP Co must be able to provide image data from the CCTV system in a secure way using authorised personnel in accordance with the Interface Protocols.

PPP Co must ensure the correct operation of the CCTV system as part of Scheduled Maintenance. This must include verification of the functionality of the image capture from each camera and associated data storage including the ability to download video image data for analysis to meet the requirements of the Interface Protocols.

RailCorp will own all image data created by the CCTV systems.

PPP Co may utilise CCTV stored data to assist with the analysis of Car Defects and Defect investigation. However, where stored information may be destroyed or corrupted by such action, PPP Co must maintain all stored data for at least 30 Business Days in accordance with the Interface Protocols.

PPP Co must keep secure all CCTV images at all times when:

- (a) the Sets are within the Maintenance Facility; and
- (b) undertaking maintenance of the CCTV systems outside of the Maintenance Facility.

If PPP Co removes or replaces a defective CCTV data recorder unit, PPP Co must maintain the stored data for at least 30 Business Days. Details of the Car and Set numbers, removal time and date etc. must be recorded with the data. If RailCorp requests 'in service' stored data for a Set during this 30 Business Day period, PPP Co must provide the stored data to RailCorp as if the Set had continued 'in service' without maintenance intervention.



2.6 Technical Services

PPP Co must maintain a technical support capacity for the Sets that includes:

- (a) assisting with design of modifications or changes to CCTV, DVA and other on-board customer systems;
- (b) updating Design Documentation;
- (c) updating of Technical Maintenance Plans and Reliability and Maintainability Programmes described in clauses 4.8 and 4.9 of the Contract Management Requirements;
- (d) timely assistance and support for any safety investigations or audits by RailCorp, ITSRR, OTSI¹ or other Investigative Authorities;
- (e) redesign of componentry due to obsolescence, lack of supply, shortfall in technical performance or reliability or for any other reason which results in a failure to achieve the Minimum Operating Standards for Available Sets;
- (f) ongoing training material updates for RailCorp and/or PPP Co's personnel to reflect any changes to Set systems, equipment or Set operation;
- (g) provision and updating of the Simulator systems data and equipment for the training of Drivers, Guards and maintenance personnel to ensure that the configuration of the Simulators is up to date with the Sets in service; and
- (h) maintenance and support of the power, cabling, antenna, and data network infrastructure for the on-Set CTIP units.

2.7 Logistics Support Services

2.7.1 Configuration Management

Throughout the TLS Phase, PPP Co shall maintain a Configuration Management System. The Configuration Management System shall provide RailCorp and PPP Co with the latest configuration status of all Cars including a record of the "Variation Order" approving the Variation, the tasks undertaken as a result and the revised status of the equipment after the Variation was completed. The Configuration Management System shall also track all other configuration changes including engineering manuals, training manuals, Simulator systems and manuals, Driver and Guard operational manuals stored in the TOS, service sheets, procedures, work instructions and any other safety related document or systems.

The Configuration Management System must be developed in accordance with the Configuration Management Plan.

¹ Some OTSI Investigations require technical responses in less than 72 hours.

The level of detail on Configuration Items tracked through the Configuration Management System shall be based on an analysis of the HAZOP and FMECA reviews during the Delivery Phase and any subsequent analysis based on maintenance history and Defect analysis.

The Configuration Management System shall include information on the removal of Configuration Items and the fitment of replacement Configuration Items for all Configuration Items identified as safety critical as part of the HAZOP and FMECA analyses. The information contained within the Configuration Management System is to be available for audit by RailCorp or its nominated contractors, through the provision of access via a terminal in the RailCorp Office Area in the Double Deck Maintenance Facility. As a minimum, it is expected that the following Items would be included in the Configuration Management System:

- (a) bogies and propulsion components;
- (b) wheels;
- (c) axles;
- (d) bearings;
- (e) suspension;
- (f) major brake components;
- (g) couplers and draw gear;
- (h) TOS configuration;
- (i) Technical Maintenance Plan;
- (j) doors and door systems;
- (k) heating, ventilation and air conditioning (HVAC) equipment;
- (l) gangways;
- (m) manuals;
- (n) as built and as in service drawings;
- (o) pantographs; and
- (p) safety equipment (including detrainment equipment, Simulators and the SCS, event recorder, CCTV, Driver's safety systems and fire and life safety systems).

2.7.2 Training of RailCorp personnel

- (a) PPP Co must train RailCorp personnel in the operation and relevant maintenance aspects of the Sets. All training is to be at a location in the Sydney metropolitan area. Training must be accomplished at two levels training of initial RailCorp personnel and RailCorp train the trainer training, then RailCorp will train other RailCorp personnel for which its trainers are trained. In providing this training:
- (i) PPP Co must use experienced trainers in the operational and maintenance areas concerned to train RailCorp personnel;
 - (ii) PPP Co must provide to RailCorp the relevant experience and Curricula Vitae of the trainers to be used in providing the training 3 months prior to commencement of training;
 - (iii) PPP Co shall provide both training materials and classroom training to RailCorp training personnel and engineering related personnel; and
 - (iv) The RailCorp trainers will then provide a second level of training to the majority of RailCorp personnel (eg Drivers and Guards). PPP Co shall provide the training packages for this second level training but will not be required to provide the training itself, which will be delivered by RailCorp.

PPP Co must use experienced trainers in the operational and maintenance areas concerned to train RailCorp personnel.

- (b) PPP Co shall develop and provide a set of training programs and assessment materials and the associated training that meets the National AQTF Guidelines and encompasses the requirements of:
- (i) Driver trainers and Guard trainers - 32 Driver Trainers and 20 Guard Trainers;
 - (ii) Mechanical Control 14 Controllers;
 - (iii) Equipment Examiners 19 Examiners and 30 RSD maintenance personnel;
 - (iv) station personnel trainers 2 Trainers;
 - (v) security personnel trainers 2 Trainers;
 - (vi) train presentation trainers 2 Trainers; and
 - (vii) RSD engineers and quality assurance personnel 22 Engineers and 8 QA personnel.

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- (c) PPP Co shall develop and provide a set of training programs and assessment materials that meets the National AQTF Guidelines and encompasses the requirements of:
- (i) Crew (Drivers and Guards) and team leaders;
 - (ii) RailCorp Emergency Train Recovery Unit (approximately 9 people);
 - (iii) emergency services personnel (including Police, Ambulance, Fire services and SES);
 - (iv) stations personnel;
 - (v) security personnel; and
 - (vi) Presentation personnel.
- (d) These training programs shall enable RailCorp trainers who have been trained by PPP Co to deliver training and assessment to the RailCorp personnel and other persons nominated in clauses 2.7.2 (c).
- (e) Specific requirements of the training programs will be to:
- (i) establish training objectives and recommended training methods;
 - (ii) develop and provide training documentation, aids and material for use in support of the training objectives;
 - (iii) integrate the use of the Simulator into the training methods;
 - (iv) provide training for RailCorp's employees, to enable them to support testing and operational evaluations and to conduct training for other personnel nominated by RailCorp in the operation and 'in service' maintenance of the Sets;
 - (v) establish training requirements for RailCorp personnel and to assist PPP Co where practicable in the event of a Failure of a Set; and
 - (vi) establish training requirements for emergency services personnel and RailCorp personnel involved in emergency response.
- (f) PPP Co shall provide training aids and material in support of all training conducted as part of the transition from the Delivery Phase to the TLS Phase of the Contract. Copies of training aids and material must be provided 1 month prior to training course provision.
- (g) PPP Co shall deliver six full sets of training aids and material and an electronic copy of all training aids and material (in a data format to be approved by RailCorp) for use by RailCorp in conducting follow on training. Drafts of the training aids and material

demonstrating the format and approach are to be supplied for RailCorp review 2 months prior to completion of the training aids and material.

- (h) Training aids and material are to be of good commercial standard and appropriate for the level of training to be conducted and shall meet the National AQTF standard.

2.7.3 Documentation and Manuals for RailCorp personnel

PPP Co must supply and maintain operating and maintenance manuals for the Sets, its installed equipment and the Maintenance Facility and the Unfixed Maintenance Plant and Equipment; Maintenance Parts and Materials

PPP Co shall supply the following quantity of each manual for use by RailCorp:

- (a) Systems Manuals – Suppliers and PPP Co generated (6 copies);
- (b) Operator Manuals (6 copies);
- (c) Presentation Manuals (6 copies);
- (d) Maintenance Manuals (6 copies);
- (e) Station personnel Manuals (6 copies);
- (f) Security personnel Manuals (6 copies);
- (g) Incident Response Manuals (6 copies); and
- (h) an electronic copy of each manual in a data format to be approved by RailCorp.

The manuals described in (a) to (h) above must be submitted 3 months before delivery of Set 1.

PPP Co must provide manuals in support of its own operations, in the range and quantity necessary to fulfil its obligations during the TLS Phase. PPP Co must make its manuals available to RailCorp for inspection as requested.

Updates to manuals are to be provided to RailCorp as part of the Variation management process referred to in the Contract Management Requirements.

2.7.4 Support equipment for RailCorp personnel

- (a) Equipment Examiners

PPP Co shall supply special tools and other equipment required by RailCorp Equipment Examiners in support of 'in service' maintenance performed during Set operations.

PPP Co shall provide a list of the support equipment to be provided, prior to the commencement of the first training session for Equipment Examiners and maintenance personnel, and provide 50 sets of the special tools and equipment prior to Practical Completion of Set 1.

(b) Pony bogies

PPP Co will, in completing the design of their bogie for the Sets, familiarise themselves with the Millennium Train pony bogies currently used by the RailCorp Emergency Train Recovery Unit for rolling stock recovery purposes. PPP Co will endeavour to achieve compatibility between bogies for Sets and RailCorp's Millennium Train pony bogies, provided the design of the bogies for the Sets is not compromised in the process.

If compatibility cannot be so achieved, PPP Co must design, build and supply to RailCorp four (4) pony bogies suitable for recovery of a Set and acceptable for use by the RailCorp Emergency Train Recovery Unit. PPP Co will, throughout the Contract Term, provide maintenance and repair services and operating and maintenance documentation, and will maintain certification for any pony bogies supplied for the use of the RailCorp Emergency Train Recovery Unit. The Pony Bogies shall be supplied one (1) month prior to commencement of Delivery Testing of the Sets.

RailCorp's Millennium Train pony bogies are Hegenscheidt Model No. 08-1160.

(c) Lifting Beams

PPP Co shall design, build and supply two (2) sets of Lifting Beams suitable for lifting and recovery of any Car on a Set and acceptable for use by the RailCorp Emergency Train Recovery Unit. PPP Co will, throughout the Contract Term provide maintenance and repair services and operating and maintenance documentation and will maintain certification for any Lifting Beam supplied for the use of the RailCorp Emergency Train Recovery Unit. The Lifting Beams shall be supplied one (1) month prior to commencement of Delivery Testing of the Sets.

2.7.5 Spares Support

(a) ***Transportability of spares***

PPP Co must transport the Maintenance Parts and Materials and other equipment to and from the Maintenance Facility and to other locations where Maintenance Parts and Materials may be necessary to achieve the Required Availability.

(b) ***Maintenance of sufficient reimbursable insurance spares***

PPP Co's list of Reimbursable Insurance Spare Parts as at the date of this Contract is contained in Attachment 4.

PPP Co shall develop and refine the Reimbursable Insurance Spare Parts list as required by clause 4.11 (Technical Maintenance Plan) of the Contract Management Requirements. PPP Co is to include all costs associated with stocking and holding the Reimbursable Insurance Spare Parts in the Set Availability Payments. RailCorp will reimburse PPP Co for usage of the Reimbursable Insurance Spare Parts in accordance with the PPP Co Schedule of Rates.

PPP Co shall hold sufficient Reimbursable Insurance Spares of critical and long lead time components to ensure that Sets can be returned to service in less than 1 month following the delivery of the Set to the Maintenance Facility and RailCorp's instruction to carryout the repairs (in accordance with clause 2.10.1) for RailCorp attributable Incidents such as:

- (i) low to medium speed collisions (20 to 35 km/hr) between 2 PPP Co Sets; and
- (ii) Minor Derailments.

The Reimbursable Insurance Spare Parts list as contained in Attachment 4 defines the minimum holding levels to be maintained by PPP Co during the TLS Phase. PPP Co may elect to hold additional quantities of any item at any time, in order to ensure the Required Availability is provided at all times. PPP Co shall hold additional quantities of any item in order to comply with the requirements of this clause 2.7.5(b).

PPP Co shall develop and refine the Reimbursable Insurance Spare Parts list as contained in Attachment 4 including minimum and maximum stock levels during the Delivery Phase, to ensure that it is properly representative of the Final Design Documentation.

PPP Co shall stock sufficient quantities of all the spare parts identified in the Reimbursable Insurance Spare Parts list for the duration of the TLS Phase. Spares shall be stored and maintained in such a way as to ensure that there is no deterioration over time.

Additionally, PPP Co must hold sufficient Reimbursable Insurance Spare Parts to support the continuous operation of the Simulators and the SCS.

PPP Co shall retain for the TLS Phase, all tooling including patterns, jigs, moulds and other production equipment necessary to manufacture replacement Cars or spare parts for the repair of major collision or other damage.

(c) **Spare Cars**

PPP Co shall hold sufficient spare Cars to provide the Required Availability through the TLS Phase.

2.7.6 Maintenance Management Information

PPP Co must provide a Maintenance Management Information System (MMIS). The PPP Co MMIS shall provide complete details on the Through Life Support carried out in respect of the Sets, the Maintenance Facility and Unfixed Maintenance Plant and Equipment. The details must include maintenance and presentation work undertaken, and be capable of real time data exchange of "fault and attention" data and Set Availability into the RailCorp MMIS system. It shall also provide selective retrieval of data related to any of the other reporting items listed below.

The PPP Co MMIS must be capable of bi-directional transactions with RailCorp's MMIS. The PPP Co MMIS must interface in Near-real-time with the Fleet Management Gateway.

The PPP Co MMIS must be capable of producing reports and providing transactional services for the purpose of maintenance assurance that shall include the following information about each Set:

- (a) Fleet Control
 - (i) List of Sets and Cars on each Set;

- (ii) Set composition history;
 - (iii) Kilometres per Car and per Set for any required time period; and
 - (iv) Number of Available Sets in each Availability Period.
- (b) Defects, Fault and Attention
- (i) list of all Defects reported by RailCorp or PPP Co including Defects reported that do not cause a Set to fall below the Minimum Operating Standards for Available Sets. The reporting of Defects must also include the days past the Performance Operating Standard allowance;
 - (ii) outstanding Defects and Defect history on a Car and Set basis for any required time period, highlighting those that caused in service Incidents;
 - (iii) monthly summary of Defects by type on a Car and Set basis;
 - (iv) monthly summary of Failure Reporting and Corrective Action System (FRACAS) investigation reports and corrective actions;
 - (v) Set kilometres per Incident for each Set and overall kilometres per Incident for the PPP Co's fleet; and
 - (vi) list of all alarms and alerts reported by the Set (all systems and subsystems) including a history of actions.
- (c) Variations and modifications
- (i) list of Variations and modifications for each Set:
 - 1) completed;
 - 2) started, but not yet completed; and
 - 3) outstanding (not yet started).
- (d) Maintenance and Presentation
- (i) yearly maintenance and presentation schedule;
 - (ii) quarterly maintenance and presentation schedule;
 - (iii) monthly maintenance and presentation schedule;
 - (iv) weekly maintenance and presentation schedule;
 - (v) maintenance and presentation history on a per Set and per Car basis;

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- (vi) wheel diameter differentials, wheel diameters, wheel profile and wheel turn information on a Car and bogie basis; and.
 - (vii) Graffiti management report.
- (e) Set Configuration (Major Components on each Car) items for each component:
- (i) type;
 - (ii) identification;
 - (iii) serial number;
 - (iv) location;
 - (v) last fitment date;
 - (vi) last overhaul date;
 - (vii) Commission date;
 - (viii) Component relationship from the lowest level to level 1;
 - (ix) maintenance history;
 - (x) defect history;
 - (xi) modification history;
 - (xii) risk factor e.g. safety related, safety critical etc; and
 - (xiii) SIL rating.
- (f) Configuration Item Traceability.
- (i) Each Configuration Item must show traceability, using the CWBS , to the business processes the Configuration Item supports.
- (g) Maintenance: maintenance (including planned versus actual statistics) and Defect history on a component basis.
- (h) Wheel Condition Monitoring Machine information and reporting on a weekly basis and immediately that the wheel condition is shown to be past the Minimum Standard.

