

Project Management

Data Deliverable Descriptions

EGH-20-01

Applicability

ARTC Network Wide

Publication Deliverable

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EGP-20-01 Project Management Procedure

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Amendment Record

Amendment Version #	Date Reviewed	Clause	Description of Amendment
1.0	18 May 18		Initial issue
1.1	14 Aug 20	Various	Data requirements grouped by subject type. Addition of requirements for GIS data deliverables. Updates to risk management and environmental requirements and corrections to document references. Ellipse details updated in line with current Asset Management System requirements introduced with the AMIP.
1.2	21 Jan 21	2.11.3, 2.11.2, 2.11.1	Addition of requirements for environmental GIS data deliverables.

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1.3	20 Sep 21	2.6, 2.12	Addition of requirement for electronic access protection system eTAP. Train Management System section moved to section 2.6 and heading updated.
1.4	23 Mar 22	2.2.4, 2.3.4, 2.3.7, 2.5.2, 2.5.3	Updated section on the Route Access Standard and Route Access Condition Notices to align with amendments to OGP-30-01 and updated references to withdrawn track geometry standard. Other editorial updates to correct references to the track & civil code of practice.

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1 Generic Project Data Deliverables

1.1 Concept Assessment

Description	Concept Assessment
Project Phase	1
Discipline	General
Delivery Date Deliverables	30 days after project approval
Item Type	Corporate Information
ARTC Update Location	Enterprise Content Management System
Detailed description of the Deliverables	This phase involves a review of whether a potential project would enable ARTC to better meet its strategic objectives as set out in the Corporate Plan and / or Business Case as per EGP-20-01 Project Management procedure.
Changes to the data	<p>Phase 1 - Concept Assessment</p> <p>Project documentation is to be provided for the works as described in EGP-20-01.</p> <ol style="list-style-type: none"> 1. Business benefits 2. Technical Issues 3. Regulatory Deliverables 4. Defined planning / approval pathway 5. Estimated Costs & Time to Implement 6. Potential Risks and Opportunities 7. Concept of Operation & Maintenance 8. Concept Assessment Report
Users of the data	Approval Authorities, Configuration Manager, Third Party Project Managers, Project Managers, Project Engineers, Environment Advisor & Stakeholders
Procedural coverage and associated documentation	EGP-20-01 - Project Management
Other clarifying commentary (why is the data required)	The Project documentation should define the scope of the Project Feasibility.

1.2 Project Feasibility

Description	Project Feasibility
Project Phase	2
Discipline	General
Delivery Date Deliverables	30 days after project approval
Item Type	Corporate Information
ARTC Update Location	Enterprise Content Management System
Detailed description of the Deliverables	<p>This phase involves a more detailed documentation of the proposed project scope, including technical and operational specifications.</p> <p>Options for implementation should be analysed to best deliver the business objectives, using financial criteria and risk assessment as per EGP-20-01.</p>
Changes to the data	<p>Phase 2 - Project Feasibility</p> <p>Project documentation is to be provided for the works as described in EGP-20-01.</p> <ol style="list-style-type: none"> 1. Preliminary Project Management Plan - Draft 2. Concept Design 3. Long Lead Time Items identified for consideration by Approval Authority <ul style="list-style-type: none"> • Initial design • Preliminary Technical Deliverables • Materials Procurement • Property Acquisition • Rail Safety Regulatory Approvals or Change Notifications • Environmental Impact Assessment / Approvals • Draft budget 4. Project Risk Management Plan - Draft 5. Project Feasibility report
Users of the data	Approval Authorities, Configuration Manager, Third Party Project Managers, Project Managers, Project Engineers, Environment Advisor & Stakeholders
Procedural coverage and associated documentation	EGP-20-01 - Project Management
Other clarifying commentary (why is the data required)	The Project documentation should define the scope of the Project Assessment

1.3 Project Assessment

1.3.1 General

Description	Project Assessment
Project Phase	3
Discipline	General
Delivery Date Deliverables	30 days after project approval
Item Type	Corporate Information
ARTC Update Location	Enterprise Content Management System
Detailed description of the Deliverables	This phase prepares the project documentation for stakeholder concurrence and written project approval with a firm budget as per EGP-20-01
Changes to the data	<p>Phase 3 - Project Assessment</p> <p>Project documentation is to be provided for the works as described in EGP-20-01.</p> <ol style="list-style-type: none"> 1. Detailed Design 2. Contract / Tender preparation 3. Project Management Plan 4. Environmental Impact Assessment / Approvals 5. Stakeholder / Community analysis 6. Project Risk Assessment – extract from Project Risk Register 7. Rail Regulator Submissions 8. Final Technical Deliverables 9. Land Acquisition Plans 10. Project Risk Management Plan 11. Project Budget
Users of the data	Configuration Manager, Third Party Project Managers, Project Managers, Project Engineers, Environment Advisor & Stakeholders
Procedural coverage and associated documentation	EGP-20-01 - Project Management
Other clarifying commentary (why is the data required)	The Project documentation should be provided to support the Project Approval

1.3.2 Project Management Plan

Description	Project Assessment - Project Management Plan
Project Phase	3
Discipline	General
Delivery Date Deliverables	30 days after project approval
Item Type	Corporate Information
ARTC Update Location	Enterprise Content Management System
Detailed description of the Deliverables	<p>A Project Management Plan (PMP) outlines what is expected of those involved in ARTC project management at each stage of a project and includes the actions required for the initiation, development, implementation, monitoring and closure of an ARTC project as per EGP-20-01.</p> <p>When developing a Project Management Plan EGP-20-01 defines all applicable ARTC projects including capital works, major periodical maintenance, business systems changes, IT projects, strategic and cultural change projects, property projects and all other projects which ARTC conducts. The PMP should be periodically updated as requirement the suit the project development.</p>
Changes to the data	<p>Project Assessment - Project Management Plan (PMP)</p> <p>A PMP is to be provided for the works to describe the management of the network alteration with template definitions in EGP-20-01 available for:</p> <ol style="list-style-type: none"> 1. Simple Project Management Plan 2. Simple Project Management Plan (Annual Works Plan across a program of Projects and Work Activities) 3. Complex Project Management Plan
Users of the data	Configuration Manager, Third Party Project Managers, Project Managers, Project Engineers, Corridor Managers, ARTC Maintenance, Environment Managers.
Procedural coverage and associated documentation	<p>EGP-20-01 - Project Management</p> <p>EGW0202T-01 - Simple Project Management Plan Template</p> <p>EGW0202T-01 - Simple Project Management Plan</p> <p>EGW0202T-03 - Work Activities Templates</p> <p>EGW0201T-01 - Complex Project Management Plan Template</p>
Other clarifying commentary (why is the data required)	The Project Management Plan should be clear and explain in detail the objectives of the project and address the question "WHAT" the project is going to deliver. This will identify the network change and the data that will be required to support the network change.

1.3.3 New Equipment & System Approval

Description	Project Assessment – New Equipment & System Approval
Project Phase	3
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-21-01
Item Type	Corporate Information
ARTC Update Location	Corporate Project Management SharePoint site
Detailed description of the Deliverables	<p>The system or equipment is assessed for technical and safety performance (including WHS issues), suitability for the task and environment and compatibility with other interfacing systems or equipment. Safety information may include as appropriate:</p> <ul style="list-style-type: none"> • Failure Mode Effects and Criticality Analysis (FMECA). • Proof of safety and safety in design
Changes to the data	<p>Project Assessment – New Equipment & System Approval</p> <p>For new equipment and systems to be used in the ARTC network the formal type approval is required by ARTC standards Manager. ARTC Manager Standards identifies the new equipment as a minor or significant change as per EGP-21-01. Some examples of approvals to be provided by the change initiator are below:</p> <ol style="list-style-type: none"> 1. Minor change equipment approvals are provided. When equipment that is equivalent, updated or upgraded item to that already approved, a variation to an existing item, an item that only affects efficiency of infrastructure and does not directly contribute to safety or operational performance or Support systems for equipment as detailed further in EGP-21-01. 2. Minor Change Safety Critical Items approvals as detailed further in EGP-21-01. 3. Significant approvals are required. When equipment procured for the first item from a new supplier, new technology or equipment, existing equipment with major upgrade or new technology or change to system software as detailed further or Major Safety system that requires fail safe philosophy as detailed further in EGP-21-01. 4. New Equipment & System Approval Form EGP2101F-01 is completed and forwarded with supporting documentation to ARTC Standards for approval.
Users of the data	Approval Authorities & Standards Manager, Project Managers, Signalling Managers and Team Managers.
Procedural coverage and associated documentation	<p>EGP-21-01 - New Equipment & Systems Approvals</p> <p>EGP2101F-01 - New Equipment & System Approval Form</p>

Other clarifying commentary (why is the data required)	<p>New components, equipment and systems are constantly being developed by industry. Introduction of these components, equipment and systems requires careful management.</p> <p>Rail infrastructure owners both nationwide and internationally are engaged in this process.</p>
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1.4 Project Approval

1.4.1 General

Description	Project Approval
Project Phase	4
Discipline	General
Delivery Date Deliverables	30 days after project approval
Item Type	Corporate Information
ARTC Update Location	Enterprise Content Management System
Detailed description of the Deliverables	This phase provides approval or otherwise of the Project Management Plan, and any constraints under which the project may proceed as per EGP-20-01.
Changes to the data	<p>Phase 4 - Project Approval</p> <p>Project documentation is to be provided for the works as described in EGP-20-01.</p> <ol style="list-style-type: none"> 1. Project Budget 2. Project Governance and Reporting Deliverables 3. Construction Environmental Management Plan and / or obtained Environmental Approvals 4. Stakeholder / Community engagement plan 5. Rail Safety Regulator Variation of Accreditation or Notification of Change Submitted 6. Rail Safety Regulator Variation of Accreditation or Notification of Change Approval
Users of the data	Approval Authorities, Configuration Manager, Third Party Project Managers, Project Managers, Project Engineers, Environment Advisor & Stakeholders
Procedural coverage and associated documentation	EGP-20-01 - Project Management
Other clarifying commentary (why is the data required)	The listed deliverable documentation is required prior work proceeding into project implementation.

