

Project Controls

Master Specification

PC-RW60 Asset Management Handover

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Contents

Contents	2
PC-RW60 Asset Management Handover	4
1 General	4
2 Asset Management	4
3 Technical Documents and Drawings	6
4 Hold Points	9

PC-RW60 Asset Management Handover

1 General

- 1.1 This Part specifies the Requirements for the asset management handover of railway infrastructure within the Adelaide Metropolitan Passenger Rail Network (AMPRN).
- 1.2 The following documents are referenced or applicable in this Part or sections of PTS-MS-05-AM-PRC-000000091 - Asset Management Technical Data Requirements Specification (AMTD):
 - a) ISO 55001 Asset Management – Management systems – Requirements.
 - b) Office of National Rail Safety Regulator (ONRSR) Asset Management Guideline.
 - c) Office of National Rail Safety Regulator (ONRSR) Major Projects Guideline.

2 Asset Management

Asset Management Planning

- 2.1 A handover strategy must be established.
- 2.2 Asset Management handover planning must be provided to the format and content standards prescribed in the AMTD sub-elements AMTD-GENERAL-1-1 Format and Content and AMTD-PLANNING – 1-3 Asset Handover.
- 2.3 A Preliminary Asset Handover Plan must be delivered after requirements complete and prior to the start of design at Gate 3. This shall constitute a **Hold Point**.
- 2.4 The Final Asset Handover Plan must be delivered at the end of Initial Design and prior to Issue For Construction at Gate 4B. This shall constitute a **Hold Point**.

Asset Acceptance

- 2.5 Prior to handover the Manager, DIT Rail Infrastructure Management must be satisfied that the system is ready for the transfer of responsibility and safe for operation.
- 2.6 Asset acceptance must be provided as prescribed in the AMTD sub-element AMTD-HANDOVER-1-1 Handover.
- 2.7 A completed Handover Certificate must be delivered at the completion of testing and prior to Asset Acceptance at Gate 4D. This shall constitute a **Hold Point**.

Asset Information

- 2.8 Asset information includes:
 - a) asset data;
 - b) technical documentation including drawings and
 - c) technical Records.

Format

- 2.9 Format and content standards for all DIT Rail Infrastructure Management asset data, technical documents, drawings and records must be as prescribed in the AMTD sub-element AMTD-GENERAL-1-1 Format and Content.

Deliverables

- 2.10 The Deliverables Register must be established and maintained.

- 2.11 Deliverables for asset data, technical documents, drawings and technical records must be provided to the format and content standards prescribed in the AMTD sub-elements AMTD- GENERAL-1-2 Deliverables Register and AMTD- GENERAL-1-3 Transmittals.
- 2.12 The Preliminary Deliverables Register must be delivered at the end of Initial Design and prior to Issue For Construction at Gate 4B. The Preliminary Register shall constitute a **Hold Point**.
- 2.13 The Final Deliverables Register must be delivered at the completion of testing and prior to Asset Acceptance at Gate 4D. The Final Deliveries Registers shall constitute a **Hold Point**.

Asset Data

Product Breakdown Structure

- 2.14 The PBS is also known as Configuration Item List (CIL).
- 2.15 The Preliminary PBS must be provided to the format and content standards prescribed in the AMTD sub-elements AMTD- DESIGN-1-1 Preliminary Product Breakdown Structure – Modified Baseline or AMTD- DESIGN-1-2 Preliminary Product Breakdown Structure – Greenfield Projects.
- 2.16 The Preliminary Product Breakdown Structure must be delivered at the end of Initial Design and prior to Issue For Construction at Gate 4B. The Preliminary Product Breakdown Structure shall constitute a **Hold Point**.
- 2.17 The Final Product Breakdown Structure (PBS) must be an update of the Preliminary Product Breakdown Structures. It must be provided to the format and content standards as prescribed in AMTD sub-element AMTD- BUILD-1-8 Final Breakdown Structure.
- 2.18 The Final Product Breakdown Structure must be delivered prior to Ready for Testing at Gate 4C and shall constitute a **Hold Point**.

Software

- 2.19 Software must be identified and documented in software registers, documentation and in the Product Breakdown Structure.
- 2.20 The software data and documents must be provided to the format and content standards prescribed in the AMTD sub-elements AMTD- BUILD-1-1 Software and AMTD- BUILD-1-8 Final Breakdown Structure.
- 2.21 The software registers and documentation must be delivered prior to Ready for Testing at Gate 4C and shall constitute a **Hold Point**.