The structure and content of each report shall be in a form approved by RailCorp.

(i) RailCorp access to PPP Co MMIS

PPP Co shall provide RailCorp users on-line access to the PPP Co MMIS. Access shall be provided via a workstation acceptable to RailCorp located in the RailCorp Office Area at the Maintenance Facility. PPP Co shall provide RailCorp nominated users with unrestricted read-only access privileges to the PPP Co MMIS for ad hoc enquiry and reporting against all current and historical information recorded.

(j) Transactions List

PPP Co shall provide and support the following transactions with RailCorp, from/to PPP Co's MMIS via the Fleet Management Gateway::

#	Section	Transaction	Description	From	To	Style of Transaction
1	Availability Management	Set Availability report	Report of Set "withdrawals" & "withhelds"	PPP Co	RailCorp	Daily
2	Availability Management	Set Defect report	Notification of any known condition with the Sets that does not comply with the Minimum Operating Standards for Available Sets. Report by Set	PPP Co	RailCorp	Daily
3	Configuration Management	Add Configuration Item	Notification of changes for nominated items (a like for like replacement of an existing Configuration Item; deletes the existing Configuration Item and creates a new Configuration Item)	PPP Co	RailCorp	When undertaken
4	Configuration Management	Configuration Item history report	Detailed history report of Configuration Items on a Set broken down using the CWBS	PPP Co	RailCorp	On request
5	Configuration Management	Master configuration management report	List of all Configuration Items within the CWBS	PPP Co	RailCorp	When each Set is delivered (as built) and after any change

#	Section	Transaction	Description	From	To	Style of Transaction
6	Configuration Management	Modify Configuration Item category	A modification to an existing Configuration Item category; (deletes the existing Configuration Item category and creates a new Configuration Item category)	PPP Co	RailCorp	On request
7	Configuration Management	Set Configuration and history report	Set configuration report detailing rotables configuration	PPP Co	RailCorp	On request
8	Configuration Management	Variation order	Configuration status of all Cars including a record of the "Variation Order" approving the variation	PPP Co	RailCorp	On request
9	Contract Management	Certification & retraining notices report	Certification reminders to RailCorp to flag personnel requiring retraining	PPP Co	RailCorp	Monthly
10	Defect Management	Close Defects	Close Defect when the Defect has been resolved	PPP Co	RailCorp	When undertaken
11	Defect Management	Defect history report	Detailed report of Defects on a Set, their status and the history of actions associated to the Defect	PPP Co	RailCorp	On request
12	Defect Management	Re-associate Defects to Configuration Items	Reopen closed Defects and assign new data	PPP Co	RailCorp	Daily
13	Defect Management	Retrieve Defect data	Retrieve known errors and Defect resolutions for a given Configuration Item or Defect code from a searchable knowledge base	PPP Co	RailCorp	On request
14	Financial Management	Set variation provision	Variation Costs for changes requested by RailCorp for a Set configuration	PPP Co	RailCorp	On request and then monthly until closed

#	Section	Transaction	Description	From	To	Style of Transaction
15	Financial Management	TLS Payment claim	Claim for TLS Payments including Availability Payments, KPI Payments, Reimbursable TLS Payments; includes a supporting Performance Report	PPP Co	RailCorp	Monthly
16	Incident Management	Assign new Set	Assign new Set to replace withdrawn or withheld Set	PPP Co	RailCorp	On request
17	Incident Management	Associate Defects to Configuration Items	Associate Defects to Configuration Items and Set	PPP Co	RailCorp	Daily
18	Incident Management	CCTV data retrieval	Retrieve CCTV data from a Set for a specific time period or specified location boundary	PPP Co	RailCorp	On request
19	Incident Management	Retrieve Event Recorder data	Download Event Recorder data via the Fleet Management Gateway for a given Set by time and/or location boundary	PPP Co	RailCorp	On request
20	Incident Management	Retrieve TOS data	Download TOS data via the Fleet Management Gateway for a given Set by time and/or location boundary	PPP Co	RailCorp	On request
21	Incident Management	TOS - alarms report	All Set-borne system generated alarms for a given Set by time and/or location boundary	PPP Co	RailCorp	On request
22	Incident Management	TOS - alerts report	All Set-borne system generated alerts for a given Set by time and/or location boundary	PPP Co	RailCorp	On request

#	Section	Transaction	Description	From	To	Style of Transaction
23	Maintenance Management	Audit report from Quality Assurance Presentation Services	RailCorp audit report on a Set	RailCorp	PPP Co	When available
24	Maintenance Management	Audit Report from Quality Assurance Technical Services	RailCorp audit report on a Set	RailCorp	PPP Co	When available
25	Maintenance Management	Call in schedule reports	A report detailing the call in schedule for the following week of all Sets	PPP Co	RailCorp	Weekly
26	Maintenance Management	Certificate of Readiness report	Electronic copy linked to each Set Configuration Item history post maintenance service	PPP Co	RailCorp	Daily
27	Maintenance Management	Cleaning services	Record external wash of a Set	PPP Co	RailCorp	Daily
28	Maintenance Management	Defect management report	A report listing all Defects that have exceeded or are due to exceed the permitted period for correction within the next 7 days.	PPP Co	RailCorp	Weekly
29	Maintenance Management	Graffiti & vandalism count report	Report of daily count of Vandalism and Graffiti Tags for a given Set, including car #, run # and location Graffiti discovered	PPP Co	RailCorp	Daily
30	Maintenance Management	Update Configuration Item maintenance service	Update the service history of a Configuration Item describing actions taken, outcomes and maintenance personnel	PPP Co	RailCorp	When undertaken

#	Section	Transaction	Description	From	To	Style of Transaction
31	Performance Management	Distance travelled by Sets report	Total km travelled and total number of Availability Periods for each Set in the reported month, with cumulative totals and averages	PPP Co	RailCorp	Monthly
32	Performance Management	Fleet availability report	The number of Available Sets by Availability Period, the Required Availability, the number of Operational Sets and the average number of Available Sets.	PPP Co	RailCorp	Monthly
33	Performance Management	KPI report	The aggregate KPI Score and, for each KPI, the calculation and capture of items used to calculate the score as well as the required supporting documentation.	PPP Co	RailCorp	Monthly
34	Performance Management	Maintenance Facility condition report	Condition report of Maintenance Facility	PPP Co	RailCorp	On request
35	Performance Management	Reimbursable Through Life Support report	Itemised quantity in units of each item of Reimbursable Through Life Support provided, the price of each item, the extended calculation for each item, and total for each month less the monthly value of "included" Reimbursable Through Life Support.	PPP Co	RailCorp	Monthly
36	Performance Management	Reliability and adjustment report	Itemised report by Set of cancellations, late into or out of service, Set withheld or withdrawn on 24 hours or less notice and Set withheld or withdrawn on more than 24 hours notice.	PPP Co	RailCorp	Monthly

#	Section	Transaction	Description	From	To	Style of Transaction
37	Service Management	Availability Period calendar	Standard date calendar containing Availability Period start/end dates	PPP Co	RailCorp	Weekly
38	Service Management	RailCorp maintenance provision	Invoice of maintenance services carried out by RailCorp on behalf of PPP Co	RailCorp	PPP Co	When undertaken
39	Service Management	Release management report	Schedule of planned Configuration Item releases	PPP Co	RailCorp	On request
40	Service Management	Required Availability calendar	Contains the number of Sets required in each Availability Period as specified (to be updated for special events and ad-hoc requirements)	PPP Co	RailCorp	On request

2.8 Simulator Support Services

- (a) PPP Co must from the Date of Practical Completion of the Simulators until the Expiry Date:
- (i) maintain, repair and support the Simulators; and
 - (ii) ensure the Simulators are kept up to date in terms of:
 - A. changes to the Cars; and
 - B. changes to RailCorp's infrastructure, operational or human interface requirements.

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- (b) PPP Co must maintain the Simulator's appearance and functionality so as to be equivalent to the current configuration control status of the real Set fleet at all times throughout the life of the Simulators.
 - (c) Simulator equipment shall be capable of being maintained in use for 10 years from the Date of Practical Completion of the Simulators without substantial upgrade or replacement of components.
 - (d) Computer equipment shall have built in diagnostics for Defect identification.
 - (e) Reporting to RailCorp on the maintenance undertaken on the Simulators.
 - (f) Any Through Life Support provided by PPP Co in respect of the Simulators must be provided by PPP Co outside the hours 0600 hours to 2200 hours from Monday to Saturday unless other times are approved by RailCorp. In relation to a Simulator malfunction, PPP Co is required to respond to an emergency call within two (2) hours.

2.9 Maintenance Facility Support Services

2.9.1 Maintenance and repairs

PPP Co must maintain and repair the Maintenance Facility and all access routes, the Unfixed Maintenance Plant and Equipment and the Maintenance Parts and Materials:

- (a) in accordance with:
 - (i) this RailCorp Through Life Support Specification;
 - (ii) the Maintenance Facility Asset Management Plan;
 - (iii) all other relevant Project Plans;
 - (iv) industry best practice;
 - (v) all applicable RailCorp, Australian and international standards;
 - (vi) all applicable laws; and
 - (vii) the other requirements of this Contract,

so that:

- (b) it is able to provide the Required Availability;
- (c) the requirements of the Specifications and the Final Design Documentation are at all times met during the TLS Phase;
- (d) all Defects are promptly rectified; and
- (e) they remain, at all times during the TLS Phase, fit for their intended purpose as ascertainable from the RailCorp Project Agreements.

Additionally, PPP Co will be expected to keep the general appearance of the Maintenance Facility and surrounds in clean, tidy and presentable condition with regular attention to buildings and grounds maintenance.

The Maintenance Facility Asset Management Plan is to be developed in accordance with section 9.11 (Maintenance Facility Asset Management Plan) of the Contract Management Requirements (CMR).

2.9.2 Condition Reports

PPP Co shall provide annual condition reports to RailCorp covering the condition of the Maintenance Facility, the Unfixed Maintenance Plant and Equipment and the Maintenance Parts and Materials.

These condition reports must cover as a minimum at the date of the report:

- (a) items in the Maintenance Facility Asset Management Plan that are now past due;
- (b) equipment/items/infrastructure that is currently failed or unserviceable;
- (c) equipment that has been decommissioned; and
- (d) status of the certification of lifting equipment.

2.10 Reimbursable Through Life Support

2.10.1 RailCorp may direct

RailCorp's Representative:

- (a) may (but is not obliged to) direct PPP Co to carry out Reimbursable Through Life Support; and
- (b) except in the case of Reimbursable Through Life Support arising out of Vandalism or Major Graffiti, must specify the time within which such Reimbursable Through Life Support must be carried out.

2.10.2 PPP to carry out

If RailCorp's Representative gives a direction under clause 2.10.1, PPP Co must carry out the Reimbursable Through Life Support:

- (a) within the time specified by RailCorp's Representative; or
- (b) in the case of Reimbursable Through Life Support arising out of Vandalism or Major Graffiti, within the time period specified below:
 - (i) Minor Vandalism – 2 consecutive Availability Periods;
 - (ii) Major Vandalism – 4 consecutive Availability Periods; and
 - (iii) Major Graffiti – 2 consecutive Availability Periods.

2.10.3 Payment

PPP Co will be entitled to payment for such Reimbursable Through Life Support in accordance with the PPP Co Schedule of Rates.

2.10.4 RailCorp may carry out

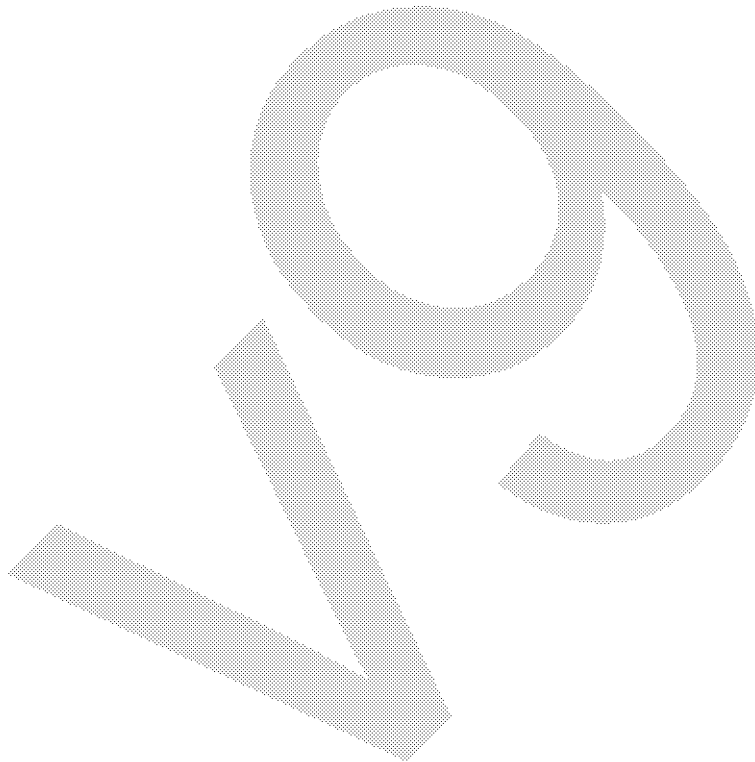
RailCorp may carry out any Reimbursable Through Life Support not the subject of a direction under clause 2.10.1 either by itself or by third parties.