1.4.2 Configuration Management Plan

Description	Project Approval - Configuration Management Plan
Project Phase	3
Discipline	General
Delivery Date Deliverables	30 days after project approval
Item Type	Corporate Information
ARTC Update Location	Enterprise Content Management System
Detailed description of the Deliverables	<p>A Configuration Management Plan (CMP) is required to show how Configuration Management is accomplished and how consistency between the product's definition, its configuration, and the configuration management records is achieved and maintained throughout the applicable phases of the product's life.</p> <p>A CMP covers the Deliverable for the advice, approval and notification of network alterations which alter the operational capability, configuration or safe working Deliverables of the ARTC Network. (A network alteration is any software component, release, tool, documentation or hardware unit required for the purpose of creating or supporting ARTC deliverables).</p>
Changes to the data	<p>Project Approval - Configuration Management Plan</p> <p>A CMP is to be provided for the works to describe the network alteration with a template available at EGN0301T-01. A part of the CMP will detail the configuration activities listed below as per EGN-03-01:</p> <ol style="list-style-type: none"> 1. Configuration Identification 2. Configuration Control 3. Configuration Status Accounting 4. Configuration Auditing
Users of the data	Configuration Manager, Project Managers, Project Engineers, Corridor Managers, ARTC Maintenance
Procedural coverage and associated documentation	<p>EGP-03-01 - Rail Network Configuration Management</p> <p>EGN-03-01 - Configuration Management Manual</p> <p>EGN0301T-01 - Configuration Management Plan Template</p>
Other clarifying commentary (why is the data required)	To define rail network configuration management in ARTC with the implementation of Configuration Management and provide guidance on Configuration Change and Network Alteration Notices including documentation and approvals.

1.5 Project Implementation

1.5.1 General

Description	Project Implementation
Project Phase	5
Discipline	General
Delivery Date Deliverables	As per EGP-20-01
Item Type	Corporate Information
ARTC Update Location	Enterprise Content Management System
Detailed description of the Deliverables	This phase involves procurement, project initiation and project delivery. Depending on the scope of the project, a delivery strategy may be necessary as per EGP-20-01 Project Management procedure.
Changes to the data	Phase 5 - Project Implementation Project documentation is to be provided for the works as described in EGP-20-01. <ol style="list-style-type: none"> 1. Project Risk Register 2. Project Deliverables – Project Management Data Deliverables 3. Environmental Deliverables (see environmental deliverables) 4. Stakeholder / Engagement deliverables (see stakeholder / community deliverables)
Users of the data	Approval Authorities, Configuration Manager, Third Party Project Managers, Project Managers, Project Engineers, Environment Advisor & Stakeholders
Procedural coverage and associated documentation	EGP-20-01 - Project Management
Other clarifying commentary (why is the data required)	All project delivery deliverables documentation is to be provided as outlined in Project Management Data Deliverables to ensure the infrastructure alteration is captured proficiently.

1.5.2 Project Plant and Equipment

Description	Project Implementation – Project Plant and Equipment
Project Phase	5
Discipline	Plant
Delivery Date Deliverables	On delivery with the plant & equipment prior to operation
Item Type	Maintenance Information
ARTC Update Location	Ellipse and the Fixed Asset Register.
Detailed description of the Deliverables	<p>Due to the diversity of plant Deliverables throughout the network, clear identification of plant Deliverables is needed to ensure appropriate selection and procurement of plant is achieved. A formal ARTC signoff process will be employed to ensure end users are conversant and in agreement with proposed plant purchases.</p> <p>All Plant & Equipment items procured for use in the rail corridor are added to the Finance Asset Register and Ellipse. All users must be accredited and licenced as required to operate the Plant & Equipment.</p> <p>TMP's will be developed according to guidelines and recommendations supplied by the Original Equipment Manufacturer (OEM). Where scheduled maintenance activities are identified, these will be directly implemented as Maintenance Scheduled Tasks (MST's) in the Ellipse maintenance management system as per EPP-32-02</p>
Changes to the data	<p>Project Implementation – Project Plant and Equipment</p> <p>All Plant and Equipment purchased/leased must be provided with delivery documentation as per EPP-32-05</p> <ol style="list-style-type: none"> 1. The (OEM) operation manuals & competencies required for the safe operation of the plant 2. Details of the knowledge, training or skill needed by a person inspecting or testing the plant 3. All relevant emergency procedures 4. Full maintenance and spare parts manuals 5. As-built hardware, electrical, pneumatic & hydraulic schematics 6. As-built PLC program documentation (where relevant) 7. As-built general arrangement drawings & detail drawings where required 8. Technical Maintenance Plans (TMP) will be developed and implemented for the various major equipment classes as per EPP-32-02 9. Possible requirements for details of Warranty and Service Agreements

Generic Project Data Deliverables

Users of the data	Project Managers, Finance Data Administrators, Procurement Managers, Plant Compliance Engineer, Plant Manager & Contracts Manager & Asset Data Administrators/Area Support Officers
Procedural coverage and associated documentation	EPP-32-05 - Plant Procurement and Disposal EPP-32-02 - Plant Maintenance Procedures EGP-03-02 - Equipment Register – Updating and Maintenance
Other clarifying commentary (why is the data required)	<p>Certain types of plant require design registration through the Commonwealth WH&S regulatory authority.</p> <p>In all cases where this occurs, the plant manufacturer will be required to submit to the ARTC Plant Compliance Engineer all appropriate documentation to ensure design and final registration is completed prior to commissioning of the equipment.</p>

1.5.3 Site Management

Description	Project Implementation – Site Management
Project Phase	5 & 6
Discipline	General
Delivery Date Deliverables	30 days prior to construction commencement
Item Type	Safety Information
ARTC Update Location	Project Management SharePoint Site
Detailed description of the Deliverables	<p>All Site Management planning is to be completed prior to the commencement of alteration works. Documents, reports, controls and plans are to be provided to detail the site management planning for the works as per ETC-00-02.</p> <p>The Site Management information provided is to record project site management and supervision planned for the alteration works.</p>
Changes to the data	<p>Project Implementation – Site Management</p> <p>All Site Management planning is to be completed prior to the commencement of alteration works. Documents, reports, controls and plans are to be provided to detail the site management planning for the works as per ETC-00-02.</p> <p>The required Site Management planning information is listed, but not limited to:</p> <ol style="list-style-type: none"> 1. Notification to the general public and authorities prior to commencement and during site works 2. Maintain the safe and continuous operation of private and public level crossings where they intersect the project 3. Carry out the services identification, and relocation where specified, of all services and equipment within the nominated work scope area 4. Protection of rail traffic and ARTC infrastructure during site works 5. Environmental, Safety and Traffic management of all construction activities 6. Removal and disposal of surplus materials and stockpiling serviceable materials 7. Fire Risk Identification 8. Access plans using public roads or private properties 9. Site Safe Working Plans, Evacuation Plan & Muster Points in accordance with ARTC regulations
Users of the data	Project Managers, Project Engineers, ARTC Maintenance & Stakeholders.

Generic Project Data Deliverables

Procedural coverage and associated documentation	EGP-20-01 - Project Management EGW-20-01 - Complex Projects EGW-20-02 - Simple Projects ETC-00-02 - New Track Construction
Other clarifying commentary (why is the data required)	Positive successful outcomes and any site issues details as a result of the site management planning are valuable to record in Lessons Learned. Good planning and communication with ARTC maintenance and stakeholders reduces issues during project works.