Third Party Assets and Interface

- 2.22 Interfaces must be managed and must be defined and described including responsibilities and details of processes for safe operating, maintaining and / or disposal.
- 2.23 Third Party assets and Interfaces detail must be provided to the format and content standards prescribed in the AMTD sub-element AMTD- BUILD-1-5 List of Third Party Assets and Interfaces.
- 2.24 The Third Party Asset and Interfaces data and documents must be delivered prior to Ready for Testing at Gate 4C and shall constitute a **Hold Point**.

Special Tools / Test Equipment

- 2.25 Special tools and test equipment detail must be provided to the format and content standards prescribed in the AMTD sub-element AMTD- BUILD-1-6 Special Tools / Test Equipment.
- 2.26 The Special Tools and Equipment data and documents must be delivered prior to Ready for Testing at Gate 4C and shall constitute a **Hold Point**.

Decommissioning / Disposal

- 2.27 Planning must be used to identify any activities and risks associated with removal of assets and their associated technical documents and drawings.

- 2.28 Decommissioned and disposal of assets must be provided to the format and content standards prescribed in the AMTD sub-element AMTD- DISPOSAL-1-1 Decommissioning Disposal.
- 2.29 The Decommissioning / Disposal data and documents must be delivered prior to Ready for Testing at Gate 4C and shall constitute a **Hold Point**.

3 Technical Documents and Drawings

- 3.1 Technical documents and drawings include but not limited to requirements, interface, design, installation instructions, test, maintenance and operational documentation.
- a) Technical Documentation detail must prescribe to the AMTD sub-elements AMTD-GENERAL-1-1 Format and Content, AMTD- BUILD- 1-3 Technical Documents and Drawings and AMTD- HANDOVER- 1-3 As Built Drawings.
- b) Handover supporting Technical documents and records must include but not limited to the following documents:
- i) Management of Change:
- Planning documents;
 - Safety, Risk and Hazards;
 - Waivers;
 - Design Decisions;
 - Safety and Safety Assurance Documentation;
 - Drawings;
 - Baseline reports;
 - Defects List;
 - Testing and Commissioning Plans and Procedures;
 - Test reports, results and certificates;
 - Residual Risk / Hazards;
 - Operation Manual(s);
 - Maintenance Manual(s);
 - Training Material;
 - Equipment Lists including special tools, test equipment and spare parts;
 - Asset Product Breakdown Structure (PBS) including identified decommissioned assets; and
 - As-Built drawings.
- 3.2 Issued for Construction (IFC) drawings and IFC drawing register must be delivered at the end of initial design and prior to Issue For Construction at Gate 4B. Delivery of IFC drawings and drawing register shall constitute a **Hold Point**.
- 3.3 As-built drawings must be delivered prior to Ready for Testing at Gate 4C. Delivery of As-built drawings shall constitute a **Hold Point**.
- 3.4 All final Technical Documents and Final As-Built drawings must be delivered at completion of testing and prior to Asset Acceptance at Gate 4D and shall constitute a **Hold Point**.

Planning

- 3.5 Management Plans must be provided to the format and content standards prescribed in the document PTS-MS-05-AM-PRC-000000091 - Asset Management Technical Data Requirements Specification Sub-element: AMTD-1-2 PLANNING

- 3.6 Also refer to PC-RW10 "Railways Management Planning".

Safety, Risk and Hazard

- 3.7 Safety, risk and hazard detail must be provided to the format and content standards prescribed in the AMTD sub-element AMTD-PLANNING – 1-4 Safety, Risk and Hazards.
- 3.8 Preliminary Safety, Risk and Hazard documentation updates must be delivered at the end of initial design and prior to Issue For Construction at Gate 4B, prior to Ready for Testing at Gate 4C and shall constitute a **Hold Point**.
- 3.9 Final Safety, Risk and Hazard documentation must be delivered prior to Asset Acceptance at Gate 4D and shall constitute a **Hold Point**.
- 3.10 Refer to PC-RW20 "System Safety and Assurance".

Waivers

- 3.11 Waivers detail must be provided to the format and content standards prescribed in the AMTD sub-element AMTD- DESIGN-1-3 Waivers.
- 3.12 Waivers must be delivered prior to Asset Acceptance at Gate 4D and shall constitute a **Hold Point**.

Design Decisions Documents and Reports

- 3.13 The Type Approval process must be considered in this process.
- 3.14 Design decision document and reports must be provided to the format and content standards prescribed in the AMTD sub-element AMTD- DESIGN-1-4 Design Decisions.
- 3.15 Final Design Decision documentation and reports must be delivered prior to Asset Acceptance at Gate 4D and shall constitute a **Hold Point**.