3 STANDARDS LIST

Following is the list of standards used in this document:

1. RailCorp Train Operations Manual, Operation and Management of Electric Trains (OMET) OMET 200 MINIMUM STANDARDS FOR ELECTRIC TRAINS November 2004 V 2.0
2. RailCorp Data Logger Information Management (Incidents) Release 1.1 August 2003
3. RailCorp Data Logger Information Management (Compliance Audit) Rev 1.0 December 2003
4. RailCorp Security Service & Revenue Protection, Standard Operating Procedure Section 6B Millennium Train (MT) CCTV Image Retrieval Version 2 7 December 2001)
5. Train Presentation Manual
6. Architecture Methodology. TOGAF
7. Service Management Infrastructure. ITIL
8. Systems engineering - System life cycle processes First edition. AS/NZS 15288
9. Systems engineering practice. CMMI Evaluation Mapping Report. CMMI
10. Risk Management. AS 4360
11. Information security management - Specification for information security management systems, Second edition. AS/NZS 7799
12. Software Safety. Railway applications - Specification and demonstration of reliability, availability, maintainability and safety (RAMS). IEC 62278 EN 50126
13. Railway Safety. Railway applications - Communications, signalling and processing systems - Software for railway control and protection systems. IEC 62279 EN50128
14. Software Safety. Functional safety of electrical/electronic/programmable electronic safety-related systems - General requirements, First edition. AS 61508
15. Software Development and Documentation, First Edition, MIL-STD-498
16. Business Continuity Management. HB 221:2004

ATTACHMENT 1 – PERFORMANCE OPERATING STANDARD



PERFORMANCE OPERATING STANDARDS

VERSION: 4

COMMERCIAL-IN-CONFIDENCE

These Performance Operating Standards have been developed from the following Minimum Standard in the Train Operations Manual:

Source Document: TOM Version 2.0 dated November 2004
Document reference: OMET 200 Minimum Standards for Electric trains

This standard sets a measurement standard, an acceptable tolerance and the maximum period for defects to remain reported on a train before being rectified.

Until the exact design of the new train is defined, this version of the Performance Operating Standards is based on existing RailCorp rolling stock rather than any proposed design.

Structure of this document

This document is based on the Minimum Standard in the TOM but is presented in a different format based on the following four categories:

- Passenger Amenity - items used to derive the Passenger Amenity KPI
- Major Subsystems - items used to derive the Other KPI
- Safety Equipment - items used to derive the Other KPI
- Cab Equipment - items used to derive the Other KPI

Note:

1. There are additional items in this document which are not included in the Minimum Standards for Electric Trains
2. In each of the attached sheets, columns B, C and D include the original wording from the Minimum Standard in the TOM and have been hidden for clarity. Any rows from the Minimum Standards which are not applicable have also been hidden for clarity
3. Words in square brackets [...] indicate the terminology used throughout the PPP documentation in place of the terminology used in the Minimum Standards
4. References to TWP and NTR are references to procedures and rules in the Train Operations Manual

Coding for Deferred Period as follows:

NIS	Not into Service - defect must be fixed before entering or returning to service
xx then NIS	Set may operate in service for defined period xx but may not continue in service after this period unless defect is cleared
1 stop then NIS	Detrain passengers at next suitable location and take out of service
< 1 run then NIS	Set may complete run or terminate early as advised by Mechanical Control, then take out of service
1 run then NIS	Set to complete current run to destination, then take out of service
< 2 runs then NIS	Set may run to second end change or terminate early, then take out of service
2 runs then NIS	Set to complete timetable to second end change, then take out of service
1 AP	Set may complete one Availability Period before defect is fixed
2 AP	Set may complete two Availability Periods before defect is fixed
X AP	Set may run for the current Availability Period plus (X-1) more Availability Periods up to midnight on last day. Defect is overdue if still present on the Set provided for the first Availability Period of the next day
48 AP	Defect should be fixed on next scheduled inspection at Maintenance Centre (assuming 30 day inspection interval)
156 AP	Defect should be fixed on next major service (assuming 90 day major service interval)

Definitions

Measure	The criteria to be used for assessing the defect
Tolerance	The acceptable tolerance (once the required Action, if any, has been taken) which allows the Set to enter or continue in service.
Action	The action required to be taken before the Set enters or continues in service
KPI Impacted	The maximum period allowed from the first report of a defect to the time at which KPI payments are impacted by the defect remaining outstanding
Availability impacted	Unless another Set is provided at a suitable location to meet the Required Availability, the maximum period that the Set may remain in service before being taken out of service

TLS Performance Operating Standards

1.1 Lights interior

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	After a major service - Lights in all areas of each car operating	100% operating			NIS
	Check minimum illumination in worst case location in Vestibules and Saloon areas	Minimum illumination must meet RailCorp standard (currently [280 lux] at passenger reading plane) at all passenger seats		156 AP	
Into service from out depot or defective in service	At Out Depot - Saloon or Vestibule lights not operating	maximum of one lamp not operating in any one car area providing fitting is not emergency light (battery maintained)	report	48 AP	
		more than one lamp (but less than 20%) not operating in any one car area providing fitting is not emergency light (battery maintained)	report	24 AP	
		20% or greater lamps not working or any one emergency lighting fitting not working in any one car	field replacement permitted	4 AP	
	In service - Saloon, Vestibule, door entry or door step lights not operating	20% or greater of Saloon or Vestibule lamps not working or any one door entry lamp, step light or emergency lighting fitting not working in any one car	field replacement permitted. All lamps must be replaced before Set comes back into service on the next day	2 AP	NIS
	<i>Note: Not operating includes: tube not illuminated, flickering or intermittent</i>				

1.2 Passenger Doors

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	After major service - Doors not operating to minimum technical specification	must be less than 110% of original commissioning specification [insert time from final specification]			NIS
Into service from Out Depot or defective in service	At Out Depot - One or more doors not working at normal speed	A maximum of 1 in 4 doors per side may be slow opening/closing (up to 120% of original commissioning specification time) All doors must be operating No doors may be locked or isolated		12 AP	12 AP then NIS
	At Out Depot - One or more Passenger doors not working	A maximum of 1 in 16 passenger doors per side may be locked or isolated	any door locked or isolated must be identified and labelled to indicate that the door is inoperable. Guards may also make PA announcements	1 AP	1 AP then NIS
	In service - some doors not operating	Maximum of 1 passenger door in any one car may be locked and isolated If unable to close any passenger door then car must be locked off	Set to be taken out of service and returned to MC if necessary, suitable employee must be provided to ensure passenger safety		1 run then NIS

1.3 Door warning device (DWD)

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	After a major service - DWD not operational	all must be operational			NIS
Into service from Out Depot	Automated door closing announcement not working	one or more DWD not functioning but manual announcements possible	Guard to provide manual announcements until fixed	1 AP	1 AP then NIS
	Door control at Guard's active position faulty	control button in another cab is operational	if door control not operational, refer to operational manual and relocate to another cab	1 AP	1 AP then NIS
Defective in service	Automated door closing announcement not working	one or more DWD not functioning but manual announcements possible	Guard to provide manual announcements until fixed	1 AP	1 AP then NIS
	Door control at Guard's active position faulty	control button in another Cab is operational	if door control not operational, refer to operational manual and relocate to another Cab	1 AP	1 AP then NIS

TLS Performance Operating Standards

1.4 Intercar Doors

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Intercar doors not operating to minimum technical specification	must meet field service limits for opening and closing times			NIS
Out Depot into service or defective in service	At Out Depot - Intercar doors not operating to minimum technical specification	must open and close within 120% of original commissioning specification time	issue defect report	12 AP	12 AP then NIS
	At Out Depot - Intercar doors not closing	must be working or locked closed	if unable to close or lock closed, defect train otherwise lock closed and issue defect report	1 AP	NIS 1 AP then NIS
	In service - Intercar doors not closing	must be able to open and close	work out of service if doors cannot be closed		< 1 run then NIS

1.5 Seats missing

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Are all seats installed and useable	100% available			NIS
Into service from out depot or defective in service	Number of seats missing or broken/unusable	maximum nine individual seats missing or unusable in any one car		2 AP	

1.6 Seats poor condition/Faulty

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	After major service - number of seats unsuitable for Passenger use	100% available			NIS
		if ripped or torn but still useable		48 AP	
		if worn or threadbare but still useable		156 AP	
	After major service. Flip up seats	if any mechanism faulty			NIS
Into service from out depot or defective in service	Number of seats unsuitable for Passenger use	maximum nine individual seats unsuitable in any one car		6 AP	
	Flip up seats do not retract	no more than one Wheelchair Space in any one Car to be unavailable provided a second Wheelchair Space is accessible from that location		2 AP	

1.7 Air Conditioning - Passenger

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Number of air conditioning units operating and maintaining temperature/humidity in passenger areas	all operating correctly			NIS
Into service from out depot or defective in service	Temperature/humidity in passenger saloon not maintained, all air con units operating	temperature is outside build specification tolerance by +/- 50% (eg build tolerance = +/-3 degrees, operating tolerance = +/-4.5 degrees)	issue defect report	4 AP	
	Temperature/humidity in passenger saloon not maintained, one (of two) air con units not operating	temperature tolerable (within the range 15 to 28 degrees C)	work out of service to Maintenance Facility	1 AP	1 AP then NIS
	At Out Depot, no air conditioning (both units inoperable)	fresh air fans must be operating in all cars and mild temperatures forecast	if temperature is not acceptable or fresh air not available, isolate Car	1 AP	1 AP then NIS
	In service, no air conditioning (both units inoperable)	must have fresh air fans operating in affected car	isolate car	1 AP	1 AP then NIS
	In service, no air conditioning (both units inoperable)	must have fresh air fans operating in affected cars	if two or more Cars isolated, work out of service to Maintenance Facility		< 1 run then NIS

TLS Performance Operating Standards

1.8 Automatic Public Address [Digital Voice Annunciations] and [Passenger] Emergency Intercom

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	automatic passenger information voice announcements (PIVA) [DVA] not operational	must be functional in all cars			NIS
Into service from Out Depot or defective in service <i>Manual Public address announcements - see Cab Equipment PA System</i>	automatic passenger information voice announcements (PIVA) [DVA] not operational	not operational in any one car	manual announcement by guard for current day's working	2 AP	2 AP then NIS
	automatic passenger information voice announcements (PIVA) [DVA] poor quality or incorrect volume	cannot be heard without moving seat in any car	issue defect report	12 AP	
		objectionable noise from PIVA [DVA] in any one car	isolate offending unit to eliminate objectionable noise	2 AP	2 AP then NIS
		objectionable noise from PIVA [DVA] in more than one car and unable to isolate offending unit		1 AP	1 AP then NIS
	Number of Passenger Emergency Intercom units not operational	one unit in any car not working two units in any one car not working more than two units not working in any one car	tag unit not operational and isolate tag unit not operational and isolate tag unit not operational and isolate. Do not use for night running	2 AP 2 AP 1 AP	 2 AP then NIS 1 AP then NIS

1.9 Passenger Information Displays

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Number of passenger information displays not displaying or incorrect data displayed	all displays must be operational			NIS
Into service from Out Depot or defective in service	Number of passenger information displays not displaying or incorrect data displayed	one display per car unreadable	isolate or cover	6 AP	
		more than one display in one car unreadable	isolate or cover	2 AP	
		all displays in all cars	isolate system	2 AP	2 AP then NIS
	Number of passenger information displays not displaying	all displays in one car vandalised one or more display per car with graffiti damage	isolate or cover report	2 AP 6 AP	2 AP then NIS

1.10 CCTV

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	CCTV System not fully operational	system and all cameras must be operating			NIS
Into service from Out Depot or defective in service	Number of CCTV Cameras at Passenger Emergency Help points inoperative	no more than one camera in any one car linked to the Passenger Emergency Intercom		2 AP	
		At Out Depot or In Service- Number of external CCTV cameras inoperative	No more than one Passenger bodyside door per side per Set not able to be monitored Any Passenger bodyside door not able to be monitored to have the doors locked and isolated. Any door locked or isolated must be identified and labelled to indicate that the door is inoperative. Guards may also make PA announcements	1AP	1AP then NIS
	Number of CCTV Cameras inoperative	not more than two inoperative cameras in any one car and not more than one inoperative camera in any one saloon area of that car		12 AP	
	Number of CCTV Cameras vandalised or Graffiti over lens	one camera obviously not working due to vandalism or graffiti and not more than two inoperative cameras in any one car and not more than one inoperative camera in any one saloon area of the car		6 AP	
	Number of CCTV Cameras inoperative, vandalised or Graffiti over lens Number of CCTV image recorders not operational	more than two cameras in any one area of saloon minimum one unit operational		2 AP 2 AP	2 AP then NIS 2 AP then NIS

1.11 Water inside train

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Pooled or wet surface due to water ingress through leaking windows/doors/panelling	no interior surfaces to be wet			NIS
Into service from Out Depot or defective in service	Pooled or wet surface due to water ingress through leaking windows/doors/panelling	interior surfaces must be safe	isolate Car if water is sufficient to cause slip hazard or Passenger discomfort	1 AP	

TLS Performance Operating Standards

1.12 Train Presentation

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Interior: verify against Presentation Manual	interior presentation must meet either turnaround or daily cleaning specification depending on duration of visit			NIS
	Exterior: verify against Presentation Manual.	No external graffiti to be visible			NIS
	Exterior: verify against Presentation Manual. External Wash at no more than 7-day frequency.	Exterior of Set to be fully washed		2 AP	
Into service from Out Depot or defective in service	<i>All cleaning at Out Depots and emergency cleaning in service is to be completed by RailCorp</i>	<i>not applicable</i>	<i>not applicable</i>		

1.13 Floor condition

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Area of floor covering worn, ripped or missing in vestibule, walkways or stairs	no uneven surfaces or trip hazards and no more than 10 satisfactory patches per car			NIS
	Area of floor covering worn, ripped or missing in seating areas	worn, ripped or missing floor covering is not in an area which would cause a trip hazard	Report	12 AP	
	Area of floor covering worn	Must be less than 30% of high use areas worn through top surface			156 AP or next major service whichever occurs first
	Wheelchair accessibility symbol/space marking on floor	Symbol missing/floor marker vandalised			156 AP or next major service whichever occurs first
	Graffiti on floor	no graffiti marks to be visible (refer Presentation Manual)			NIS
Into service from Out Depot or defective in service	Area of floor covering ripped or missing in vestibule, walkways or stairs	uneven surfaces or trip hazards must be made safe or tagged	temporarily tape area or patch if trip hazard exists	2 AP	
	Area of floor covering ripped or missing in seating areas	worn, ripped or missing floor covering is not in an area which would cause a trip hazard	Report	12 AP	
	Wheelchair accessibility symbol/space marking on floor	Symbol missing/floor marker vandalised			156 AP or next major service whichever occurs first
	Graffiti on floor	<i>All cleaning at Out Depots and emergency cleaning in service is to be completed by RailCorp</i>	Report		

1.14 Internal fittings

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted	
Into service from Maintenance Facility	After a major service, condition of internal panelling or cabinet doors/covers, electrical wiring and fittings	All must be fit for purpose			NIS	
Into service from Out Depot or defective in service	Condition of Internal panelling or cabinet doors/covers	Graffiti shadowing or scuffing must not be visible			156 AP or next major service whichever occurs first	
		damaged but still secure	temporarily tag or tape, then repair or replace within time period	12 AP		
		loose or hazardous	isolate Car	1 AP		
		will not lock shut	temporarily tag and tape or isolate Car	1 AP		
	Condition of grab rails and handles	jammed closed	report		2 AP	
		all grab rails and handles must be secure with no loose or hazardous parts	if any rail or handle is hazardous to Passengers, isolate Car		1 AP	
	Condition of electrical wiring or fittings	no loose paint, no peeling or separation of coatings or scratches over 100 mm in length. Maximum damaged area to be less than 2500mm ²			12 AP	
wiring or internal fitting exposed or equipment cupboards not lockable		Car must be isolated If unable to isolate Car suitable employee must be provided to ensure Passenger safety		1 AP	1 AP then NIS	