1.5.4 Engineering Modifications/Change Notes

Description	Project Implementation - Engineering Modifications/Change Notes
Project Phase	5/6
Discipline	Engineering General
Delivery Date Deliverables	As per ESC-21-02
Item Type	Maintenance Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>Engineering drawings and related documentation are required to show how infrastructure has been designed and constructed and are part of the permanent records of our organisation as required by law.</p> <p>During design, construction and commissioning phases of the network alteration there are, as required, engineering changes/modifications made to any works infrastructure, software, hardware, circuits and systems for the change to function correctly as per design.</p> <p>All engineering changes/modifications to any works infrastructure, software, hardware, circuits and systems require approval prior to installation and testing as per ESC-21-02</p> <p>Project files record the requests for change detailing the reasons the change is required and signed by the approval authorities.</p> <p>All drawings are marked up with changes for engineering changes/modifications to be identified and included in As Built Drawings as per EGP-04-01.</p>
Changes to the data	<p>Project Implementation - Engineering Modifications/Change Notes</p> <p>Engineering Modifications/Change Notes applied to infrastructure, software, hardware, circuits and systems drawings marked up and supplied as per ESC-21-02 to show:</p> <ol style="list-style-type: none"> 1. The change drawn on approved design, construction or commissioning phases drawings 2. Clearly marked and dated as a change/modification 3. Signature of the checker, verifier and approver 4. Drawing version control for drawing reissue 5. Notes on the drawings to indicate any removals or other changes as a result of the change/modification.
Users of the data	Project Managers, Approval Authorities, Corridor Managers, Project Administrators, ARTC Maintenance & DMS Users
Procedural coverage and associated documentation	<p>EGP-04-01 - Engineering Drawings and Documentation</p> <p>EGP-04-02 - Drawing Management System DMS</p> <p>ESC-21-02 - Inspection and Testing of Signalling – Plans, Programs, Documentation and Packages</p>

Generic Project Data Deliverables

Other clarifying commentary (why is the data required)	<p>The record of the engineering notes remains with the drawings until the final As Built or Works as Executed drawings are provided.</p> <p>Caution must be applied to version control when the marked up changed/modified approved design, construction or commissioning phases drawings are redrawn and reissued for circulation for works to continue.</p> <p>The ARTC DMS is a web-based SQL database system of controlled, up-to-date 'as built' and historic drawings of ARTC rail infrastructure for NSW, QLD, SA and WA. The viewer program is ACONEX and drawings are accessible to ARTC infrastructure staff and other appropriately authorised users.</p>
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1.5.5 Equipment Operating Manuals

Description	Project Implementation - Equipment Operating Manuals
Project Phase	5
Discipline	Engineering General
Delivery Date Deliverables	10 days prior to commissioning of each asset
Item Type	Maintenance Information
ARTC Update Location	Enterprise Content Management System
Detailed description of the Deliverables	<p>Any new equipment and systems introduced into the ARTC network must be appropriate with regard to technical and safety performance, and suitability and compatibility with existing equipment.</p> <p>The supplier of the equipment provides detailed technical information to allow it to be assessed against operational and technical Deliverables.</p>
Changes to the data	<p>Project Implementation - Equipment Operating Manuals</p> <p>Operating Manuals will be supplied for all new and specialised equipment & systems introduced into the ARTC network as per EGP-21-01. For example, but not limited to:</p> <ol style="list-style-type: none"> 1. Specialised testing equipment 2. Tunnel ventilation control systems & fans 3. Wayside measuring equipment 4. Control system components and systems 5. Permanent environmental monitoring equipment 6. All other new equipment installed or modified in the ARTC network.
Users of the data	Approval Authorities, Standards Manager, Configuration Administrator, Project Administrator, Project Manager & ARTC Staff
Procedural coverage and associated documentation	EGP-21-01 - New Equipment & System Approval
Other clarifying commentary (why is the data required)	New components, equipment and systems are constantly being developed by industry. Introduction of these components, equipment and systems requires the supply of equipment operating manuals and the management of training needs analysis.

1.5.6 Maintenance Training Packages

Description	Project Implementation - Maintenance Training Packages
Project Phase	5
Discipline	Engineering General
Delivery Date Deliverables	10 days prior to commissioning of each Asset
Item Type	Maintenance Information
ARTC Update Location	Enterprise Content Management System
Detailed description of the Deliverables	<p>From time to time legislation requires ARTC to undertake certain training. This can include the organisation as a whole, or applicable to certain employees and/or business units.</p> <p>New legislation or changes to existing legislation may require further instruction or training for new/modified equipment maintenance and operation.</p> <p>An improvement in the installation methodologies and efficiencies of existing, modified and new equipment or system installations requires training to be provided. Training will be provided to meet compliance with installation competencies.</p> <p>Due to the continual development of new and modified technology, equipment and systems to replace existing, training will be provided to meet compliance with maintenance competencies.</p>
Changes to the data	<p>Project Implementation - Maintenance Training Packages</p> <p>Training will be provided to meet compliance with installation and maintenance competencies as per ARTC PEO-PR-005.</p> <ol style="list-style-type: none"> 1. Accredited training will be provided for applicable ARTC staff prior to commissioning 2. Training will meet the Deliverables of installation and maintenance competencies 3. Training will be provided/delivered by accredited training providers 4. Recognition of training issued to participants and recorded to meet compliance
Users of the data	Project Managers, ARTC HR Managers, All applicable ARTC Staff
Procedural coverage and associated documentation	PEO-PR-005 - Learning Development Procedure
Other clarifying commentary (why is the data required)	<p>ARTC recognises the contribution of suitably trained and competent employees to the achievement of its business objectives.</p> <p>ARTC will Conduct regular training needs analysis to ensure all employees have the required skills, knowledge and attributes for their role in ARTC.</p>

1.6 Project Close-out**1.6.1 General**

Description	Project Close-out
Project Phase	6
Discipline	General
Delivery Date Deliverables	As per EGP-20-01
Item Type	Corporate Information
ARTC Update Location	Enterprise Content Management System
Detailed description of the Deliverables	<p>This phase ensures that all aspects of the project have been completed, and that all related contracts are finalised in accordance with their terms and conditions.</p> <p>Lessons learnt that have been collected in each phase are documented to the satisfaction of the Approval Authority.</p> <p>Any residual risks and controls are transferred from the project risk register to another appropriate Risk Owner and/or register within the Enterprise Risk Management System. Financial close-out and capitalisation of the assets are key tasks in this phase as per EGP-20-01</p>
Changes to the data	<p>Phase 6 - Project Close-out</p> <p>Project documentation is to be provided for the works as described in EGP-20-01.</p> <ol style="list-style-type: none"> 1. Project Risk Register 2. Financial Close-out and Capitalisation of the Assets 3. Environmental Deliverables (see data deliverables) 4. Stakeholder / Engagement deliverables (see stakeholder / community deliverables) 5. Project Deliverables – Project Management Data Deliverables 6. Lessons Learnt Report
Users of the data	Approval Authorities, Configuration Manager, Third Party Project Managers, Project Managers, Project Engineers & Stakeholders, Environmental Teams
Procedural coverage and associated documentation	EGP-20-01 - Project Management
Other clarifying commentary (why is the data required)	All project delivery deliverables documentation is to be provided as outlined in Project Management Data Deliverables to ensure the infrastructure alteration is captured proficiently.

1.6.2 Issues Register

Description	Project Close-out - Issues Register
Project Phase	3-6
Discipline	General
Delivery Date Deliverables	10 days prior to commissioning
Item Type	Maintenance Information
ARTC Update Location	Enterprise Content Management System
Detailed description of the Deliverables	<p>Any issues or non-conformances found with work carried out or materials at any time must be immediately raised with the Inventory Controller and Area Manager or delegate especially if there are immediate safety issues.</p> <p>All issues are captured in the Project Issue Register and allocated a unique number for identity, traceability and recorded as "Open". The "Open" and new issues are discussed during meetings and actions assigned to team members/stakeholders to resolve the issue.</p> <p>All issues resolved are recorded with the action details and the issue is recorded as "Closed".</p> <p>Register of issues actioned and not resolved will remain "Open" and are captured in the issues register and will be handed over to ARTC maintenance on completion of the works with all details of actions to resolve the issue.</p>
Changes to the data	<p>Project Close-out - Issues Register</p> <p>Project Management will supply an updated copy of the Issues Register at the beginning of team meetings to advise of the progress of "Open" issues. Project Issues can consist of but are not limited to:</p> <ol style="list-style-type: none"> 1. Design issues 2. Construction issues 3. Inventory issues 4. Site safety issues 5. Environmental issues 6. Stakeholder / Community issues
Users of the data	Inventory Controller, Project Managers, Stakeholders, ARTC Area Managers, Environment Managers.
Procedural coverage and associated documentation	<p>FPR-PR-024 - Purchasing Materials Procedure</p> <p>EGP-20-01 - Project Management</p>
Other clarifying commentary (why is the data required)	<p>Accurate records of the project issues are captured in the issue register which can contribute to Lessons Learned and assist with future similar project works. Proactive Project Managers, Area Managers, team members and stakeholders (if applicable) will contribute to project issues identification and safe resolutions.</p>

1.6.3 Evidence of Capitalisation of Assets

Description	Project Close-out - Evidence of Capitalisation of Assets
Project Phase	6
Discipline	Corporate
Delivery Date Deliverables	30 days following commissioning of each asset
Item Type	Corporate Information
ARTC Update Location	Fixed Asset Register & Accounts
Detailed description of the Deliverables	<p>All assets purchased or constructed by ARTC are to be recorded in the relevant ARTC Fixed Asset Register in sufficient detail.</p> <p>Given that a single capital project may result in the generation of multiple assets, upon capitalisation, all major asset types are to be identified and allocated a cost. An asset is to be capitalised when it is first considered available for use.</p> <p>Project Management, the Capital Works Closeout Form (FCA-FM-101), must be promptly completed as part of phase 6 Project Close-out as per EGP-20-01</p>
Changes to the data	<p>Project Close-out - Evidence of Capitalisation of Assets.</p> <p>Project Managers to supply accurate equipment details for:</p> <ol style="list-style-type: none"> 1. New equipment installed in use 2. Modified equipment in use 3. Redundant/Removed equipment not in use 4. Renamed equipment in use 5. Equipment removed and to be refurbished to be reused.
Users of the data	Corporate Accounting, Fixed Asset Accountant & Project managers
Procedural coverage and associated documentation	<p>EGP-20-01 - Project Management</p> <p>FCA-PO-004 - Fixed Assets Policy</p> <p>Capital Works Closeout Form FCA-FM-101</p>
Other clarifying commentary (why is the data required)	To ensure that ARTC complies with all relevant accounting standards, financial reporting Deliverables, income tax rules and regulations and GBE Guidelines.