Safety Assurance Documentation

- 3.16 Safety Assurance documentation detail must be provided to the format and content standards prescribed in the AMTD sub-element AMTD- DESIGN-1-5 Safety Assurance Documentation.
- 3.17 Final Safety Assurance documentation must be delivered prior to Asset Acceptance at Gate 4D and shall constitute a **Hold Point**.
- 3.18 Also refer to PC-RW20 "System Safety and Assurance".

Baselines

- 3.19 The Issued for Construction (IFC) and As-Built baselines must be documented.
- 3.20 IFC baselines must include design documents and IFC drawings.
- 3.21 As-Built baselines must include asset data for physical assets (including hardware, software and firmware) and associated technical documents and drawings.
- 3.22 Baseline detail must be provided to the format and content standards prescribed in the AMTD sub-element AMTD-BUILD-1-2 Baselines.
- 3.23 The Issued for Construction baseline must be delivered by the end of Initial Design and prior to Issue for Construction at Gate 4B and shall constitute a **Hold Point**.
- 3.24 The As-Built baseline must be delivered prior to Ready for Testing at Gate 4C and shall constitute a **Hold Point**.
- 3.25 The Final As-Built baseline must be delivered prior to Asset Acceptance at Gate 4E and shall constitute a **Hold Point**.

Defects

- 3.26 Defect detail must be provided to the format and content standards prescribed in the AMTD sub-element AMTD- BUILD-1-7 Defects

- 3.27 The Defects List must be delivered prior to Asset Acceptance at Gate 4D and the Defects List shall constitute a **Hold Point**.

Testing and Commissioning Plans

- 3.28 Testing and commissioning documentation must be provided to the format and content standards prescribed in the AMTD sub-element AMTD INTEGRATE / TEST-1-1 Testing and Commissioning Plans.
- 3.29 Also refer to PC-RW50 "Inspection, Testing and Commissioning".

Test Reports

- 3.30 Test Reports must be provided to the format and content standards prescribed in AMTD sub-element AMTD INTEGRATE / TEST-1-2 Test Reports.
- 3.31 Test Reports must be delivered at the completion of testing and prior to Asset Acceptance at Gate 4D and shall constitute a **Hold Point**.
- 3.32 Refer to PC-RW50 "Inspection, Testing and Commissioning".

Punchlists

- 3.33 A punch list must be prepared during a project to note any deficiencies and must verify that the work has been completed to the contract documents.
- 3.34 Punchlists must be provided to the format and content standards prescribed in the AMTD sub-element AMTD-HANDOVER-1-2 Punchlists.
- 3.35 The Punchlist must be delivered prior to Asset Acceptance at Gate 4E and shall constitute a **Hold Point**.

Residual Risk / Hazards

- 3.36 The Residual Risk / Hazards must be transferred to DIT Rail Infrastructure Management as part of commissioning and handover.
- 3.37 Residual Risk and Hazards must be provided to the format and content standards prescribed in the AMTD sub-element AMTD-HANDOVER-1-4 Residual Risk / Hazards.
- 3.38 Residual Risks and Hazards must be delivered prior to Asset Acceptance at Gate 4D and shall constitute a **Hold Point**.
- 3.39 Also refer to PC-RW20 "System Safety and Assurance".

Operation and Maintenance

- 3.40 Maintenance documentation must be provided to the format and content standards prescribed in the AMTD sub-elements AMTD-MAINTENANCE-1-1 Maintenance and AMTD-MAINTENANCE-1-2 Maintenance Contracts.
- 3.41 Operations documentation must be provided to the format and content standards prescribed in the AMTD sub-element AMTD-OPERATIONS-1-1 Operations.
- 3.42 Preliminary Operation and Maintenance manuals and plans must be delivered prior to Ready for Testing at Gate 4C and shall constitute **Hold Point**.
- 3.43 Final Operation and Maintenance manuals and plans must be delivered prior to Asset Acceptance at Gate 4D and shall constitute a **Hold Point**.
- 3.44 Maintenance Contracts must be delivered prior to Asset Acceptance at Gate 4D and shall constitute a **Hold Point**.

Technical Records

- 3.45 Records generated or used by or for the State Government are governed by the State Records Act 1997, DIT Record Keeping Policies and / or obligations under the Rail National Safety Law 2012.