TLS Performance Operating Standards

1.15 Decals

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Condition of decals (emergency information, train information and network information) damaged, marked, torn or missing	all decals to be clearly readable, none torn, ripped or missing			NIS
Into service from Out Depot or defective in service	Condition of decals (emergency information) damaged, marked, torn or missing	all decals relating to safety or emergency operation to be clearly readable, none torn, ripped or missing		2 AP	
	Condition of decals (network or train information) damaged, marked, torn or missing	at least one decal per car relating to train or network information to be clearly readable	report any unreadable, damaged, marked, torn or missing	156 AP or next major service whichever occurs first	

1.16 Windows Passenger

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted	
Into service from Maintenance Facility	Condition of Passenger side windows	No broken or missing glass No visible cracks greater than 100 mm Refer TWP 150 for detailed assessment			NIS	
Into service from Out Depot or defective in service	Condition of Passenger windows	May enter service from Out Depot with broken or cracked glass if car is locked off. Maximum of one Car to be isolated		1 AP	1 AP then NIS	
		If broken or cracked window occurs during service, may continue running if Car is isolated.	if unable to lock off Car with window damage, an employee must ride in the Car and guard the broken or missing window area Refer TWP 150 for further details Work out of service to Maintenance Facility		2 runs then NIS	
	Visibility through side window glass	glass/poly side windows must provide clear view of station signage (ie no opaque panels permitted)		156 AP		
	Area of side window glass (glass or protective film) scratched or marked		no more than 30% of glass area on any one window to be unusable for viewing station signage		156 AP	
			no more than five windows per car with a maximum of 20% of each window to be unusable for viewing station signage		156 AP	
	Bulkhead windows missing, broken or cracked	Refer TWP 150 for criteria	work out of service to Maintenance Facility		< 1 run then NIS	
	Visibility through bulkhead glass	glass provides clear view of station signage (ie no opaque panels permitted)		156 AP		
	Terminal door windows missing or cracked	Refer TWP 150 for criteria	work out of service to Maintenance Facility		< 1 run then NIS	
	Visibility through terminal door glass	glass provides clear view of station signage (ie no opaque panels permitted)		156 AP		
	Area of door glass (glass or protective film) scratched or marked	no more than 30% of glass area on any one window to be unusable for viewing		156 AP		
	Number of intercar door windows broken, cracked or missing	Must not run with glass missing or broken glass exposed No visible cracks greater than 100 mm Refer TWP 150 for further criteria	if broken glass exposed, lock and isolate car. If unable to isolate Car, employee to be provided to prevent access to affected area		1 AP then NIS	1 AP then NIS
	Visibility through intercar door glass	glass provides clear view of next car (ie no opaque panels permitted)		156 AP		
Area of intercar door glass scratched or marked	no more than 30% of glass area on any one window to be unusable for viewing next car		156 AP			

1.17 Hearing Augmentation

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Hearing Augmentation device not operational	must be functional in all Cars			NIS
Into service from Out Depot or defective in service	Hearing Augmentation device not operational	not operational in any one Car		24 AP	
	Hearing Augmentation device poor quality or incorrect volume	not operational in any one Car		24 AP	

1.18 Wheel Chair Ramps

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	4 ramps per Set. Must be present/operational in all Cabs	one ramp missing/vandalised			NIS
Into service from Out Depot or defective in service	4 ramps per Set. Must be present/operational in all Cabs	one ramp missing/vandalised		2 AP	

TLS Performance Operating Standards

2.1 Air Spring

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Number of air springs deflated or leaking	all must be inflated			NIS
Into service from Out Depot or defective in service	Number of air springs deflated or leaking	one bogie on one car with air spring deflated or leaking	Observe speed restriction	1 AP	1 AP then NIS
		more than one bogie on one car or more than two bogies per train	Work out of service to Maintenance Facility. Observe speed restrictions		< 2 runs then NIS

2.2 Air gauges in Driver's Console

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Number of air gauges not working in any Cab	all must be operational			NIS
Into service from Out Depot	Number of air gauges not working in any Cab	all must be operational			NIS
Defective in service in operational Cabs	Number of air gauges not working in any Cab	any one air gauge faulty in an operational cab	The train is to proceed to the nearest suitable platform where Passengers must be detained. The train must then be worked out of service to Maintenance Facility		1 stop then NIS

2.3 Ammeter

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Ammeter not operational	all ammeters must be working			NIS
Into service from Out Depot or in service	Ammeter not operational	Ammeter in driving end not operational	work out of service to Maintenance Facility		2 runs then NIS

2.4 Auxiliary supply

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Supply sets not operational	All must be operational			NIS
	Motor alternators not operational	All must be operational			NIS
	Static inverter not operational	All must be operational			NIS
Into service from Out Depot or in service	Supply sets not operational	75% must be operational		1 AP	1 AP then NIS
	Motor alternators not operational	75% must be operational		1 AP	1 AP then NIS
	Static inverter not operational	75% must be operational		1 AP	1 AP then NIS

2.5 Bells

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Bell not operational	must be operational			NIS
Into service from Out Depot or in service	Bell not operational	may run if another form of communication available	use intercom or another form of communication - see TWP 162 Train Crew bell signals	1 AP	1 AP then NIS

2.6 Blue lights

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Guard's Blue lights not operational	Must be operational			NIS
Into service from Out Depot or in service	Guard's Blue lights not operational	light intermittent or not working	report Defect and relocate to a working Cab	2 AP	2 AP then NIS

TLS Performance Operating Standards

2.7 Bogies

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Bogie components missing, loose, damaged or broken	No bogie components to be missing, loose, damaged or broken			NIS
Into service from Out Depot or in service	Bogie components missing, loose, damaged or broken	No bogie components to be missing, loose, damaged or broken	report to Mechanical Control and work as directed	1 AP	1 AP then NIS

2.8 Brakes

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Automatic Brakes do not apply	all must be operational			NIS
	EP Brakes do not apply	all must be operational			NIS
	Park Brakes do not apply	all must be operational			NIS
	Rate of loss of brake cylinder pressure	air loss not greater than OEM specification			NIS
	Brake pad thickness	must equal or exceed xx mm above condemn (equivalent to 30 days wear or time to next service)			NIS
Into service from Out Depot or in service	Number of brakes cut out or defective	automatic brakes inoperative or not releasing on more than one car	report to Mechanical Control. Stop train.		NIS
	Number of brakes cut out or defective	automatic brakes inoperative or not releasing on one car only	isolate Car		< 1 run then NIS
	Number of brakes cut out or defective	automatic brake releasing or intermittent on one car	isolate Car		< 1 run then NIS
	EP Brake system defective	Refer TWP 130	report to Mechanical Control, work to Maintenance Facility		1 run then NIS
	Observe air loss with brakes applied	loss is greater than 35 kPa per minute	report to Mechanical Control		< 1 run then NIS
	Number of bogies with inoperative handbrake	no more than 2 bogies per 8 cars	report to Mechanical Control		NIS

2.9 Compressors

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Number of compressors not operating	All compressors must be operational			NIS
Out Depot into service and in service	Number of compressors not operating	On 8 car Set, at least 75% must be operational	isolate non operational units	2 AP	2 AP then NIS
	Compressor not cycling normally	operating continuously, tripping CB or incorrect air pressure	isolate faulty unit, check number of working units conforms to minimum standard	2 AP	2 AP then NIS
	Compressor noisy, damaged, leaking, loose or missing filters	Compressor not working normal duty cycle or apparent problem	isolate faulty unit, check number of working units conforms to minimum standard	2 AP	2 AP then NIS
	Compressor smoking, vibrating, major damage, continuously operating and unable to isolate	Compressor not operating correctly with obvious major fault	work out of service to Maintenance Facility		<1 run then NIS

TLS Performance Operating Standards

2.10 Guard's emergency Brake Pipe (BP) air gauge

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Brake Pipe air gauge not working in Guards Cab	air gauge must be operational			NIS
Into service from out depot or defective in service	Brake Pipe air gauge not working in Guards Cab	one air gauge must be operational	move to Cab with operational air gauge. Work train out of service		< 1 run then NIS

2.11 Lights exterior

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Exterior lights not operational or globe blown	all exterior lights to be operational			NIS
Into service from out depot or in service	Exterior lights not operational or globe blown	sufficient exterior lights must be operational in accordance with Network Rule NTR 406	replace globes from toolkit	2 AP	2 AP then NIS
		all of one type blown and unable to replace blown globes	work out of service to Maintenance Facility		< 1 run then NIS

2.12 Pantographs

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Pantograph not operational	pantograph must raise and lower within specification, and if re-entering service from an inspection, carbon must not be grooved, chipped or damaged and have greater than 30 day wear remaining and the pantograph frame and head must be undamaged			NIS
Into service from Out Depot or defective in service	Pantograph worn or damaged	one pantograph carbon worn beyond condemn point, grooved, chipped or damaged or pantograph head or frame damaged	lower pantograph and isolate. May proceed on one pantograph, run in accordance with Train Operating Manual	1 AP	1 AP then NIS

2.13 Scharfenberg Coupler

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Leading and trailing end couplers operational	End couplers must be operational for emergency recovery			NIS
Into service from Out Depot or defective in service	Leading and trailing end couplers operational	At least one end coupler must be operational	report Defect if only one end coupler operable	2 AP	

2.14 Skirts side and front

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Loose or missing side skirts, end skirts or equipment covers	All must be fitted and secure	repair or replace		NIS
Into service from Out Depot or defective in service	Loose side or end skirts or equipment covers	No loose skirts or covers allowed. All skirts and equipment covers must be secure	Loose skirts must be secured, taped or removed to prevent movement during run if still loose, work out of service	1 AP	
	Missing side or end skirts or equipment covers	No loose skirts or covers allowed.	All skirts and equipment covers must be either secure or removed. Report missing item and position on train	2 AP	

TLS Performance Operating Standards

2.15 Traction Motors

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Number of traction motors cut-out	all traction motors must be fit for purpose	repair prior to departure		NIS
Into service from Out Depot or defective in service	Number of traction motors cut-out	no more than 25% cut-out per Set	report Defect to Mechanical Control	1 AP	1 AP then NIS
	Number of motors not powering on one car	all motors isolated on one car	report Defect to Mechanical Control		< 1 run then NIS
Grades 1 in 33 and all underground lines	Number of traction motors cut-out	no more than 25% cut-out per Set	report Defect to Mechanical Control	1 AP	1 AP then NIS
	Number of motors not powering on one car	all motors isolated on one car	request advise from Mechanical Control		NIS

2.16 Wheels

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
In all circumstances	Wheel condition	One or more skids over 100 mm or multiple Class 4 skids on same wheel	Train must not be moved until it has been examined, the Defect adequately rectified and certified fit for travel by a qualified worker		NIS
		Any crack running through the flange, rim, web or boss	Train must not be moved until it has been examined, the Defect adequately rectified and certified fit for travel by a qualified worker		NIS
		Scale greater than 15 mm deep	Train must not be moved until it has been examined, the Defect adequately rectified and certified fit for travel by a qualified worker		NIS
		Spalling at least 3mm deep	If found at Out Depot or Maintenance Facility must not enter service. If found in service isolate brakes and work out of service. Maximum Speed 40 km/hr. Refer to "Brakes" for total number of brakes which can be cut out.		NIS work out of service
		Impact damage generally is a chip or gouge in the flange or as bruise on the tread	Maximum Speed 40 km/hr If found at Out Depot or Maintenance Facility must not enter service.		NIS
	Wheel unusable, Pony Bogie required	Maximum Speed 20 km/hr Maximum speed over points and crossovers 10 km/hr	Return to Maintenance Facility		NIS

TLS Performance Operating Standards

3.1 Emergency Equipment Box

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Box out of date with seal intact	All equipment in box but some or all equipment out of date	replace out of date detonators		NIS
	Seal broken	All equipment to be checked. All items on list to be present and date codes on detonators to be at least three months to expiry	replace missing items and any detonators with less than 90 days to expiry and reseal		NIS
Into service from Out Depot or in service	Box out of date with seal intact	All equipment present but some or all equipment out of date	replace box with box from non-occupied compartment	1 AP	
	Seal broken	All equipment to be checked. All items on list to be present and all detonators to be in date (i.e. not expired)	replace missing items and out of date detonators from Out Depot supply and reseal		NIS

3.2 Drivers Safety System - Vigilance and/or Deadman

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Vigilance System and Deadman System test procedure	All equipment must be operational			NIS
Into service from Out Depot or in service	Vigilance System and Deadman System not operational	Either one or other system not fully operational	Work in accordance with TWP 422 Failure of the Drivers Safety Systems. Detrain passengers at next suitable location		1 stop then NIS

3.3 Data Logger [Event Recorder]

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Check data logger [Event Recorder] operational and recording data	Both data loggers [Event Recorders] must be operational			NIS
Into service from Out Depot or defective in service	Number of data loggers [Event Recorders] operational	One data logger [Event Recorder] fully operational, one not operational	return to Maintenance Facility as soon as possible during second AP	2 AP	2 AP then NIS
		Both data loggers [Event Recorders] defective or not recording all inputs	If at Out Depot, fix prior to departure If in service finish peak then work out of service	1 AP	NIS 1 AP then NIS

3.4 Safety Equipment Locker [Emergency Equipment Cupboard]

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	equipment locker contents complete	seal must be intact			NIS
Into service from Out Depot or in service	equipment locker is not locked or seal is broken	Minimum of 50% of total quantity of each item per Set must be available. Both emergency couplers must also be available	report missing items	2 AP	

TLS Performance Operating Standards

3.5 Door open traction interlocking

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Any door not fully closed must activate door open traction interlock	traction interlocking must be operational on all passenger doors	fix prior to departure		NIS
Into service from Out Depot	Number of doors with traction interlocking not operational	maximum of two doors per 8 car Set with traction interlocking not operational or isolated	if door interlocking faulty, lock and isolate affected door and tag door "not in use"	2 AP	2 AP then NIS
	Number of doors with traction interlocking not operational	Traction interlocking not functional, no doors protected	do not enter service until fixed		NIS
	Traction interlocking indicators not operational	all doors are protected but Drivers indicator not working	work out of service		< 1 run then NIS
	Traction interlocking indicator in active Guards cab not operational	all doors are protected but Guards indicator not working	use alternative panel work out of service if alternative panel not available	1 AP	1 AP then NIS
Defective in service	Guard's light does not extinguish	if traction interlocking operational on all Passenger doors, may continue Passenger service	confirm operation of traction interlocking on all Passenger doors even though light not operational	1 AP	
	Guard's light does not extinguish and some passenger doors are not operational	no more than 1 in 8 Passenger doors on either side of train to have traction interlocking faults	isolate doors or Car with non-operational traction interlocking and work out of service		< 1 run then NIS
	Traction interlocking not operational	Traction interlocking not working on any door	detrain Passengers at next suitable location and work out of service empty to Maintenance Facility		1 stop then NIS
	Driver's Door Open Indicator Light not working	Driver's light does not work but traction interlocking is operating on all doors	work out of service		1 run then NIS
	Door open indicator in active Guards Cab not operational	all doors are protected but Guards indicator not working	use alternative panel work out of service if alternative panel not available		1 AP then NIS

3.6 Terminal end emergency access ramp

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Visual inspection of terminal end emergency access ramp	Any sign of damage or tampering	fix prior to departure		NIS
Into service from Out Depot	Visual inspection of terminal end emergency access ramp	Any sign of damage or tampering	fix prior to departure		NIS
Defective in service	Visual inspection of terminal end emergency access ramp	Any sign of damage or tampering	work out of service		1 run then NIS