1.6.4 Associated Software, Data & Documents

Description	Project Close-out - Associated Software, Data & Documents
Project Phase	6
Discipline	Engineering General
Delivery Date Deliverables	60 days following the completion of the deliverables for each project within the programme.
Item Type	Engineering Information
ARTC Update Location	Corporate Project Management SharePoint Site, or Drawing Management System, whichever is relevant to the data type.
Detailed description of the Deliverables	All generated project works software, data and documents are required for the post works management of the network alteration as per EGP-20-01.
Changes to the data	<p>Project Close-out - Associated Software, Data & Documents</p> <p>All software, data and documents produced from the network alteration are to be captured and filed in the SharePoint site are listed below, but not limited to:</p> <ol style="list-style-type: none"> 1. Design Models 2. RailSys operational models accurate for the delivered assets 3. Copies of Waivers Granted 4. Master Design Record of whom supervised, checked, verified works and designs 5. Warranty data for all warrantable items 6. Copies of service supplier agreements that extend into the asset maintenance period 7. Lists of spare equipment procured by each project and the location of the spares 8. List of test equipment including make, model, description, part & serial number, calibration and location used. 9. Defect liability period data for each asset 10. Mobile phone, email and other contact details of maintenance providers for defect rectification 11. Copies of licences involved with ATMS, signals, communications, rail systems, tunnel systems and train control systems 12. Operational specifications for any particular operational control functions (e.g. Safe Working)
Users of the data	Project Managers, Project Engineers, Area Manager, Signal Maintenance Engineer, Structures Managers, Configuration Management, and ARTC Staff
Procedural coverage and associated documentation	EGP-20-01 - Project Management EGW-20-01 - Managing Complex project

Generic Project Data Deliverables

	EGW-20-02 - Managing Simple Projects
Other clarifying commentary (why is the data required)	The software, data and documents produced from the network alteration is captured and available for the required ARTC maintenance & stakeholders to manage any post alteration issues, licencing and regulatory Deliverables.

1.6.5 Lessons Learnt

Description	Project Close-out - Lessons Learnt
Project Phase	6
Discipline	General
Delivery Date Deliverables	60 days following the completion of the deliverables for each project within the programme.
Item Type	Corporate Information
ARTC Update Location	Corporate PM SharePoint site
Detailed description of the Deliverables	<p>Lessons learnt that have been collected in each project phase are documented with any residual risks and controls transferred from the project risk register to the ARTC Corporate Risk Register as per EGP-20-01</p> <p>Lessons learnt are the most valuable contribution of the closure process. Project Managers capture issues during the works to be recorded as lessons learnt for future project works. The lessons learnt are identified and recorded during workshops, team meetings and audits.</p> <p>The results shall be recorded in the Lessons Learnt Report and uploaded onto the Lessons Learnt page of the ARTC Project Management SharePoint site.</p>
Changes to the data	<p>Project Close-out - Lessons Learnt Report</p> <p>Project managers, team members and stakeholders identify issues to be recorded as Lessons Learnt in a report focussing in three main areas:</p> <ol style="list-style-type: none"> 1. What went well? 2. What didn't go so well? 3. What we would do different next time?
Users of the data	Approval Authorities, Project Managers, Stakeholders and Project Staff
Procedural coverage and associated documentation	EGP-20-01 - Project Management
Other clarifying commentary (why is the data required)	<p>Lessons Learned are not a one-off activity at the end of the Project. A formal lesson learned workshop can be conducted at the end of a phase to seek and exploit lessons learned.</p> <p>A more common method is during team meetings, project works, health checks, reviews or audits during the project works to capture the issue as it is identified.</p>

1.6.6 Archiving of Project Records

Description	Project Close-out - Archiving of Project Records
Project Phase	1-6
Discipline	Corporate
Delivery Date Deliverables	Daily as required
Item Type	Corporate Information
ARTC Update Location	Corporate Project Management SharePoint Site
Detailed description of the Deliverables	<p>Creation and management of records is a shared responsibility. All ARTC employees and contractors are required to document and manage their daily business activities using the official record keeping systems for capturing records.</p> <p>Archiving of project records will be saved to the ARTC intranet in a project file for recovery by project managers, team members, applicable stakeholders and ARTC Staff. Archived records can be used for examining project change data to inspect equipment performance issues, specifications or manufacturers.</p> <p>It is ideal to include all change information in projects records which are archived for safe storage and recovery at a later date.</p>
Changes to the data	<p>Project Close-out - Archiving of Project Records</p> <p>Project Managers will archive and project records as per SYS-PR-001 in the ARTC Enterprise Content Management System.</p>
Users of the data	Project Managers, Project Engineers, Configuration Management, Corridor Managers, Project Contractors and ARTC Staff
Procedural coverage and associated documentation	<p>EGP-20-01 - Project Management</p> <p>SYS-PR-001 - Records Management Policy</p>
Other clarifying commentary (why is the data required)	ARTC creates and manages records and documents across state and commonwealth jurisdictions. ARTC is subject to and must comply with a range of recordkeeping and archival standards, and specific clauses of various agreements.

2 Specific Project Data Deliverables

2.1 Risk Management

2.1.1 Project Risk Management Plan

Description	Risk Management - Project Risk Management Plan
Project Phase	2
Discipline	Corporate
Delivery Date Deliverables	10 days after each risk assessment
Item Type	Corporate Information
ARTC Update Location	
Detailed description of the Deliverables	<p>During project planning phases, requirements and arrangements for risk management for the project are to be determined and documented.</p> <p>This includes the expected risk management activities to be undertaken, allocation of responsibility for risk management, an appropriate risk matrix with customised risk criteria for financial and schedule consequences, and arrangements for escalation of significant risks,</p> <p>For Complex Projects, a Project Risk Management Plan is to be developed that establishes these risk management arrangements for the project.</p> <p>For Simple Projects, a stand-alone Project Risk Management Plan may be established, or alternatively, arrangements may be embedded within the Project Management Plan provided that the requirements of RSK-WI-005 Project Risk Management are met.</p>
Changes to the data	<p>Project Risk Management Plan - Risk Management</p> <p>The Project Manager will actively manage the project risks as per RSK-WI-005 with:</p> <ol style="list-style-type: none"> 1. Project Risk Management Plan 2. Customised Project Risk Matrix 3. Managed Risk Register
Users of the data	Approval Authorities, Executive General Manager – Risk, ARTC Employees, Stakeholders, Third Party Project Managers
Procedural coverage and associated documentation	<p>RSK-WI-005 - Project Risk Management</p> <p>RSK-FM-005- Project Risk Management Plan Template</p>
Other clarifying commentary (why is the data required)	<p>Risk can be defined as the effect of uncertainty on objectives and organisations of all types face internal and external factors that have the potential to impact on objectives. All activities within an organisation involve some degree of risk and risk management is a discipline that assists in the achievement of those objectives.</p> <p>Risk management activities undertaken for a project may vary depending on the nature, scale and scope of a project. Establishment of a Project Risk Management Plan enables appropriate customisation of these activities, appropriate to the project.</p>

2.1.2 Project Risk Register

Description	Risk Management - Project Risk Register
Project Phase	3
Discipline	Corporate
Delivery Date Deliverables	10 days after each risk assessment
Item Type	Corporate Information
ARTC Update Location	Relevant risk register
Detailed description of the Deliverables	<p>Risks are identified from various sources, assessed and entered into an appropriate risk register by the Project Manager, or their delegate.</p> <p>Once on a risk register, risks are analysed in greater detail, responsibility allocated to the appropriate manager and control effected. The risk is then monitored to ensure the continued effectiveness of any control. Stakeholder communication and consultation occurs at each stage of the process where appropriate. A Project Risk Register is managed for each project identifying latent risks to be adopted by the maintenance organisation.</p>
Changes to the data	<p>Project Assessment - Risk Management</p> <p>The Project Manager will actively manage the project risk register as per RSK-PR-001 with:</p> <ol style="list-style-type: none"> 1. Risk Assessments – Identify Risks 2. Risk Assessments – Analyse Risks 3. Managed Risk Register 4. Evaluated and Controlled Risks – SFAIRP
Users of the data	Approval Authorities, Executive General Manager – Risk, ARTC Employees, Stakeholders, Third Party Project Managers
Procedural coverage and associated documentation	<p>RSK-PR-001 - Risk Management</p> <p>RSK-WI-001 - Application of Risk Management</p> <p>RSK-WI-005 - Project Risk Management</p>
Other clarifying commentary (why is the data required)	Risk can be defined as the effect of uncertainty on objectives, and organisations of all types face internal and external factors that have the potential to impact on objectives. All activities within an organisation involve some degree of risk, and risk management is a discipline that assists in the achievement of those objectives.