- 3.46 Technical records detail must be provided to the format and content standards prescribed in AMTD sub-element AMTD- BUILD-1-4 Records.
- 3.47 Technical records must include but not limited to:
- a) test records, results and certificates;
 - b) installation records;
 - c) Certificates of Conformance; and
 - d) Certificates of Compliance.
- 3.48 All Technical Records must be delivered prior to Asset Assurance at Gate 4D and shall constitute a **Hold Point**.

4 Hold Points

- 4.1 Hold Points are described with reference to Asset Management Delivery Gates and associated baselines. They are:
- a) Gate 1 – Proposal / Planning;
 - b) Gate 2 – Approved to Proceed with Change;
 - c) Gate 3 – Requirements Complete;
 - d) Gate 4A – Initial Design Complete;
 - e) Gate 4B – Issued for Construction;
 - f) Gate 4C – Ready for Testing;
 - g) Gate 4D – Asset Acceptance;
 - h) Gate 4E – Handover; and
 - i) Gate 5 – Asset Assurance.

- 4.2 The following is a summary of Hold Points referenced in this Part:

Document Ref.	Hold Point	Delivery Gate Description	Delivery Gate
2.3	Preliminary Asset Handover Plan	Requirements completed and prior to the start of design	Gate 3
2.4	Final Asset Handover Plan	End of Initial Design and prior to Issue For Construction	Gate 4B
2.12	Preliminary Deliverables Register	End of Initial Design and prior to Issue For Construction	Gate 4B
2.16	Preliminary Product Breakdown Structure	End of Initial Design and prior to Issue For Construction	Gate 4B
3.2	IFC Drawing register	End of Initial Design and prior to Issue For Construction	Gate 4B
3.2	IFC Drawings	End of Initial Design and prior to Issue For Construction	Gate 4B
3.23	Issued for Construction Baseline	End of Initial Design and prior to Issue For Construction	Gate 4B
3.8	Preliminary Safety, Risk and Hazards updates	End of Initial Design and prior to Issue For Construction	Gate 4B
3.8	Preliminary Safety, Risk and Hazards updates	Prior to Ready for Testing	Gate 4C
3.42	Preliminary Operation and Maintenance Manuals & Plans	Prior to Ready for Testing	Gate 4C
2.18	Final Product Breakdown Structure	Prior to Ready for Testing	Gate 4C
2.21	Software Registers and Documentation	Prior to Ready for Testing	Gate 4C
2.24	Third Party Assets and Interfaces	Prior to Ready for Testing	Gate 4C

Document Ref.	Hold Point	Delivery Gate Description	Delivery Gate
2.26	Special Tools / Test Equipment	Prior to Ready for Testing	Gate 4C
2.29	Decommissioning / Disposal	Prior to Ready for Testing	Gate 4C
3.3	As-Built Drawings	Prior to Ready for Testing	Gate 4C
3.24	As-Built Baseline	Prior to Ready for Testing	Gate 4C
2.7	Handover Certificate	At completion of testing and prior to Asset Acceptance	Gate 4D
2.13	Final Deliverables Register	At completion of testing and prior to Asset Acceptance	Gate 4D
3.4	Final As-Built Drawings	At completion of testing and prior to Asset Acceptance	Gate 4D
3.4	Technical Documentation. Also refer to specific Technical Documents deliveries.	At completion of testing and prior to Asset Acceptance	Gate 4D
3.48	Technical Records	At completion of testing and prior to Asset Acceptance	Gate 4D
3.9	Final Safety, Risk and Hazards	At completion of testing and prior to Asset Acceptance	Gate 4D
3.12	Waivers	At completion of testing and prior to Asset Acceptance	Gate 4D
3.15	Final Design Decisions and Reports	At completion of testing and prior to Asset Acceptance	Gate 4D
3.17	Final Safety Assurance Documentation	At completion of testing and prior to Asset Acceptance	Gate 4D
3.27	Defects List	At completion of testing and prior to Asset Acceptance	Gate 4D
3.31	Test Reports	At completion of testing and prior to Asset Acceptance	Gate 4D
3.38	Residual Risk / Hazards	At completion of testing and prior to Asset Acceptance	Gate 4D
3.43	Final Operation and Maintenance Manuals & Plans	At completion of testing and prior to Asset Acceptance	Gate 4D
3.44	Maintenance Contracts.	At completion of testing and prior to Asset Acceptance	Gate 4D
3.35	Punchlist	At completion of testing and prior to Asset Acceptance	Gate 4E
3.25	Final As-Built Baseline	At completion of testing and prior to Asset Acceptance	Gate 4E