TLS Performance Operating Standards

4.1 Crew Compartment

Location	Measure	Tolerance	Action	KPI impacted	Availability impacted
Into service from Maintenance Facility	Cab air conditioning units operating and maintaining temperature	all operating correctly	repair or replace		NIS
	temperature in Cab not maintained, all air con units operating	temperature variation should be inside build specification tolerance plus 50% (eg Build spec of +/- 3 degrees would give operating tolerance of +/- 4.5 degrees of set point)	repair or replace		NIS
	No air conditioning in Cab	no fresh air in Cab			NIS
	Blinds in Cabs not working	all must be operational			NIS
	any lights in Crew areas including inspection lights, step lights and terminal end emergency access ramp light not working	all must be operational			NIS
	All Crew compartment doors operational	doors must meet service limit specifications			NIS
	Stops in position and effective	all must be operational, stops not loose or worn			NIS
	check recertification date	must be fit for purpose and in-date			NIS
	if fitted, deadman foot pedal [operator enable pedal] operates on static test in all positions	all must be operational			NIS
	if fitted, heaters must be working and fit for purpose	all must be operational			NIS
	check operation of indicator lights	all must be operational			NIS
	check operation of Public Address in all Cars	all must be operational			NIS
	check operation of intercom between all Driver's Cabs and all Guard's Cabs	all must be operational			NIS
	check for broken or loose components on Drivers or Guards seats	seat should adjust correctly and lock in position			NIS
	check for worn fabric on Drivers or Guards seats		report for fix at next service	48 AP	
	speedometer not operating	all must be operational			NIS
	whistle not operating	all must be operational			NIS
	wipers or washers not working	all must be operational			NIS
	TOS and DDU diagnostic test	all units must be operational and pass self test diagnostic			NIS
	Train Radio self test	all units must be operational and pass self test diagnostic			NIS
Into service from Out Depot or defective in service	Cab air conditioning units operating but not maintaining adequate temperature control	temperature variation should be inside build specification tolerance plus 50% (eg Build spec of +/- 3 degrees would give operating tolerance of +/- 4.5 degrees of set point)	Report	2 AP	2 AP then NIS
	temperature in Crew Cab not maintained	temperature tolerable (within the range 15 and 28 degrees C)		1 AP	1 AP then NIS
	No air conditioning in Cab	temperature tolerable (within the range 15 and 28 degrees C)		1 AP	1 AP then NIS
	No air conditioning in Cab	no fresh air in Cab	work out of service to Maintenance Facility		< 1 run then NIS
	Blinds on front screen in Cabs will not raise	obstructing view through front windscreen	tie up, remove blind or repair	1 AP	1 AP then NIS
	Blinds on front screen in Cabs not working eg torn, missing will not lower	blind not serviceable			1 run then NIS
	Blind on side screen in Cab will not raise	obstructing view through side windscreen	tie up, remove blind or repair	2 AP	2 AP then NIS
	Blinds on side screen in Cabs not working eg torn, missing will not lower	blind not serviceable			1 run then NIS
	lights in Crew Cab not working	at least one light operational with at least one emergency light operational		2 AP	2 AP then NIS
	lights in Crew Cab not working	at least one light operational but no emergency lighting operational		1 AP	1 AP then NIS
	check operation of Crew access doors	door unable to be opened/closed	work out of service to Maintenance Facility		<1 run then NIS
	check door stops secure	door must be secure in both open and closed position	work out of service to Maintenance Facility		<1 run then NIS
	check for draughts, leaks at doors and windows	gaps causing unwanted draughts	report	12 AP	
	check fire extinguisher locking pin & seal not broken	not fit for purpose, tag out of date, pressure gauge out of green zone, or discharged	replace the extinguisher from inactive Cab, collect spare extinguisher from nearest pickup point or deliver to Set at end of run		1 run
	deadman foot pedal [Operator Enable Pedal] not operating	Pedal not activating warning light or does not pass self test operation	work out of service to Maintenance Facility		< 1 run then NIS

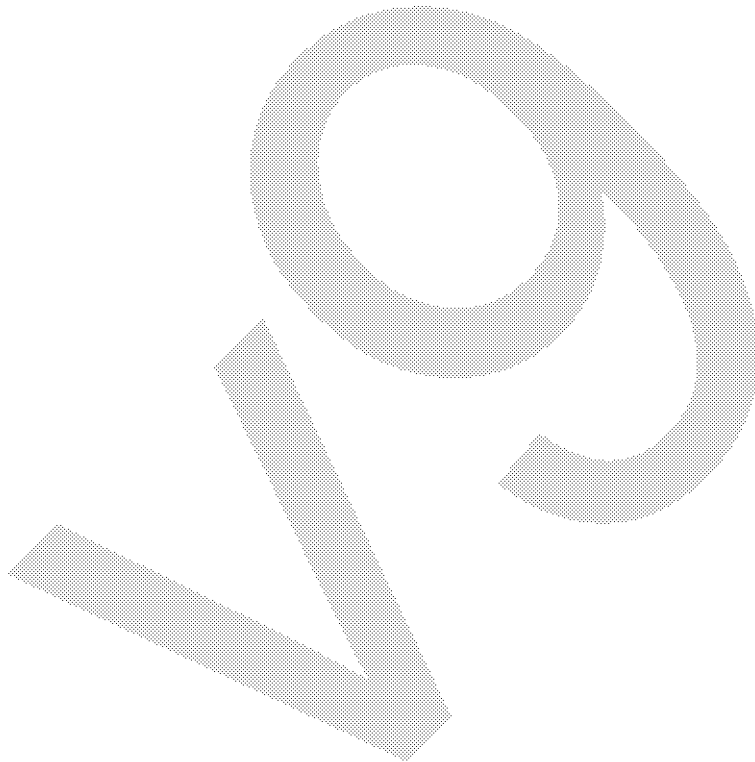
TLS Performance Operating Standards

Indicator lights on console	any indicator lights for safety related warnings not operational and alternative display available	replace indicator globe from toolkit or advise Mechanical Control	2 AP	
	any indicator lights for safety related warnings not operational and no backup display	replace indicator globe from toolkit or advise Mechanical Control		1 run then NIS
Public Address announcements not operational	Driver's Cab unit faulty	use Guard's unit for announcements	2 AP	2 AP then NIS
	Guard's Cab unit faulty	use Driver's unit	2 AP	2AP then NIS
Public Address announcements poor quality or incorrect volume	any Cars, objectionable noise	isolate, use only in emergency	2 AP	
Public Address announcements poor quality or incorrect volume	any Cars	use only in emergency	6 AP	
PA Individual speakers/amps not working	any one speaker in a Car	report	24 AP	
PA Individual speakers/amps not working	whole Car not working	report	2 AP	2AP then NIS
Intercom between Driver and Guard not operational	no communication possible, bells still operational	Guard to relocate to another compartment, if none then work out of service. Work out of service before second end change		< 2 runs then NIS
Intercom between Driver and Guard not operational	alternative Guard's position operational	Guard relocated to another intercom position	1 AP	1 AP then NIS
Intercom between Driver and Guard useable but poor quality or intermittent speech	useable but requires repeating of messages or communication distorted	report	6 AP	
Crew seats - check for broken or loose components	seat does not adjust correctly and lock in position	Guard to relocate to alternative Cab if seat broken If Driver's seat broken, work out of service		1 run then NIS
Crew seats - check for worn fabric	seat to be fit for purpose (see Presentation Manual)	report	48 AP	
speedometer not operating	Speedo not operational	If not operational run in accordance with NTR 410 Defective Equipment		< 1 run then NIS
TOS and DDU diagnostic test	Self test does not complete and does not provide indication of any subsystems not operational	report		< 1 run then NIS
Train Radio self test	Self test does not complete and provide indication of any subsystems not operational	If not operational run in accordance with NTR 410 Defective Equipment Work out of service before second end change		< 2 runs then NIS
Whistle not operating or continuously operating	not operating correctly - either no whistle or continuous whistle	isolate whistle if continuous Run in accordance with NTR 408 Using train whistles		< 1 run then NIS
Whistle operating low volume or excessive volume	normal operation not achieved	report	2 AP	2AP then NIS
Windscreen wiper performance unsatisfactory	wiper worn, ripped, skipping, streaking or motor too slow, too fast, noisy but operating	replace blade rubbers, otherwise report defect		1 run then NIS
Windscreen wiper not operating	wiper not moving due to arm broken, missing, loose, stuck or motor not operating	report		1 run then NIS
Windscreen wipers operating continuously	unable to stop or isolate	report	1 AP	1 AP then NIS

ATTACHMENT 2 – SAMPLE CERTIFICATE OF READINESS

Certificate of Readiness			
PPP Co warrants that this Set is fit for use on the RailCorp Network and meets the current Minimum Standards			
Set Number	XYZ 123	Car Numbers	001 002 003 004 005 006 007 008
Issued at:.....[Location] Timehrs Date / / ... [dd/mm/yyyy].			
This certificate EXPIRES AT Midnight on / / [dd mm yyyy]			
Issued by [Print Name] Signature			
CONCESSIONS			
This Set meets the Minimum Standards and is released into service with the following concessions from the Performance Operating Standards (if none write NONE)			
.....			
.....			
.....			
Concession(s) accepted by RailCorp			
Name: Signature: Date:.... / /			

ATTACHMENT 3 – INTERFACE PROTOCOLS



ATTACHMENT 3

THROUGH LIFE SUPPORT

INTERFACE PROTOCOLS

‘How the organisations interface on a day to day basis’



DOCUMENT VERSION

Version	Date	Section Changed	Comment
DRAFT			Vol.3 Part D of Request for Detailed for Proposal (2005/0108)
1.0	17/08/2010	Various	The Interface Protocols were further developed in collaboration with RailCorp, Reliance Rail and DEDIR, refer to letters RR03703; RC02306; RC02360; RR04137; RC02588; RR06849; RC04712; RC05270; RR08955, and issued in accordance with contract clause 23.3 under RailCorp letter RC5366.

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PREAMBLE

This Attachment 3 of the Through Life Support specification contains the formally issued Non Draft Interface Protocols.

These Non Draft Interface Protocols are the result of a RailCorp and PPP Co collaborative review process leading to its further development. Amendments may be requested by either party by giving notice in accordance with clause 23.3(d) of the Contract.

Furthermore, this document will be reviewed in accordance with CMR 8.3.4 and CEP00136 Testing and Refinement of the Interface Protocols in accordance with Contract Management Requirements (CMR).

1 Introduction

1.1 *Guiding Principle*

Clause 23.3 of the Contract requires PPP Co and RailCorp to comply with these Interface Protocols and the associated procedures referred to in these Interface Protocols.

The guiding principles for these Interface Protocols are to:

- (a) promote a harmonious day to day working relationship between PPP Co and RailCorp;
- (b) assist RailCorp to achieve its mission of providing safe, reliable and clean trains to its customers by using the Sets; and
- (c) enable PPP Co to achieve its business objectives in providing the Required Availability to RailCorp.

This document summarises certain rights and obligations of the parties under the Contract. It does not in any way limit, lessen or affect:

- (d) PPP Co's obligations whether under the Contract or otherwise according to law; or
- (e) RailCorp's rights against PPP Co whether under the Contract or otherwise according to law.

1.2 *Purpose of this Document*

The purpose of this document is to:

- (a) enable PPP Co and RailCorp personnel involved in managing the operational interfaces to have a clear understanding of their roles and responsibilities by:
 - (i) describing interface administration by PPP Co and RailCorp representatives under the Contract; and
 - (ii) specifying the operational interfaces between PPP Co and RailCorp personnel;
- (b) define the protocol at each of the points of interface (for example, receiving a Set into the Maintenance Facility). The Interface Protocols describe:
 - (i) who is involved at the interface;
 - (ii) what information needs to be provided – including the format, by when, how often and how it is to be provided; and
 - (iii) what actions are required and procedures that need to be followed; and
- (c) provide an agreed set of procedures to support the Interface Protocols (for example, a procedure for RailCorp train crews handing over responsibility of a Set to PPP Co personnel at the Maintenance Facility). The procedures will include guidelines for managing the interfaces when there are changes or disruption to normal operations.

1.3 Contract Management/Nominated Representatives

PPP Co and RailCorp will provide personnel at the Maintenance Facility to manage the Contract. RailCorp will appoint a person to act as RailCorp's Representative under clause 6.3 (RailCorp's Representative) of the Contract. RailCorp's Representative may, in turn, appoint other persons under clause 6.4 (Appointees of RailCorp's Representative) of the Contract to exercise any of the functions of RailCorp's Representatives under the Contract.

PPP Co must ensure that PPP Co's Representative is provided with all necessary personnel and resources to fulfil its functions under the Contract. PPP Co's Representative may, in turn, appoint other persons (Appointees of PPP Co's Representative) to exercise any of the functions of PPP Co's Representatives under the Contract.

1.4 Responsibilities for Updating and Implementing this Document

1.4.1 Updates to this Document

PPP Co and RailCorp may, by giving written notice, propose changes to this document from time to time to improve the way the interfaces are managed, to take account of changed circumstances etc.

Reference: Clause 23.3 of the Contract

1.4.2 Implementing this Document

RailCorp's Representative and PPP Co's Representative are responsible for implementing the Interface Protocols, procedures and administrative processes described in this document within their respective organisations. Implementation of this document includes ensuring that sufficient personnel from each organisation are involved in each interface activity and administrative process and that they:

- a) understand their roles and responsibilities; and
- b) are competent and trained to undertake the interface activity in a safe manner.

2 Performance and Commercial Management

2.1 Regular and Ad Hoc Meetings of Representatives

PPP Co's Representative and RailCorp's Representative will have regular meetings to manage the performance of the fleet. This will be in accordance with the procedure referenced in Appendix B.

2.1.1 Meeting Frequency

RailCorp's Representative and PPP Co's Representative will establish a schedule of meetings and meet regularly during the TLS Phase, and may also meet on an ad-hoc basis as and when required.

The schedule of meetings must include:

- Daily
- Weekly
- Monthly
- Quarterly
- Ad Hoc

Senior Project Group and Safety Committee Meetings will be held separately.

Reference: Clauses 6.6 and 6.7 of the Contract

2.1.1.1 Daily Meeting

A daily meeting will be held each Business Day, or more frequently as agreed between both parties, during the AM availability period throughout the TLS Phase. The purpose of this meeting is to review and discuss Availability, recent Incident details impacting Required Availability and where relevant Defects reported, fixed and outstanding. It will also include resolution of any failure attribution issues in accordance with the procedure referenced in Appendix B.

2.1.1.2 Weekly Meeting

A weekly review meeting will be held to discuss Availability, Reliability, Reimbursable, emerging failure trends, FRACAS investigations status, repeat failures, modifications status and any safety issues that may have arisen that require action.

2.1.1.3 Monthly Meeting

A monthly meeting will be held, within 7 days following month's end, to discuss the performance of the fleet. A Performance Report for that month will be produced by PPP Co

Reference: Contract Schedule 7, Annexure 7

2.1.1.4 Quarterly Meeting

Agenda items as per the monthly meetings, with PPP Co's Representative and RailCorp's Representative in attendance.

2.1.2 Meeting Agenda and Recording and Distribution of Minutes

Agendas will be prepared and minutes will be taken for all scheduled and ad-hoc/special meetings between the RailCorp's Representative and PPP Co's Representative.