2.2 Configuration Management

2.2.1 Network Alteration Notice (NAN)

Description	Configuration Change Management - Network Alteration Notice (NAN)
Project Phase	3/4/5 & 6
Discipline	General
Delivery Date Deliverables	As per EGP-03-01
Item Type	Engineering Information
ARTC Update Location	Configuration Management Network Alteration Notice - NAN Register
Detailed description of the Deliverables	<p>A Network Alteration Notice (NAN) is developed for each network alteration. A NAN identifies the exact location and describes in detail the alteration (scope) including a risk assessment and schematic diagram as per Network Alteration Notice EGP0301-F01.</p> <p>A record of the document, data and system change to be updated is detailed in Configuration Change List (CCL) in EGP0301-F01.</p> <p>As works progress the NAN is circulated as to stakeholders affected by the alteration during phases of the alteration until works are commissioned/closed as per EGP-03-01.</p> <p>The NAN can only be closed when the works are complete and the documents, data and system changes identified in the CCL are updated in ARTC systems and CCL closed with signature and recorded in the NAN register.</p>
Changes to the data	<p>Configuration Change Management - Network Alteration Notice (NAN).</p> <p>Develop, register and manage the NAN through the progression of works phases as per EGP-03-01. Record all alteration details in respective NAN register/ file.</p> <ol style="list-style-type: none"> 1. Develop and register the NAN with required alteration information 2. Develop the CCL identifying all alteration affected documents, data and systems. 3. Complete, change initiator sign & circulate to respective approval authorities noted in the NAN for approval. 4. Record alteration information including circulated NAN and any alteration configuration documents received in respective NAN file. 5. Circulate NAN as works phases progress to notify applicable Stakeholders listed in the Notification List. 6. Circulate NAN Commissioning phase with approved Safe Notice attached 7. Amend Approved NAN with Scope Change if required and recirculate for Approval. 8. Complete & Close NAN & CCL and NAN register. Record in respective NAN file.

Specific Project Data Deliverables

Users of the data	Configuration Manager, Configuration Management Administrator, Project Managers, Project Administrators, Third Party Project Managers, Change Initiators & ARTC Staff
Procedural coverage and associated documentation	EGP-20-01 - ARTC Project Management EGP-03-01 - Rail Network Configuration Management EGP0301F-01 - Network Alteration Notice ARTC Configuration Management - NAN Notification List: NAN Register/file
Other clarifying commentary (why is the data required)	<p>The NAN covers the Deliverable for the advice, approval and notification of network alterations which alter the operational capability, configuration, documentation or safe working Deliverables of the ARTC Network and the maintenance of ARTC operational systems as per EGP-03-01.</p> <p>As the NAN is circulated through design/construction/commissioning phases of the network configuration alteration to all stakeholders to provide accurate and timely alteration advice for their assets and systems as network alteration progresses.</p> <p>ARTC accepts alterations to the design or configuration of the infrastructure on the basis that the alterations conform to an approved design. The acceptance process must include the verification of integrated engineering and operating systems in terms of Deliverables, standards and designs.</p>

2.2.2 Configuration Change Lists (CCL)

Description	Configuration Change Management - Configuration Change Lists (CCL)
Project Phase	3/4/5 & 6
Discipline	General
Delivery Date Deliverables	As per EGP-03-01
Item Type	Engineering Information
ARTC Update Location	Configuration Management Configuration Change List – NAN Register/file
Detailed description of the Deliverables	<p>The CCL is included in the Network Alteration Notice (NAN) and identifies the equipment that will be new installed, removed/disposed or updated/modified.</p> <p>The CCL identifies the Discipline with the Configuration Item, Configuration Document, Configuration System affected by the network to be updated and the ARTC person who manages the changed information.</p> <p>The CCL is closed only when all change information is updated in the relevant ARTC configuration system. The NAN can only be closed when the works are complete and the CCL is closed with signature and recorded in the NAN register.</p>
Changes to the data	<p>Configuration Change Management - Configuration Change Lists (CCL).</p> <p>Complete the CCL and capture the configuration change as per EGP-03-01. Record all change CCL details in respective NAN register/file.</p> <ol style="list-style-type: none"> 1. Develop the CCL identifying all change affected configuration items, documents and systems. 2. Capture the changed configuration documents in phases/stages of network alterations and save to respective NAN file for distribution to an ARTC person to update the configuration system. 3. The status of configuration documents in the network alteration are identified as new installation/removed/modified/updated or relocated in the CCL. 4. Close the CCL when all configuration systems are updated with the network alteration.
Users of the data	ARTC Approval Authorities, Configuration Manager, Configuration Management Administrator, Project Managers, Project Administrators, Third Party Project Managers, Change Initiators & ARTC Staff
Procedural coverage and associated documentation	<p>EGP-03-01 - Rail Network Configuration Management</p> <p>EGP0301F-01 - Network Alteration Notice</p> <p>EGP-03-02 - Equipment Register – Updating and Maintenance</p> <p>EGP-04-01 - Engineering Drawings & Documentation</p> <p>NAN Register/file</p>

Specific Project Data Deliverables

Other clarifying commentary (why is the data required)	<p>ARTC accepts changes to the design or configuration of the infrastructure on the basis that the changes conform to an approved design. The provision of the configuration documents change data must be provided in the format ARTC uses in its respective configuration systems as per EPG-04-01.</p> <p>The CCL process will capture all changes to the configuration items defined in configuration documents as they progress through phases of design/construction/commissioning of the network configuration change.</p> <p>The configuration documents captured in the CCL are approved by respective discipline approval authorities and then loaded into respective ARTC configuration systems.</p> <p>ARTC Maintenance crews will have accurate change information for maintenance duties on ARTC equipment as network alteration progresses as per EGP-03-01.</p>
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2.2.3 Network Information Books – Infrastructure and Operational Information

Description	Network Information Books – Infrastructure and Operational Information
Project Phase	5
Discipline	Operational
Delivery Date Deliverables	10 working days prior to commissioning
Item Type	Operational Information
ARTC Update Location	Network Information Books (NIB)
Detailed description of the Deliverables	<p>Network Information Books provide network section documents containing infrastructure and operational information relating to corresponding sections on the relevant Network Control Centre boards.</p> <p>Network Information Books will require updating when any ARTC network infrastructure is altered as per Rail Network Configuration Management EGP-03-01.</p>
Changes to the data	<p>Network Information Books - Infrastructure and Operational Information</p> <p>Project change initiator will forward the infrastructure and system alteration for approval for Network Information Books to be updated as per OGP-30-02. Some alterations consist of, but are not limited to:</p> <ol style="list-style-type: none"> 1. Location specific crossing facilities and sidings (inequality KM adjustments) 2. Safe working methods in use 3. Network control contact details 4. Level crossing details 5. Gauge changes 6. Tunnel details 7. Location of Signalling 8. Special Instructions 9. Wayside Equipment 10. New Track or Points, Loops or sidings - Line diagram 11. Communications 12. Environmental Monitoring Equipment
Users of the data	ARTC's Operator Customers, Network Controllers, ARTC Maintenance
Procedural coverage and associated documentation	<p>EGP-03-01 - Rail Network Configuration Management</p> <p>OGP-30-02 - Network Information Books</p>
Other clarifying commentary (why is the data required)	<p>Network Information Books provide operators and ARTC staff mapping of the ARTC Network.</p> <p>It is crucial that all network alterations are captured and updated prior to commissioning of the works to reflect accuracy in the Network Information Books.</p>

2.2.4 Route Access Standard (RAS) – Route Access Condition Notice (RACN)

Description	Route Access Standard (RAS) - Route Access Condition Notice (RACN)
Project Phase	5
Discipline	General
Delivery Date Deliverables	6 weeks prior to commissioning of each track section
Item Type	Operational Information
ARTC Update Location	Route Access Standard (RAS)
Detailed description of the Deliverables	<p>Each network is represented by a series of sections. These sections contain information about the current status of the ARTC Network and include, line maps, route capacity tables, location of speed signs or permanent speed restrictions listed in the RAS. These sections may also include special access conditions.</p> <p>All alterations to the network are listed in the RAS to keep an accurate diary of the network status for rail operators.</p> <p>Permanent alterations to the network are updated in the RAS in accordance with EGP-01-01 Engineering Document Control.</p> <p>Proposed temporary deviations from the access conditions outlined in the RAS are provided in the form of a Route Access Condition Notice (RACN) in accordance with OGP-30-01 Route Access Condition Notices.</p>
Changes to the data	<p>Route Access Standard (RAS) - Route Access Condition Notice (RACN)</p> <p>Details of the infrastructure alteration or proposed temporary deviation from the access conditions outlined in the RAS are submitted in writing to ras@artc.com.au, using one (or a combination) of the following:</p> <ul style="list-style-type: none"> • OGP3001F-01 RAS Enquiry Form • OGP3001F-02 RACN Template • Direct email to ras@artc.com.au. <p>The forms above are available via the ARTC website at www.artc.com.au</p> <p>Alterations to the network or proposed temporary deviations from the access conditions outlined in the RAS may include, but are not limited to the following Track Configuration Changes:</p> <ul style="list-style-type: none"> • Track Speed Changes • Relocation of speed boards • Crossing / Balloon Loop Locations (KM) and Lengths (M) • Lines no longer operational • Bi-Directional Signalling Systems • Crossovers • Third Party Private Sidings • Tunnel Locations • Track Gauge (including identification of dual gauge) • Route Capacity Changes (allowable tonne and speed combinations) • Clearances • Changes to Communications or Safeworking Systems
Users of the data	Project Managers, Operators, ARTC Staff

Specific Project Data Deliverables

Procedural coverage and associated documentation	EGP-01-01 – Engineering Document Control OGP-30-01 - Route Access Condition Notices OGP3001F-01 - RAS Enquiry Form OGP3001F-02 - RACN Template EGP-03-01 - Rail Network Configuration Management
Other clarifying commentary (why is the data required)	The RAS contains interface Deliverables for access to the ARTC Network and has been published by ARTC for use by current and potential operators.