RailCorp's Representative will arrange for the setting of the agenda and recording of minutes, review and comment by PPP Co's Representative and distribution of the agreed minutes to all relevant stakeholders as appropriate.

2.2 Reporting

PPP Co will provide daily, weekly, monthly, quarterly and annual reports as well as any other agreed reports required to monitor the performance of Sets to meet the Required Availability. The reports must be produced in a timely manner, allowing reasonable time for review prior to the relevant Performance Management Meeting in which the report's content is to be discussed.

Specific reports may also be requested by RailCorp as a result of recurring Incidents, failures to provide the Required Availability or any other events connected with the supply of the Sets.

Reference: Clause 2.7.6 of the RailCorp TLS Specification

2.3 TLS - Payment Claims and Payment Process

2.3.1 Payment Claims

PPP Co must give RailCorp's Representative Claims for TLS Payments and other amounts for TLS Phase Activities

Reference: Clause 27.6 of the Contract

2.3.2 Payment

RailCorp must within 20 Business Days of receiving a payment Claim, pay PPP Co the amount claimed or such lesser amount as RailCorp's Representative reasonably determines is due.

If RailCorp's Representative determines that a lesser amount is due it must give PPP Co a written statement of the reasons why and PPP Co must issue a revised invoice, in accordance with the procedure referenced in Appendix B. This procedure outlines PPP Co's requirements in this matter as well as the mechanism for payment claim disputes.

References: Clause 27.6, 27.7, 27.9 & 27.11 of the Contract

2.4 Issue Resolution

Resolution of interface administration and operational interface issues, in the first instance, will be by agreement of RailCorp's Representative and PPP Co's Representative. RailCorp's Representative and PPP Co's Representative will ensure that any decisions concerning the resolution of such issues are consistent with the guiding principles and intent of the Contract.

If necessary, unresolved issues may require further instructions to determine the outcome. In such cases, it is generally anticipated that the following table will be used to escalate the issues. However, this escalation process does not affect either party's right to initiate the dispute resolution procedure referenced in Appendix B at any time.

Step	Indicative Timescale Before Escalation
1	Daily Meeting
2	Weekly Meeting
3	Monthly Meeting
4	Quarterly Meeting

Reference: Dispute Resolution, Clause 53 of the Contract

3 Movement of Sets

3.1 Calling in Sets to the Maintenance Facility

3.1.1 Daily Schedule of Call-ins (Scheduled Maintenance)

PPP Co will provide a daily schedule of call-ins to Mechanical Control by **16:00** hours each Business Day or more frequently as agreed between both parties.

The Call-In schedule will list the Sets (by Set number) that PPP Co proposes to be delivered to the Maintenance Facility for the following 7 days on a rolling basis. For each day, the Call-in list is to be in ascending date order and within each date the sets are listed in order of preference.

Mechanical Control will endeavour to arrange Sets to be delivered in order of preference to the Maintenance Facility but may present the 2nd preference Set from the Call-ins list in lieu of a 1st preference Set not being able to be delivered.

3.1.2 Alterations to the Daily Schedule of Call-ins (Scheduled Maintenance)

PPP Co may alter the Daily Schedule of Call-Ins by advising Mechanical Control of any alterations no later than **2 days** prior to the date on which PPP Co proposes that the relevant Sets be presented. RailCorp will endeavour to, but will not be obliged to, deliver the requested Set on the proposed date.

3.1.3 Special Call-ins (Unscheduled Maintenance)

PPP Co may request a 'special call-in' of a Set to the Maintenance Facility on a particular day. For special call-ins, PPP Co will advise Mechanical Control no later than **12:00** hours on the preceding day to the proposed special call-in.

Mechanical Control will endeavour to, but will not be obliged to, arrange for special call-ins when requested regardless of whether PPP Co provides advice as per above.

All Call-ins will be conducted in accordance with the procedure referenced in Appendix B.

3.2 Receipt of Sets to the Maintenance Facility

Receipt of Sets into the Maintenance Facility will be undertaken as referenced in Appendix B.

Reference: Clause 9.4.5 – Handover & Pick Up Protocols of the Contract Management Requirements

3.3 Unplanned Arrivals

The Yard Master must ensure that one of the designated arrival roads is kept free to accept a train from the RailCorp network. (Arrival Road 1, 2 & 3).

The unplanned arrival of any Set or Other Set to the Maintenance Facility will be managed by processes referenced in Appendix B.

Reference: Exhibit 7 of the Contract (Attachment 7, RailCorp Maintenance Facility Specification, Clause 5.1)
Clause 9.4.5 of the CMR

3.4 Dispatch of Sets from Maintenance Facility

Reliance Rail must develop and maintain a set of protocols and procedures for the delivery and collection of sets. Sets delivered to the Pick-up Points must satisfy the Minimum Operating Standards for Available Sets.

Dispatch of PPP Co Sets from the Maintenance Facility will be undertaken in accordance with procedure referenced in Appendix B.

Reference: Clause 9.4.5 of the CMR

3.5 Movement of Sets between locations

PPP Co may request the movement of Sets between locations away from the Maintenance Facility.

PPP Co FOSO will advise Mechanical Control of the request no later than **1200** hours on the preceding day. Mechanical Control will endeavour, but are not obliged, to arrange the movement.

3.6 Management of the Commissioning Track/Down Relief

Movement of rail vehicles via the Commissioning Track/Down Relief at Auburn will be undertaken in accordance with the procedures referenced in Appendix B.

Reference: Clause 11.5(a) of the Contract
Exhibit 11 of the Contract (RailCorp Enabling Works Specification, Clause 2.5)

4 Crew Duties at the Maintenance Facility

Rail vehicle movements within the Maintenance Facility will be conducted by the following three groups of qualified personnel.

4.1 RailCorp Operational Crew

RailCorp Crew may enter the Maintenance Facility when required for train crewing duties including:

- (a) delivering a train to the Handover Point;
- (b) duties while at the Maintenance Facility;
- (c) collecting a train from the Pick-up Point, preparing the train and departing the Maintenance Facility; and

PPP Co must provide a site induction for the Maintenance Facility for RailCorp's Crew so that they are fully aware of any PPP Co requirements whilst at the Maintenance Facility, including local emergency procedures.

Reference: Exhibit 5 of the Contract (RailCorp TLS Specification),
Clause 2.3.3

4.2 RailCorp Depot Crew

RailCorp will supply depot Crew to the Maintenance Facility at least one hour prior to the commencement of the required delivery time for each AP, until after the commencement of the AP and during morning and afternoon peaks.

The depot Crew will work under the direction of RailCorp's Representative. During the daily meetings, PPP Co may request use of the Depot Crew for necessary activities including, but not limited to, Train Preparations and trial runs. RailCorp's Representative will determine the most appropriate utilisation of the depot Crew for the RailCorp Network and advise daily works for the depot Crew.

PPP Co's Representative will advise RailCorp's Representative during the working day if unforeseen requirements arise. RailCorp's Representative may, but is not obliged to, modify the depot Crew daily works to accommodate PPP Co's request.

RailCorp Crew (including depot or any other) will not be moving sets to or from the Maintenance Building.

Reference: Clause 23.8 of the Contract

4.3 PPP Co Qualified Personnel

PPP Co will ensure non-RailCorp Staff are qualified to operate Sets within the Maintenance Facility.

Reference: Clause 2.3.4 TLS Specification

5 Track Possessions/Disruptions

5.1 Track possessions

RailCorp's Representative will update the annual schedule of track possessions. Any changes to the schedule will be notified to PPP Co at least 30 days before the relevant track possession.

PPP Co will make arrangements at the Maintenance Facility to accommodate the track possession requirements.

Reference: Clause 2.3.10 (Track Possessions) of the RailCorp TLS Specification

5.2 Disruptions

RailCorp will, as soon as practicable, notify PPP Co if it is unable to deliver a Set to the Maintenance Facility or unable to allow a Set to depart the Maintenance Facility at the agreed time due to unplanned events that occur.

Unplanned events could include network congestion, emergency track closures, infrastructure failure, Crew availability issues, Incidents involving Sets etc and may involve the issuing of Special Train Notices. Depending on the nature of the unplanned event, the notification from RailCorp to PPP Co may be from:

- (a) the Shift Manager (RMC) to the Help Desk;
- (b) Mechanical Control to the Help Desk; or
- (c) RailCorp's Representative to PPP Co's Representative.

When advised by RailCorp, PPP Co will notify RailCorp's Representative within 24 hours of any impact on the Daily Schedule of Call-Ins or on the number of Available Sets for any Availability Period, as a result of these unplanned events.

6 Certificate of Readiness

6.1 Issuing Certificates of Readiness

PPP Co must provide:

- (a) a Certificate of Readiness with each Set it delivers to the Pick-up Point for collection by RailCorp; and
- (b) a new Certificate of Readiness if any Unscheduled Maintenance is carried out at RailCorp's Maintenance Centres or Out Depots.

This process is referenced in Appendix B

Reference: Clause 2.3.5 of the RailCorp TLS Specification

7 Availability

7.1 Available Sets

The following sets out the number of Available Sets PPP Co must provide for each Availability Period during the:

- **Transition-in Phase;**
(The period commencing on the date of Practical Completion of Set 1 and ending on the Date of Practical Completion of Set 78)
- **Steady-state Phase**
(The period commencing on the day after the Date of Practical Completion of Set 78 and ending on the day before the date on which the first Set to be decommissioned by PPP Co, or acquired by RailCorp, is so decommissioned or acquired)
- **Transition-out Phase**
(The period commencing on the date on which the first Set to be decommissioned by PPP Co, or acquired by RailCorp, is so decommissioned or acquired and ending on the last day of the Contract Term).

The table in Appendix C details the number of Available Sets which PPP Co must provide for each Availability Period during each phase of the project.

7.1.1 Definition of Availability Periods

"Weekday AM Availability Period" means the period from commencement of the first service in the Timetable to 1200 hours on any weekday excluding any Public Holiday.

"Weekday PM Availability Period" means the period from 1200 hours to completion of the last service in the Timetable on any weekday excluding any Public Holiday (recognising that completion of the last service may occur after midnight).

"Weekend Availability Period" means the period from commencement of the first service in the Timetable to completion of the last service in the Timetable on any Saturday, Sunday or Public Holiday (recognising that completion of the last service may occur after midnight).

Reference: Contract Definitions, Clause 1.1 of the Contract

7.2 Additional Required Availability

During the Steady-state Phase PPP Co must provide additional Available Sets as follows:

Reference: Clause 22.8 of the Contract

7.2.1 Royal Easter Show

4 additional Available Sets for each Availability Period during the Royal Easter Show.

7.2.2 New Years Eve

4 additional Available Sets for each Availability Period during New Year's Eve.

7.2.3 Additional Special Event

4 additional Available Sets for each Availability Period during an Additional Special Event. RailCorp may nominate 4 additional events in each financial year as "Additional Special Events", provided that:

- RailCorp has given 1 month prior written notice of the Additional Special Event;
- the notice specifies the Availability Periods which the Additional Special Event will cover; and
- the Additional Special Event does not coincide with the Royal Easter Show, New Year's Eve or any other Additional Special Event.

RailCorp may give PPP Co written notice not less than 48 hours before the commencement of the Additional Special Event stating that RailCorp does not require PPP Co to provide the Additional Required Availability.

If, in any financial year, PPP Co is not required to provide all 4 Additional Special Events, PPP Co will be entitled to make a claim in July of the following financial year for the balance.

Reference: Clause 22.8(b) of the Contract

7.3 Ad-hoc Additional Required Availability

RailCorp may from time to time request PPP Co to nominate the number of Available Sets in addition to the Required Availability which PPP Co is willing to provide for one or more particular Availability Period.

PPP Co must respond to any such request by written notice within 5 Business Days. If RailCorp advises PPP Co that it wishes to use some or all of the additional Available Sets nominated by PPP Co in its response, then the Required Availability which PPP Co must provide will be increased accordingly.

Reference: Clause 22.9 of the Contract

7.4 Record of daily Set Availability

PPP Co will provide a report containing information on Set Availability 1 hour prior to each Availability Period.

The Set Availability report will as a minimum contain the following information:

- a) Sets Available
 - (i) Required Availability
 - (ii) Deemed Availability
 - (iii) Spare

- b) Set Unavailable
 - (i) Unavailable – in maintenance
 - (ii) Withdrawn/Withheld <= 24 hr notice
 - (iii) Withdrawn/Withheld > 24 hr notice

Sets stabled at an Out Depot will be deemed to be Available, unless PPP Co advises otherwise in the Set Availability report.

The availability calendar comprises of the following information which would form the basis of the SAU component of the Availability Payment.

- Required Availability (Schedule 8)
- Required Availability (Royal Easter Show and New Year's Eve)
- Adhoc Availability
- Nominated Special Event – first Availability Period
- Nominated Special Event – second, third and fourth Availability Period

References: Clause 2.7.6(j) of the RailCorp TLS Specification
Clause 22.3(a) of the contract

7.5 Notice by RailCorp of a Set that does not meet the requirements of the Minimum Operating Standard for Available Sets

If RailCorp becomes aware that a Set at an Out Depot does not meet the Minimum Operating Standards for Available Sets, RailCorp will advise PPP Co as soon as practicable to maximise the opportunity for PPP Co to offer another Set for use by RailCorp.

Notification from RailCorp to PPP Co that a Set does not meet the Minimum Operating Standards for Available Sets may be from:

- (a) the Shift Manager (RMC) to Help Desk;
- (b) Mechanical Control to Help Desk; or
- (c) RailCorp's Representative to PPP Co's Representative

RailCorp's Representative will analyse RailCorp's Network Control IIMS Incident Reports and the RailCorp MMIS to confirm which Availability Incidents are attributable to PPP Co and advise PPP Co at the daily meetings.

7.6 Notice by PPP Co of a Set not Available

PPP Co must advise RailCorp when it becomes aware that a Set is not Available.

The primary communication line for PPP Co to advise of a Set not being Available is to Mechanical Control (RMC). If this is not possible, PPP Co must advise Train Control, or RailCorp's Representative.

7.7 Substituting spare sets

PPP Co must advise RailCorp's Representative of Spare Sets that may be used by RailCorp as substitutes. Depending on the notice period given, RailCorp may accept or decline the offer of a substitute Set or decide another course of action (for example, assign another type of train to the run, cancel the service etc.)

Reference: Clause 22.5 of the Contract

7.8 Withholding/withdrawing Sets from a service

PPP Co must advise RailCorp's Representative of Sets to be withheld or withdrawn from service in accordance with the process referenced in Appendix B.

Reference: Clause 22.7 of the Contract

8 Reliability

8.1 Reporting of Daily Set/Fleet Reliability

Daily set reliability is achieved when Sets operate 'in service' without incurring a PPP Co Related Incident. It will be assumed that Sets operate reliably 'in service' each day unless reported otherwise (i.e. reporting on reliability will be by exception only whenever Sets do not operate within 2 minutes 59 seconds of Timetable or are cancelled).

Reliability and Disruption Adjustments to the monthly Availability Payments will be made based on the following categories:-

Category	Reliability Measure
Late into or in service	Set is introduced into service between 3 minutes and 9 minutes 59 seconds late or becomes this late while in service.
Very late into or in service	Set is introduced into service 10.00 minutes or more after the commencement of an Availability Period; or Becomes 10.00 minutes or more behind the time nominated in the Timetable.
Cancelled by RailCorp	Set fails to meet the Minimum Standards for Available Sets; or Set has a PPP Co Related Defect which RailCorp believe may delay the Set when in service by 10 minutes or more; or Set is introduced into service 10.00 minutes or more after the commencement of an Availability Period; or Becomes 10.00 minutes or more behind the time nominated in the Timetable.

Note: The above table is a summary only. See the Contract reference at the end of this section for full details.

PPP Co must advise RailCorp when it becomes aware that a Set is not reliable in service.

The primary communication line for PPP Co to advise a Set is not reliable is to Mechanical Control (RMC). If this is not possible, PPP Co must advise Train Control, or RailCorp's Representative.

Notification from RailCorp to PPP Co that a Set is 'not reliable' may be from:

- (a) the Shift Manager (RMC) to Help Desk;
- (b) Mechanical Control to Help Desk; or
- (c) RailCorp's Representative to PPP Co's Representative.

RailCorp's Representative will analyse RailCorp's Network Control IIMS Incident Reports and the RailCorp MMIS to confirm which Reliability Incidents and Defects are attributable to PPP Co and advise PPP Co at the daily meetings.

Reference: Clause 3.3 of Schedule 7 of the Contract

8.1.1 Fault/Defect Reporting

The table below details the various methods of reporting faults/defects.

	Reporting source/method	Time/Date stamp
RailCorp	Phone	When the call is made to the PPP Co 24/7 Help Desk
	MMIS	When the fault is entered into the RailCorp MMIS
	IIMS	When PPP Co has been notified of an Incident through an IIMS record generated.
PPP Co	eTIS	When the alert/alarm is highlighted to the 24/7 Help Desk
	MMIS	When the fault/defect is entered into the PPP Co MMIS in a timely manner.

References: Clause 2.7.6(b) of the RailCorp TLS Specification
Clause 9.4.4 of the CMR

8.2 PPP Co Response to Defective Sets

8.2.1 When in use on Rail Network

When requested by RailCorp PPP Co will call out appropriate personnel to assist Sets when in use by RailCorp on the Rail Network for:

- (a) defective Sets; and
- (b) in response to an Incident.

The response of PPP Co to notification of defective Sets on the Rail Network shall be in accordance with the procedure referenced in Appendix B.

The areas of RailCorp that may request PPP Co personnel to assist a Set include:

- (c) the Shift Manager (RMC) to the Help Desk for Incidents;
- (d) Mechanical Control to the Help Desk for response for a Defective Set;
- (e) RailCorp Equipment Examiner to the Help Desk ; and
- (f) RailCorp's Representative to PPP Co's Representative.

PPP Co will ensure that all its personnel required to attend on the Rail Network are trained and competent to do so, including:

- (g) having the necessary safety qualifications and certifications and understanding of their roles required by the Network Rules and the Network Procedures; and
- (h) understanding their roles in the Incident command and control structure at an Incident site as defined in RailCorp's Incident Management Framework.

Reference: Clauses 11.2, 11.3 and 11.4 of the Contract

8.2.2 At Out Depots

PPP Co may access the Sets for the purposes of Unscheduled Maintenance when stabled at Out Depots.

PPP Co will ensure that all of its personnel accessing Sets at Out Depots:

- (a) are fully aware of any RailCorp requirements for accessing Sets at the Out Depot, including advising their presence to a RailCorp officer in charge when in attendance;
- (b) have the necessary safety qualifications and certifications and understanding of their roles as required by the Network Rules and the Network Procedures; and
- (c) are familiar with the local emergency procedures for the location.

PPP Co personnel will access Sets at Out Depots in accordance with the procedure referenced in Appendix B.

In summary, the procedure will include processes such as the re-issuing of Certificates of Readiness, including what needs to be done to have any concessions added to it, advising RailCorp if the Set will not be made available, and requesting Set Train Operating Condition Waivers.

Reference: Clauses 11.2, 11.3 of the Contract

8.2.3 At RailCorp's Maintenance Centres or other maintenance facilities

PPP Co may request access to Maintenance Centre equipment for the purposes of maintenance of its Sets when at a RailCorp Maintenance Centre. Access may be granted at the discretion of RailCorp. PPP Co will be charged for any costs incurred by RailCorp in providing access

PPP Co will ensure that all of its personnel accessing PPP Co Sets at a RailCorp Maintenance Centre:

- (a) are fully aware any RailCorp requirements for accessing Sets at the RailCorp Maintenance Centre including advising their presence to the appropriate RailCorp officer in charge;
- (b) have the necessary safety qualifications and certifications and understanding of their roles required by RailCorp's Network Rules and Network Procedures; and
- (c) are familiar with the local emergency procedures for the RailCorp Maintenance Centre.

PPP Co personnel will access PPP Co Sets at RailCorp Maintenance Centres or other maintenance facilities in accordance with the procedure referenced in Appendix B

Reference: Clauses 11.2, 11.3 of the Contract
Contract Schedule 7 Annexure 5, RailCorp Schedule of Rates

8.3 Failure Attribution

RailCorp will notify PPP Co of an Incident associated with the Sets as described in section 8.1 of these Interface Protocols. All incidents notified to PPP Co will also be attributed to PPP Co.

The Failure Attribution process is detailed further in the procedure referenced in Appendix B.

8.4 Help Desk support

PPP Co must establish a Help Desk support facility. The Help Desk must be staffed continuously (i.e. on a 24 hours a day, 7 days per week basis) and must:

- (a) provide a single point of contact for reporting Defects on Sets to PPP Co;
- (b) assist Mechanical Control, Equipment Examiners and RailCorp maintenance personnel in attending to In-service defects; and
- (c) provide advice to RailCorp personnel on operational aspects of PPP Co Sets. The RailCorp personnel may include Drivers, Guards, Mechanical Control (RMC) personnel and Equipment Examiners or other personnel as identified by RailCorp's Representative.

PPP Co is to acknowledge the immediate nature of responding to Incidents via the Help Desk and shall have in place protocols for reporting to RailCorp the time the call was logged, the time to respond and the nature of the request for assistance.

8.4.1 Help Desk location, support and communications arrangements

PPP Co is to locate the primary Help Desk support facility in the RailCorp Rail Management Centre (RMC) at a permanent location provided by RailCorp.

PPP Co will utilise the provided desk, meal, change and toilet facilities within the RailCorp RMC.

PPP Co will utilise the Voice Communications System (VCS) located at the Help Desk support facility desk to enable the Help Desk support facility to communicate with RailCorp, from within the RailCorp RMC.

RailCorp will provide the required training, security and clearance to the PPP Co nominated Help Desk support facility personnel, to access the RMC. PPP Co personnel operating within the RMC must adhere to the operational processes and procedures that govern the RMC.

PPP Co will utilise the existing RailCorp ICT Infrastructure to enable connection of ICT equipment from the west wing communications room to the Help Desk support facility desk. PPP Co is required to liaise with the RailCorp service provider for ICT support of facilities provided in the RMC.

PPP Co will provide the necessary ICT equipment for a single workstation. PPP Co must also provide a BDSL service which interfaces with RailCorp's west wing Communications room in order to support the functions of the Help Desk support facility.

PPP Co will develop a Help Desk operations procedure that will define the interaction with the relevant sections of RailCorp – this procedure is also referenced in Appendix B.

RailCorp will review and update, if necessary, RMC procedures to define the interaction with the Help Desk support facility.

RailCorp does not represent or warrant that the RMC will always be available, and will not provide a Help Desk support facility at the RailCorp Disaster Recovery Centre, in the event that the RMC is not able to be utilised. PPP Co will need to ensure a Help Desk support facility is immediately available at an alternative location in the event the RMC cannot be utilised.

In the event of communications/ICT being unavailable, PPP Co must continue to provide Help Desk support functions in accordance with the Contract. RailCorp will provide support to PPP Co in the event of a fault in accordance with RMC procedures.

Reference: Clause 2.3.2(b)(ix) of the RailCorp TLS Specification
 Clause 2.3.6 of the RailCorp TLS Specification

9 Access to the Maintenance Facility

9.1 Maintenance Facility Induction Process

PPP Co to produce and manage an induction process for all employees and visitors to the Maintenance Facility, as referenced in Appendix B

9.2 Access by RailCorp Infrastructure Services personnel

RailCorp Infrastructure Services personnel may access the Maintenance Facility to:

- (a) gain access to the RailCorp Network; and
- (b) maintain RailCorp owned or managed infrastructure, systems or land within the leased area.

All RailCorp Infrastructure Services personnel accessing the Maintenance Facility with the purpose of carrying out work within the Maintenance Site must follow the procedure referenced in Appendix B (to be developed by PPP Co)

Reference: Clause 11.7 of the Contract.

10 Operations Services

10.1 Maintenance Information

PPP Co will provide a Maintenance Management Information System (MMIS).

PPP Co's Representative will provide RailCorp's Representative with access to the PPP Co MMIS as required.

Reference: Maintenance Management Information, Clause 2.7.6 of the RailCorp TLS Specification

10.2 Retrieval of Set borne data

10.2.1 RailCorp Request for PPP Co to retrieve Event Recorder information

RailCorp may request PPP Co to retrieve and provide information from Event Recorder units.

When RailCorp requires a download of Event Recorder information, an approved RailCorp person will contact PPP Co in accordance with the procedure referenced in Appendix B.

Following such a request, PPP Co must ensure that the Event Recorder information is downloaded and securely handled in accordance with the applicable RailCorp procedures:

- Data Logger Information Management (Incidents) – also referenced in Appendix B.
- Data Logger Information Management (Compliance Audit) – also referenced in Appendix B.

PPP Co will ensure that only authorised PPP Co personnel retrieve information for investigation purposes when requested by RailCorp. PPP Co personnel must be approved by RailCorp to perform the above procedures before placement on a list

of personnel authorised to perform Event Recorder downloads on PPP Co Sets for investigation purposes.

Requests for download of Event Recorder information for any other purpose may be from:

- (a) the shift manager, RMC to Help Desk; or
- (b) RailCorp's Representative to PPP Co's Representative.

PPP Co will be entitled to payment for retrieval of Event Recorder information in accordance with the PPP Co Schedule of Rates.

RailCorp may request that PPP Co download Event Recorder information from Sets at any location.

For Major Incidents as defined in the RailCorp Incident Management Framework, PPP Co shall also have the capability to remove the Event Recorders from the Set (either at an Incident site or at any RailCorp or PPP Co site under direction from the Rail Commander or the Site Controller) again, in accordance with the procedure referenced in Appendix B.

Reference: Data Downloading of Event recorder and Train Information system, Clause 2.5.5 of the RailCorp TLS Specification

10.2.2 RailCorp retrieval of Event Recorder information

Authorised RailCorp personnel may retrieve, store and analyse information from Event Recorders fitted to Sets for any purpose. Authorised RailCorp personnel may retrieve the information either within or outside of the Maintenance Facility.

When authorised RailCorp personnel wish to retrieve Event Recorder information from a Set at the Maintenance Facility, the authorised personnel will inform RailCorp's Representative (or the Help Desk when outside of Business Hours). RailCorp's Representative or the Help Desk will advise the relevant PPP Co personnel and arrange for access to the Maintenance Facility and the Set for the authorised personnel to retrieve the information.

From time to time, RailCorp will provide PPP Co with a list of authorised personnel permitted to download Event Recorder data from Sets.

Reference: Data Downloading of Event recorder and Train Information system, Clause 2.5.5 of the RailCorp TLS Specification

10.2.3 Retrieval of CCTV Images

RailCorp may request PPP Co to retrieve CCTV images from a Set. Following such a request, PPP Co must ensure that the CCTV images are retrieved and securely handled in accordance with the RailCorp Standard Operating Procedure – PPP Co Train CCTV Image Retrieval and further procedures to be developed by PPP Co, as referenced in Appendix B.

PPP Co will be entitled to payment for retrieval of CCTV images in accordance with the PPP Co Schedule of Rates.

For Major Incidents as defined in the RailCorp Incident Management Framework, PPP Co must extract image data or remove the CCTV data recorder from the Set (either at an Incident site or at any RailCorp or PPP Co site under direction from the Rail Commander or the Site Controller). PPP Co shall have the ability to review images either “on the bench” at the Maintenance Facility, at the RailCorp Security Communication Centre or at a secure third party site. In all cases, the procedure referenced in Appendix B must be followed.

Where an Incident is reported which requires an urgent retrieval of the stored CCTV images, authorised RailCorp security personnel may retrieve CCTV images whilst the Set is ‘in service’. In this instance, RailCorp will advise PPP Co of the action taken.

Reference: Retrieval of CCTV Images, Clause 2.5.6 of the RailCorp TLS Specification

10.2.4 Retrieval of eTIS Data

RailCorp may request PPP Co to retrieve and provide information from eTIS

This procedure, referenced in Appendix B is to be developed by PPP Co.

References: Clause 2.5(e) of the RailCorp TLS Spec
Downloading of Event Recorder and Train Information) Clause 2.5.5 of the RailCorp TLS Spec.

10.2.5 Required Response Time

The following table will state RailCorp’s requirement for retrieval of Set borne data from the time of the request. This table is to be further developed jointly by RailCorp & PPP Co.

	Non-urgent	Urgent
Event Recorder	TBD	TBD
CCTV images	TBD	TBD
eTIS alarms/alerts	TBD	TBD
eTIS data	TBD	TBD

10.3 Updates to on-train Information

PPP Co will update on-train information provided by RailCorp from time to time in accordance with the procedure referenced in Appendix B.

PPP Co will be entitled to payment for updating this information in accordance with the PPP Co Schedule of Rates.

Reference: Operations Services Clause 2.5 of the RailCorp TLS Specification

The following table states RailCorp’s requirement for updating the Set borne information. Urgent requests will be managed jointly by RailCorp & PPP Co. on an as and when required basis.

	Non-urgent	Urgent
Updates to RailCorp manuals and procedures stored in eTIS	Next scheduled maintenance inspection	As requested by RailCorp
Updates to Timetable Information in eTIS	Next scheduled maintenance inspection	As requested by RailCorp
Updates to signage and codes for Train Destination Indicators	Next scheduled maintenance inspection	As requested by RailCorp
Updates to RailCorp decals, route maps and passenger information posters	Next scheduled maintenance inspection	As requested by RailCorp
Updates to DVA	Next scheduled maintenance inspection	As requested by RailCorp

10.4 Simulator Support

This section is to be further developed detailing the following as a minimum:

- Defect reporting and response times
- Access and reporting for routine Maintenance
- Access for modifications

Reference: Clause 2.8 of the RailCorp TLS Spec

11 Audits

11.1 Audit schedules

To be jointly developed by RailCorp and PPP Co and referenced in Appendix B

11.2 Compliance Audits

RailCorp's Representative (or any person authorised by RailCorp's Representative) may audit the Performance Monitoring System or any data for, or resulting from, the Performance Monitoring System or the TLS Activities PPP Co's Representative will ensure that the audit personnel are provided with the necessary access to the Maintenance Facility, Sets, Simulator and Through Life Support records to be able to effectively observe and audit the TLS Phase Activities, including but not limited to:

- Maintenance and configuration activities
- Compliance to quality and environment standards
- Compliance to safety system standards
- Other processes and procedures
- Asset Operations Group (AOG) risk register
- External risk
- AOG surveillance audit
- SMS audit
- Quality audit (including external)
- System risk/hazard audit
- External OH&S audit
- TMP Technical audit

RailCorp's Representative may utilise internal or external resources for these audits.