2.3 Track and Civil

2.3.1 Track & Civil Drawings – Track Equipment

Description	Track & Civil Drawings – Track Equipment
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	EGP-04-01
Item Type	Maintenance Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>Track & Civil – Track equipment network infrastructure alterations are shown on Track & Civil Drawings for the duration of the project construction phases – Detailed Design (Issued for Construction - IFC) to As Built/Works as Executed as per EGP-04-01</p> <p>All versions of network alterations Track & Civil – Track equipment drawings to be supplied for upload into Drawing Management System (DMS) for a record of progress in design, construction to pre-commissioning construction phases with updated metadata as per EGP-04-01.</p> <p>When design modifications are approved and new copies of design drawings are created, the new version is recorded in the title block and is uploaded into the DMS as the latest version.</p> <p>As network alteration works are commissioned with marked up alterations to design, testings and checking of commissioned works are completed the Track & Civil – track equipment drawing is dated, stamped and certified by a Commissioning Manager.</p> <p>The final certified copy is known as an As Constructed which is loaded into the DMS and used as the Interim Maintenance Copy (IMC).</p> <p>When the network alteration works are complete and certified an Interim Maintenance Copy (IMC) is issued from the DMS to ARTC Maintenance for the network alteration on site while As Built/Works as Executed drawings are developed, issued & approved.</p> <p>As Built/Works as Executed Track & Civil – Track equipment drawings are forwarded to ARTC DMS with metadata as final records of the change as per EGP-04-01.</p>
Changes to the data	<p>Track & Civil Drawings – Track Equipment</p> <p>All drawings to be provided in readable drawing formats, specifications and types listed in ARTC EGP-04-01</p> <ol style="list-style-type: none"> 1. Track & Civil Drawing Detailed Designed (CAD/Pdf) 2. Track & Civil Drawing Issued For Construction - IFC (Pdf) 3. Track & Civil Drawing As Constructed (Marked Up-Pdf) 4. Track & Civil Drawing Interim Maintenance Copy – IMC (Pdf) 5. Track & Civil Drawing As Built/Works as Executed (WAE) (CAD/Pdf)

Specific Project Data Deliverables

Users of the data	Project Managers, Third Party Project Managers, Configuration Manager, Configuration Administrator, Project Administrator & ARTC Maintenance
Procedural coverage and associated documentation	EGP-04-01 - Engineering Drawings and Documentation EGP-04-02 - Drawing Management System ESD-25-01 - CAD & Drafting Manual for Signal Drawings
Other clarifying commentary (why is the data required)	<p>The purpose is to provide guidelines for the usage of the system for management of engineering drawings pertaining to the Australian Rail Track Corporation (ARTC) network, through the Drawing Management System (DMS).</p> <p>Drawing ownership and management in Victoria resides with Public Transport Victoria (PTV) and Victorian Drawing Management System procedures apply.</p> <p>The supply of drawings during the progression of works provides an accurate account of the alteration for ARTC maintenance.</p>

2.3.2 Track & Civil Drawings – Civil Structures Equipment

Description	Track & Civil Drawings – Civil Structures Equipment
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Engineering Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>Track & Civil – Civil structures equipment network infrastructure alterations are shown on Track & Civil Drawings for the duration of the project construction phases – Detailed Design (Issued for Construction - IFC) to As-built/Works as Executed as per EGP-04-01</p> <p>All versions of network alteration Track & Civil – Civil structures equipment drawings to be supplied for upload into Drawing Management System (DMS) for a record of progress in design, construction and pre-commissioning construction phases with updated metadata as per EGP-04-01.</p> <p>When design modifications are approved, and new copies of design drawings are created the new version is recorded in the title block and is uploaded into the DMS as the latest version.</p> <p>As network alteration works are commissioned with marked up alterations to design, testings and checking of commissioned works are completed the Track & Civil – Civil structures equipment drawing is dated, stamped and certified by a Commissioning Manager.</p> <p>The final certified copy is known as an As Constructed which is loaded into the DMS and used as the Interim Maintenance Copy (IMC).</p> <p>When the network alteration works are complete and certified an Interim Maintenance Copy (IMC) is issued from the DMS to ARTC Maintenance for the network alteration on site while As Built/Works as Executed drawings are developed, issued & approved.</p> <p>As Built/Works as Executed Track & Civil – Civil structures equipment drawings are forwarded to ARTC DMS with metadata as final records of the change as per EGP-04-01.</p>
Changes to the data	<p>Track & Civil Drawings – Civil Structures Equipment</p> <p>All drawings to be provided in readable drawing formats, specifications and types listed in ARTC EGP-04-01, as applicable to alteration:</p> <ol style="list-style-type: none"> 1. Track & Civil Drawing Detailed Designed (CAD/Pdf) 2. Track & Civil Drawing Issued For Construction - IFC (Pdf) 3. Track & Civil Drawing As Constructed (Marked Up) (Pdf) 4. Track & Civil Drawing Interim Maintenance Copy – IMC (Pdf) 5. Track & Civil Drawing As Built/Works as Executed (WAE) (CAD/Pdf)
Users of the data	Project Managers, Third Party Project Managers, Configuration Manager, Configuration Administrator, Project Administrator & ARTC Maintenance.

Specific Project Data Deliverables

Procedural coverage and associated documentation	EGP-04-01 - Engineering Drawings and Documentation EGP-04-02 - Drawing Management System ESD-25-01 - CAD & Drafting Manual for Signal Drawings
Other clarifying commentary (why is the data required)	<p>The purpose is to provide guidelines for the usage of the system for management of engineering drawings pertaining to the Australian Rail Track Corporation (ARTC) network, through the Drawing Management System (DMS).</p> <p>Drawing ownership and management in Victoria resides with Public Transport Victoria (PTV) and Victorian Drawing Management System procedures apply.</p> <p>The supply of drawings during the progression of works provides an accurate account of the alteration for ARTC maintenance.</p>

2.3.3 Engineering Survey Drawings & Data

Description	Engineering Survey Drawings & Data – Track & Civil
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	EGP-04-01
Item Type	Engineering Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>Rail surveys are essential for the correct design, installation and maintenance of railway infrastructure. Control surveys form the framework for most railway surveys as per ETD-00-04</p> <p>Track & Civil Alignment surveys define the components of both horizontal and vertical alignment and the relationship between components and their associated parameters.</p> <p>The horizontal alignment defines the centreline of '4 foot' of each track. The vertical alignment defines the position of the low rail of each track.</p> <p>The Kilometrage defines the distance from Sydney along the centreline '4 foot', of each track as per ETD-00-03</p> <p>Surveyed Track Geometry Data is provided in a readable spreadsheet format for ARTC asset and maintenance management.</p> <p>For Signalling Detailed Site Survey see</p> <p>Signalling Technical Drawings – Detailed Site Survey (NSW/QLD)</p>
Changes to the data	<p>Engineering Survey Drawings & Data – Track & Civil</p> <p>All Survey drawings to be provided in readable drawing formats and specifications listed in ARTC EGP-04-01</p> <ol style="list-style-type: none"> 1. Survey - As Designed (CAD/Pdf) 2. Survey – Works as Executed / As Built (CAD/Pdf) 3. Survey – Track Geometry Data As Designed 4. Survey – Track Geometry Data Works as Executed / As Built
Users of the data	Asset Management, Compliance Management, Project Administrators, ARTC Maintenance, Track & Civil Area Managers
Procedural coverage and associated documentation	<p>ETD-00-03 - Alignment Surveys</p> <p>ETD-00-04 - Control Surveys</p>
Other clarifying commentary (why is the data required)	<p>Survey Drawings are stored in the DMS for future records for new works with the As Built Track Geometry Data used for the daily asset and maintenance Management systems.</p> <p>The purpose of the DMS is to provide guidelines for the usage of the system for management of engineering drawings pertaining to the Australian Rail Track Corporation (ARTC) network, through the Drawing Management System (DMS).</p>

2.3.4 Track Design Data – Rail Points, Crossings & Turnouts

Description	Track Design Data – Rail Points, Crossings & Turnouts
Project Phase	5
Discipline	Engineering General
Delivery Date Deliverables	As per ETC-00-01
Item Type	Maintenance Information
ARTC Update Location	Ellipse, Drawing Management System
Detailed description of the Deliverables	<p>Rail Design Data Deliverables</p> <p>Guidelines for the design and selection of rail are listed in the Track & Civil Code of Practice (CoP) Section 1 Rail</p> <p>An example of deliverables for new track construction of standard gauge railway track on a new alignment for projects such as loop extensions as per ETC-00-01</p> <p>Points, Crossings & Turnouts Design Data</p> <p>Plain track components used in points and crossing installations should be designed, constructed and maintained in accordance with the relevant sections of the Track & Civil CoP Section 3 Points and Crossings</p> <p>Due to the variety and complexity of points and crossing assemblies, ARTC has adopted a number of standard designs which are detailed in the Track & Civil CoP Section 3 Points and Crossings</p> <p>New rail, points, crossings or turnouts could be configured, and not limited to, installations for Loops, Crossovers, Turnouts to access Third Party property, Turnouts, Conversion to Continuous Welded Rail (CWR), Points or Catch Point/Derail installations or upgrades.</p> <p>All network alterations that are a result of a change to Rail, Points Crossings or turnouts provided will be in the drawings, documents and data formats outlined in EGP-04-01.</p> <p>The TrackData for the section of track works will be required to be recorded when works are complete to record track geometry and equipment as per</p> <p>TrackData – Track Geomertry, Alignment and Equipment</p>

<p>Changes to the data</p>	<p>Track Design Data – Rail, Points, Crossings & Turnouts</p> <p>On completion of the network infrastructure alteration installing new rail, points, crossings or turnouts the change initiator will provide the drawings, documents and data for ARTC Deliverables below, as applicable to alteration:</p> <ol style="list-style-type: none"> 1. Rail size, New Rail, Part Worn Rail data, Rail Lubrication and Guard Rail records 2. Points, Crossing or Turnout type, manufacture and assembly 3. Catch Points, Derail, Design, Type. 4. Reused Catch points, Derail, Points, Crossing or Turnout data, defects/history 5. Manufacturer Engineering Design Drawings 6. Any specific specialised maintenance, inspection or scheduled task Deliverable for assets upgraded or installed to be provided and recorded for routine inspection regime. 7. Final Survey including the as-constructed location of the track including line, level, superelevation, tangent points, transitions and turnout coordinates 8. GPS Data 9. Insulated Joints (IRJ), Welded Rail (CWR) and Non Welded Rail records 10. Request for Information, Non Conformance Report, Test Certificates 11. Record of signed and dated Weld and Rail Adjustments returns 12. Inspection and Test Plans – Signed off 13. Track Certification signed 52 & 53 Certificates 14. Ballast Configuration and Sleepers Configuration/type 15. Verse Test Data – Rail Stressing records 16. Platform Clearance and/or Track Centre Data 17. Tamping Software Files 18. Fasteners, Anchors and Soil types 19. Earthworks, Track Formation, Drainage records 20. Utilities / Services search e.g. Dial before you dig records 21. Track & Civil Drawings 22. Signage installed/removed 23. Third Party access details / Interface Agreements 24. Site Clean up
<p>Users of the data</p>	<p>Project Managers, Compliance Engineers, Asset Management, TrackData, ARTC Maintenance, Asset Performance, Engineering Compliance & Area Managers</p>

Specific Project Data Deliverables

Procedural coverage and associated documentation	New Track Construction ETC-00-01 Track & Civil CoP Section 0 Track and Civil Management System Track & Civil CoP Section 1 Rail Track & Civil CoP Section 3 Points and Crossings Track & Civil CoP Section 7 Clearances ETD-07-01 - Technical Note – Track Centre Guidance – Double Stack Corridors (Inland) Track & Civil CoP Section 2 Sleepers and Fastenings ETE-03-01 - Inspection of Points and Crossings ETC-03-01 - Turnout Replacement ETA-03-03 - Points & Crossings Track & Civil CoP Section 5 Track Geometry
Other clarifying commentary (why is the data required)	All new rail, points, crossings or turnouts network alteration information to be captured for maintenance, asset and risk management.

2.3.5 Track Design Data – Level Crossings

Description	Track Design Data – Level Crossings
Project Phase	3/5 &6
Discipline	Engineering General
Delivery Date Deliverables	As per ETC-16-01
Item Type	Maintenance Information
ARTC Update Location	Ellipse, Drawing Management System
Detailed description of the Deliverables	<p>Level Crossings</p> <p>All network alterations that are a result of an alteration to Level Crossings construction and operation provided in drawings, documents and data formats outlined in EGP-04-01.</p> <p>New Level Crossing new and upgrade construction deliverables will be provided as works described in ETD-16-02.</p> <p>Level crossing configuration is outlined in Level Crossings – Configuration Standards ETD-16-04. The type of Level Crossing design and construction will determine the deliverables required.</p> <p>The TrackData for the section of track works will be required to be recorded when works are complete to record track geometry and equipment as per TrackData – Track Geometry, Alignment and Equipment</p>
Changes to the data	<p>Track Design Data – Level Crossings</p> <p>On completion of the network infrastructure alteration installing new or upgrading level crossings the change initiator will provide the drawings, documents and data for ARTC Deliverables in ETC-16-01 below, as applicable to alteration:</p> <ol style="list-style-type: none"> 1. Level Crossing type, manufacture and assembly 2. Pedestrian Crossing type, manufacture and assembly (if applicable) 3. Level Crossing/ Pedestrian Crossing Base 4. Level Crossing/ Pedestrian Crossing Surface (e.g. Sealed/Unsealed) 5. Road Approaches 6. Sighting Distances/Quadrant Photos 7. Level Crossing Speed/Speed Restriction data 8. Rail Head field and gauge relief in road surface 9. Manufacturer Engineering Design Drawings 10. Any specific specialised maintenance, inspection or scheduled task Deliverable for assets upgraded or installed to be provided and recorded for routine inspection regime. 11. Final Survey including the as-constructed location of the track including line, level, superelevation, tangent points, transitions and turnout coordinates (As shown in WAE Track and Civil Drawings)

Specific Project Data Deliverables

	<ul style="list-style-type: none"> 12. GPS data 13. Rail Joints Data, Rail Lubrication and Guard Rail records 14. Request for Information, Non Conformance Report, Test Certificates 15. Record of signed and dated Weld and Rail Adjustments returns 16. Inspection and Test Plans – Signed off 17. Track Certification signed 52 & 53 Certificates 18. Ballast Configuration and Sleepers Configuration/type 19. Flangeway clearance data 20. Fasteners, Anchors and Soil types 21. Earthworks, Track Formation & Drainage records 22. Utilities / Services Search / e.g. Dial before you dig records 23. Signage 24. Third Party access details / Interface Agreements 25. Site Clean up
Users of the data	Project Managers, Compliance Engineers, ARTC Maintenance, Asset Performance & Engineering Compliance, Area Managers, Level Crossing Managers & Asset Data Administrators/Area Support Officers
Procedural coverage and associated documentation	<ul style="list-style-type: none"> ETC-00-02 - New Track Construction ETD-16-04 - Level Crossings – Configuration Standards ETD-16-02 - Level Crossings – Design and Installation Track & Civil CoP Section 0 Track and Civil Management System ETC-08-04 - Earthworks Construction Specification ETM-01-01 Rail Weld Geometry Standard
Other clarifying commentary (why is the data required)	<ul style="list-style-type: none"> All new level crossing network alteration information to be captured for maintenance, asset and risk management. ALCAM records provided to ARTC Level Crossing Management

2.3.6 Structures Design Data – Bridges, Culverts & Tunnels

Description	Structures Design Data – Bridges, Culverts & Tunnels	
Project Phase	3/5 & 6	
Discipline	Engineering General	
Delivery Date Deliverables	30 days following commissioning of each asset	
Item Type	Maintenance Information	
ARTC Update Location	Ellipse, Drawing Management System	
Detailed description of the Deliverables	ARTC has an overall responsibility is to ensure that new structures are designed, constructed and maintained to designated minimum Standards and that existing structures do not present an unacceptable safety risk to operators.	
	ARTC Structures are dissected into types as per Track & Civil CoP Section 9 Structures:	
	Class	Structure Type
	Bridges	Underbridge
		Overbridge
		Footbridge
	Culverts	Large Culvert
		Small Culvert
	Tunnels	Tunnel
	Miscellaneous Structures	Access (i.e. stairs, walkways)
		Buffer stop (includes “Stop block”)
		Culvert non-track
		Flood structure
		Lighting Gantry
		Lighting Tower
		Loading Structures (e.g. Loading Bank)
		Overhead Service crossing
		Small Retaining wall
		Large Retaining wall (> 2m in height)
		Signal gantry
Sound barrier (including fencing)		
Turntable		
Water Structures		
Weighbridge		