These audits are to be completed in accordance with the procedure referenced in Appendix B

Reference: TLS Performance Monitoring, Clause 26 of the Contract
Audits, Clause 26.7 of the Contract

11.3 KPI Product Audits

These audits are to be completed in accordance with the procedure referenced in Appendix B. Audits may include but not be limited to:

- Unreported Defects
- Configuration
- Presentation

Reference: Audits, clause 26.7 of the Contract

11.3.1 KPI Audit Timeframes

The RailCorp Representative will advise PPP Co of the locations and timescales of audits to be conducted.

Reference: Clause 2.11 of the CMR.

12 Wheel Profiling

PPP Co must conduct wheel profiling of Sets and Other Sets at the Auburn Maintenance Facility.

Scheduling of wheel profiling activities will be conducted in accordance with the procedure referenced in Appendix B

PPP Co may request RailCorp to carry out wheel profiling activities for Sets on their behalf. Requests and management of such activities will be conducted in accordance with the procedure referenced in Appendix B. RailCorp is not obliged to make the arrangements necessary to do this wheel profiling.

In the event of RailCorp providing such services, PPP Co. shall pay the cost incurred by RailCorp in accordance with an agreed set of rates.

Reference: Clause 2.3.8 of the RailCorp TLS Specification.

13 Presentation

13.1 Presentation – Internal and External

PPP Co is responsible for the provision of external washes for the Sets and Other Sets (as requested) sent to the Maintenance Facility.

PPP Co is responsible for the provision of internal cleaning of Sets sent to the Maintenance Facility.

Scheduling and management of Presentation activities to be conducted in accordance with the procedure referenced in Appendix B

Reference: Clause 2.4.3 of the RailCorp TLS Specification
Clause 9.5 of the CMR

13.2 Reporting and Management of Graffiti and Vandalism

PPP Co is responsible for the Graffiti and vandalism reporting requirements. Reporting and management of Graffiti and vandalism issues to be conducted in accordance with the procedure referenced in Appendix B

Reference: Clause 2.4.1 of the RailCorp TLS Specification
Clause 9.5.2 of the CMR

14 Safety & Environmental

14.1 Accident/Incident Reporting Process

PPP Co must manage and report incidents involving Sets and in the facility as referenced in Appendix B.

Reference: Clause 9.4.7 of the CMR.

Appendix A – Document Traceability Matrix

The following table provides a cross reference to the Draft Interface Protocols included in the Through Life Support specification (Exhibit 5 of the Contract).

Section	Title	Reference to Original Document
2.1	Scheduled and Ad Hoc Meetings of Representatives	2.3
2.1.1	Meeting Frequency	2.3.1
2.1.1.1	Daily Meeting	2.3.2
2.1.1.2	Weekly Meeting	2.3.2
2.1.1.3	Monthly Meeting	2.3.2
2.1.1.4	Quarterly Meeting	2.3
2.1.2	Meeting Agenda and recording and Distribution of Minutes	2.3.2
2.2	Reporting	2.4
2.4	Issue Resolution	2.5
3.1.1	Daily Schedule of Call-ins (Scheduled Maintenance)	3.1.1
3.1.2	Alterations to the Daily Schedule of Cal-ins (Scheduled Maintenance)	3.1.2
3.1.3	Special Call-ins (Unscheduled Maintenance)	3.1.3
3.2	Receipt of Sets to the Maintenance Facility	3.2
3.4	Dispatch of Sets from the Maintenance Facility	3.3
3.5	Movement of Sets between Locations	3.11
4.1	RailCorp Operational Crew	3.4
4.2	RailCorp Depot Crew	3.14
4.3	PPP Co Qualified Personnel	3.14
5.1	Track Possessions	3.5
5.2	Disruptions	3.6
7.2	Additional Required Availability	3.9
7.4	Record of Daily Set Availability	3.7
7.5	Notice RailCorp of a Set that does not meet the requirements of the Minimum Operating Standard for Available Sets	3.7
7.6	Notice by PPP Co of a Set not Available	3.7
8.1	Reporting of Daily Set/Fleet Reliability	3.8
8.1.1	Fault / Defect reporting	3.8
8.2.1	When in use on Rail Network	3.12.1
8.2.2	At out Depots	3.12.2
8.2.3	At RailCorp Maintenance Centres or Other Maintenance Facilities	3.12.3
8.4	Help Desk Support	2.6
9.1	Maintenance Facility Induction Process	3.4
9.2	Access by RailCorp Infrastructure Personnel	3.13
10.2.1	RailCorp Request for PPP Co to Retrieve Event Recorder Information	4.2.1
10.2.2	RailCorp Retrieval of Event recorder Information	4.2.2
10.2.3	Retrieval of CCTV Images	4.3
10.2.4	Retrieval of eTIS data	4.4
10.3	Updates to On Train Information	4.4
11.2	Compliance Audits	4.5
12	Wheel Profiling	4.6.1
12	Wheel Profiling	4.6.2

Appendix B – Reference Document Matrix

The following table provides a reference to the procedures developed to manage specific interfaces.

Note: The last column of this table provides a reference back to the Draft Interface Protocols V3 20090520, submitted under letter RC02588 dated 22 May 2009. The appendices referred to contained procedural detail which was previously incorporated within the main body of the Draft Interface Protocols in the TLS Specification. Therefore the procedures subsequently developed by Reliance Rail (i.e. the CWIs) and RailCorp shall incorporate the detail previously included in these appendices.

Section	Title	Document Reference	Document Title	Contract Reference	Ref to Draft Interface Protocols V3 20090520
2.1	Regular and Ad Hoc Meetings of Representatives		Performance Management Meetings – Scope and Schedules		Appendix I
2.1.1.1	Daily Meeting		Failure Attribution Procedure		Appendix I Appendix P
2.3.2	Payment	AU_SA_000_CWI-XXxxx	Payment Adjustment Process	27.6,27.7, 27.9 & 27.11 of Contract	Appendix J
2.4	Issue Resolution		Dispute Resolution	53 of the Contract	No appendix
3.1	Call-ins	AU_QU_000_OP_CWI20322	Maintenance Scheduling		Appendix K
3.2	Receipt of Sets to the Maintenance Facility	AU_QU_000_OP_CWI20310	Rail Vehicle Movements	CMR 9.4.5	Appendix A
3.3	Unplanned Arrivals	AU_QU_000_OP_CWI20310	Rail Vehicle Movements	CMR 9.4.5	Appendix A
3.4	Dispatch of Sets from Maintenance Facility	AU_QU_000_OP_CWI20310	Rail Vehicle Movements	CMR 9.4.5	Appendix A
3.6	Management of the Commissioning Track/Down Relief	AU_QU_000_OP_CWI20310 AU_QU_000_OP_CWI20333	Rail Vehicle Movements Management of the Commissioning Track/Down Relief		Appendix A Appendix AC
6.1	Certificate of Readiness	AU_QU_000_EG_CWI20399 AU_QU_000_EG_CWI20318 AU_QU_000_EG_CWI20404		TLS 2.3.5	Appendix L
7.2	Additional Required Available			22.8 of the Contract	No appendix
7.8	Withholding / withdrawing Sets from a Service			22.7 of the Contract	Appendix M
8.2.1	When in use on Rail Network	AU_QU_000_OP_CWI20332	Off Site Attendance	11.2, 11.3 & 11.4 of the Contract	Appendix N
8.2.2	At Out Depots	AU_QU_000_OP_CWI20332	Off Site Attendance	11.2, 11.3 of the Contract	Appendix B
8.2.3	At RailCorp's Maintenance	AU_QU_000_OP_CWI20332	Off Site Attendance	11.2, 11.3 of	Appendix C

Section	Title	Document Reference	Document Title	Contract Reference	Ref to Draft Interface Protocols V3 20090520
	Centres or other maintenance facilities			the Contract; Schedule 7, Annex 5	
8.3	Failure Attribution		Failure Attribution		Appendix P
8.4.1	Helpdesk Support		Helpdesk protocols	TLS 2.3.2(b)(ix) & 2.3.6	Appendix O
9.1	Maintenance Facility Induction Process	AU_SA_039_OP_CWI20202	Safety Arrangements for Contractors and Visitors		Appendix AA
9.2	Access by RailCorp Infrastructure Services Personnel	AU_SA_039_OP_CWI20202	Safety Arrangements for Contractors and Visitors	11.7 & 11.8 of the Contract	Appendix Q
10.2.1	RailCorp Request for PPP Co to Retrieve Event Recorder info.	AU_QU_000_EG_CWI20408	Set Borne Data Download Management	TLS 2.5.5	Appendix R Appendix E Appendix F
10.2.3	Retrieval of CCTV Images	AU_QU_000_EG_CWI20408	Set Borne Data Download Management	TLS 2.5.6	Appendix D
10.2.4	Retrieval of eTIS data	AU_QU_000_EG_CWI20408	Set Borne Data Download Management	TLS 2.5.5	Appendix S
10.3	Updates to On-train information	AU_QU_000_EG_CWI20408	Set Borne Data Download Management	TLS 2.5	Appendix T
11.1	Audit Schedules				Appendix V
11.2	Compliance Audits			26 and 26.7 of the Contract	Appendix U
11.3	KPI Product Audits			26.7 of the Contract	Appendix U
12	Wheel Profiling	AU_QU_000_OP_SPP-2031 AU_QU_000_OP_CWI20322	Wheel Reprofiting & Train Wash Procedure at AMF Maintenance Scheduling	TLS 2.3.8	Appendix G Appendix H
13.1	Presentation - Internal & External			TLS 2.4.3 9.5 of the CMR	Appendix W Appendix X
13.2	Reporting & Management of Graffiti and Vandalism			TLS 2.4.1, CMR 9.5.2	Appendix Y Appendix Z
14.1	Accident/Incident reporting	AU_SA_055_QS_CWI20323	Incident Management	CMR 9.4.7	Appendix AB

Appendix C – Set Availability Table

The following tables set out the number of Available Sets which PPP Co must provide for each Availability Period:

- (a) during the Transition-in Phase;
- (b) during the Steady-state Phase; and
- (c) during the Transition-out Phase.

1. Transition-in Phase

Number of Operational Sets	Availability Period		
	Weekday AM Availability Period	Weekday PM Availability Period	Weekend Availability Period
1.	1	1	1
2.	1	1	1
3.	2	2	2
4.	3	3	3
5.	4	4	4
6.	5	5	5
7.	6	6	6
8.	7	7	7
9.	8	8	8
10.	9	9	9
11.	10	10	10
12.	11	11	11
13.	12	12	12
14.	13	13	13
15.	14	14	14
16.	15	15	15
17.	16	16	16
18.	16	16	16
19.	17	17	17
20.	18	18	18
21.	19	19	19
22.	20	20	20
23.	21	21	21
24.	22	22	22
25.	23	23	23
26.	24	24	24
27.	25	25	25

Number of Operational Sets	Availability Period		
	Weekday AM Availability Period	Weekday PM Availability Period	Weekend Availability Period
28.	26	26	26
29.	27	27	27
30.	28	28	28
31.	29	29	29
32.	30	30	30
33.	31	31	31
34.	32	32	32
35.	33	33	33
36.	33	33	33
37.	34	34	34
38.	35	35	35
39.	36	36	36
40.	37	37	37
41.	38	38	38
42.	39	39	39
43.	40	40	40
44.	41	41	41
45.	42	42	42
46.	43	43	43
47.	44	44	44
48.	45	45	45
49.	46	46	46
50.	47	47	47
51.	48	48	48
52.	49	49	49
53.	50	50	50
54.	50	50	50
55.	51	51	51
56.	52	52	52
57.	53	53	53
58.	54	54	54
59.	55	55	55
60.	56	56	56
61.	57	57	57

Number of Operational Sets	Availability Period		
	Weekday AM Availability Period	Weekday PM Availability Period	Weekend Availability Period
62.	58	58	58
63.	59	59	59
64.	59	59	59
65.	60	60	60
66.	61	61	61
67.	62	62	62
68.	63	63	63
69.	64	64	64
70.	65	65	65
71.	66	66	66
72.	66	66	66
73.	67	67	67
74.	68	68	68
75.	69	69	69
76.	70	70	70
77.	71	71	71
78.	72	72	72

2. Steady-state Phase

Number of Operational Sets	Availability Period		
	Weekday AM Availability Period	Weekday PM Availability Period	Weekend Availability Period
78	72	72	72

3. Transition-out Phase

Number of Operational Sets	Availability Period		
	Weekday AM Availability Period	Weekday PM Availability Period	Weekend Availability Period
78.	72	72	72
77.	71	71	71
76.	70	70	70
75.	69	69	69
74.	68	68	68
73.	67	67	67
72.	66	66	66
71.	66	66	66
70.	65	65	65
69.	64	64	64
68.	63	63	63
67.	62	62	62
66.	61	61	61
65.	60	60	60
64.	59	59	59
63.	59	59	59
62.	58	58	58
61.	57	57	57
60.	56	56	56
59.	55	55	55
58.	54	54	54
57.	53	53	53
56.	52	52	52
55.	51	51	51
54.	50	50	50
53.	50	50	50
52.	49	49	49
51.	48	48	48
50.	47	47	47
49.	46	46	46
48.	45	45	45
47.	44	44	44
46.	43	43	43
45.	42	42	42

Number of Operational Sets	Availability Period		
	Weekday AM Availability Period	Weekday PM Availability Period	Weekend Availability Period
44.	41	41	41
43.	40	40	40
42.	39	39	39
41.	38	38	38
40.	37	37	37
39.	36	36	36
38.	35	35	35
37.	34	34	34
36.	33	33	33
35.	33	33	33
34.	32	32	32
33.	31	31	31
32.	30	30	30
31.	29	29	29
30.	28	28	28
29.	27	27	27
28.	26	26	26
27.	25	25	25
26.	24	24	24
25.	23	23	23
24.	22	22	22
23.	21	21	21
22.	20	20	20
21.	19	19	19
20.	18	18	18
19.	17	17	17
18.	16	16	16
17.	16	16	16
16.	15	15	15
15.	14	14	14
14.	13	13	13
13.	12	12	12
12.	11	11	11
11.	10	10	10

ATTACHMENT 4 - STARTING POINT FOR LIST OF REIMBURSABLE INSURANCE SPARE PARTS

- 2 off leading Cars complete
- 2 motor and 2 trailer bogies (or 2 bogies if all axles motored)
- Passenger bodyside doors (4) and operating systems for 2 doorways
- Auxiliary Inverter
- Coupler system front Car
- Front tread plate
- Front skirts (if used)
- Train Radio transponder and brackets
- Horns
- Air piping at No. 2 end (front)
- Coupler system for Car 1, No. 1 end & Car 2 No. 1 end
- Brake manifolds
- Gangway between Cars 1 & 2
- Nose cone
- Nose cone repair sections (if available)
- Side skirts for Car 1 No. 2 end (if used)
- Windscreens and all glazing for nose cone
- Terminal end door
- Destination Indicator
- Crew bodyside doors and window glazing
- Air piping for Car 1 No. 1 end, & Car 2 no. 1 end
- Crumple zone elements for Car 1 and Car 2
- Crew Cab side steps and lights
- Detrainment ramp
- Set of intercar doors
- Headlights and marker lights
- Driver's workstation and Guard's Station equipment
- Gondola piping and sheeting
- Compressor
- Air drier
- Air compressor intercooler

- Air reservoirs
- Stainless steel and complex wall panels.