Specific Project Data Deliverables

	The information from a change to any structure will be required to maintain accurate records for asset, maintenance and risk management.
Changes to the data	<p>Structures Design Data – Bridges, Culverts & Tunnels</p> <p>The network change information will be provided in various formats in drawings (CAD/Pdf as required), data, photos & documents, as applicable to alteration:</p> <ol style="list-style-type: none"> 1. Structure identification (eg; Asset Class, Region, Kilometrages, Road/River name) 2. Structure information (eg; Structure Type, Span Material, Deck Type) 3. Structure configuration (eg; No. of spans, span lengths, No. of cells, cell length, size of cell, invert) 4. Details if a new asset or replacing an old asset e.g. bridge to culvert etc. (which would include E8 asset #) 5. Structure Build and Construction date 6. Any specific specialised maintenance, inspection or scheduled task Deliverable for assets upgraded or installed to be provided and recorded for routine inspection regime. 7. Any special structure inspection Deliverables (elastomeric bearings, roller bearings etc.), 8. Confined space/ working at height Deliverables (box girders etc.) 9. Asset owner (Third-party details etc.) 10. Any inherited defects 11. Interface Agreements 12. Access Information for inspection and maintenance 13. Geometry Details (eg; vertical & horizontal clearances, structure length) 14. GPS Data (where available) 15. Paint Details 16. Transom Details 17. Utilities / Services search e.g. Dial before you dig 18. Documents / Photographs 19. Structure Capacity / Structure Elements 20. Waterway Assessment Details including routine inspections for environmental performance in relation to siltation or scouring at culverts / bridges. 21. Tunnel Operating Speeds 22. Signage installed/removed 23. Site Clean Up plans
Users of the data	Project Managers, National Bridges & Structures Engineer, Structures Engineer, Structures Inspector, Asset Management, ARTC Maintenance, Asset Performance & Engineering Compliance, Configuration Management, Ellipse (ADA) & Area Managers
Procedural coverage and associated documentation	<p>ETG-09-01 - Structures Inventory</p> <p>Track & Civil CoP Section 9 Structures</p> <p>Track & Civil CoP Section 7 Clearances</p> <p>ETD-07-01 - Technical Note (Inland)</p> <p>ETM-07-01 - Management of Clearances</p> <p>Track and Civil Management System Section 0</p>
Other clarifying commentary (why is the data required)	Structures generally include bridges, culverts, tunnels and miscellaneous structures, whether they are currently 'in service', 'not maintained', 'disposed of', 'and redundant'

	or in any other service status. All network change information to be captured for maintenance, asset and risk management.
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2.3.7 TrackData – Track Geometry, Alignment and Equipment

Description	TrackData – Track Geometry, Alignment and Equipment
Project Phase	5
Discipline	Engineering General
Delivery Date Deliverables	30 days following commissioning of each asset
Item Type	Maintenance Information
ARTC Update Location	TrackData, Ellipse
Detailed description of the Deliverables	<p>Trackdata is a combination of track geometry, alignment and equipment used to meet ARTC Track & Civil Standard ETC-00-02 and Track & Civil CoP Section 5 Track Geometry.</p> <p>New track construction, upgrades and maintenance works where new tracks are installed or a track is totally reconstructed and new rails are used as per Track & Civil CoP Section 5 Track Geometry.</p> <p>Alterations to the track require measurement of the track geometry, alignment and to capture any alterations to track equipment associated with the new or reconstructed track.</p> <p>TrackData captured from the new or reconstructed track is to include, but not limited to:</p> <ul style="list-style-type: none"> • Embankments / Cuttings • Track Gauge • Ballast • Grade • Basecodes • Track Geometry • Track Alignment • Sleepers • Curvature • Rail • Platforms <p>All TrackData supplied creates a record of the track configuration to be used for maintenance, testing and asset lifecycles. Any alteration to track configuration from any works is captured and supplied for ARTC TrackData updating.</p>

Changes to the data	<p>TrackData – Track Geometry, Alignment and Equipment</p> <p>On completion of the network infrastructure alteration affecting Track Geometry, Alignment and Equipment the change initiator will provide the data for ARTC TrackData system information Deliverables below, as applicable:</p> <ol style="list-style-type: none"> 1. Final Survey Data including the as-constructed location of the track including chainage, line, level, superelevation, tangent points, transitions and turnout coordinates (as shown on Works as Executed Track & Civil Drawings) 2. Request for Information, Non Conformance Report, Test Certificates 3. Record of signed and dated Weld and Rail Adjustments returns 4. Inspection and Test Plans – Signed off 5. Track Certification signed 52 & 53 Certificates 6. Ballast Configuration and Sleepers Configuration/type 7. Verse Test Data – Rail Stressing records 8. Platform Clearance 9. Track Centre Data 10. Tamping Software Files 11. Network Data Sheets
Users of the data	Approval Authority, Engineering Compliance Manager, Asset Management, TrackData, ARTC Maintenance, Asset Performance, Project Administrator & Engineering Compliance, Assets Data Administrator & Area Managers
Procedural coverage and associated documentation	<p>New Track Construction ETC-00-02</p> <p>ARTC TrackData</p> <p>Track & Civil CoP Section 5 Track Geometry</p> <p>Track & Civil CoP Section 0 Track and Civil Management System</p>
Other clarifying commentary (why is the data required)	<p>TrackData (geometry) is measured by the AK Car on ARTC track checking the rail wear for, but not limited to:</p> <ul style="list-style-type: none"> • Rail Corrugations • Ride Quality • Rail Cross Sectional Profiles <p>The ARTC TrackData measurements recorded from recent works compared with the AK Car TrackData measurements will indicate maintenance works required and/or asset lifecycle wear.</p> <p>Tamping of track can use the Trackdata to return the track to pre-works levels.</p>

2.3.8 ARTC Works Packages

Description	ARTC Works Packages – Track & Civil
Project Phase	1- 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-20-01
Item Type	Engineering Information
ARTC Update Location	Enterprise Content Management System
Detailed description of the Deliverables	<p>The Approval Authority is responsible for overseeing all aspects of the project and to ensure controls are in place, and monitored, for project success. The Approval Authority is to be able to provide guidance and assist in decision making as required during the project.</p> <p>Specific activities that the Approval Authority is responsible for are listed at paragraphs 3.2.2 for Simple Projects and 3.3.2 for Complex Projects in EGP-20-01.</p> <p>The Approval Authority Project Checklist EGP2001T-04 is available to assist Approval Authorities with their responsibilities.</p> <p>All ARTC projects are required to comply with the WHS Act and its Regulations. The projects that meet the definition of a “Construction Project” (see s1.4 Definitions) have additional WHS Deliverables, and guidance for meeting these Deliverables is set out in the referenced documents in Appendix 2, EGP-20-01.</p>
Changes to the data	<p>ARTC Works Packages – Track & Civil</p> <p>All ARTC Track & Civil network alterations will require an ARTC work package as a Simple, Simple – Work Package or Complex Project as per EGP-20-01.</p> <ol style="list-style-type: none"> 1. Complex Project Management Plan 2. Complex Project Work Package 3. Complex Project Checklists 4. Simple Project Management Plan 5. Simple Project Work Package 6. Simple Project Checklist
Users of the data	Project Managers, Project Engineers, Area Managers, Project Administrators & ARTC Maintenance

Specific Project Data Deliverables

<p>Procedural coverage and associated documentation</p>	<p>EGP-20-01 - Project Management EGW-20-01 - Complex Project EGW2001T-12 - Complex Project Work Package EGW2001T-01 - Complex Project Management Plan EGW2001T-02 - Complex Project Checklist Phase 1 EGW2001T-03 - Complex Project Checklist Phase 2 EGW2001T-04 - Complex Project Checklist Phase 3 EGW2001T-05 - Complex Project Checklist Phase 4 EGW2001T-06 - Complex Project Checklist Phase 5 EGW-20-02 - Simple Project EGW2002T-01 - Simple Project Management Plan EGW2002T-03 - Simple Project Work Package EGW2002T-04 - Simple Project Checklist</p>
<p>Other clarifying commentary (why is the data required)</p>	<p>Approval Authorities, Project Managers, Contractors, Project Staff and ARTC Staff are required to keep records of the current status of actions they are responsible for in each project they are involved in.</p> <p>As Approval Authorities, Project Managers and/or Project Staff change over, incoming staff shall ascertain which tasks they are responsible for which remain to be accomplished for the project to capture the infrastructure change.</p>

2.4 Asset Management System

2.4.1 Equipment Register - Ellipse

Description	Equipment Register - Ellipse
Project Phase	5
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-03-02
Item Type	Maintenance Information
ARTC Update Location	Ellipse
Detailed description of the Deliverables	<p>All ARTC assets affected by the network alteration are required to have the assets data updated in Ellipse Equipment Register as per ARTC EGP-03-02</p> <p>The change initiator must request from the Asset Systems Support Officer (ASSO) an export and download of all current active assets in the location identified by the "Limits of Work" detailing the FROM and TO kms in the respective disciplines.</p> <p>The ellipse data from the equipment register will be provided in a spreadsheet in ellipse format to identify equipment in the requested location. Equipment affected by the alteration is then highlighted and identified by the change initiator with the respective ACTION as per EGP-03-02:</p> <ul style="list-style-type: none"> • New • Removing/Disposing • Updating/Modifying <p>All new equipment to be added to the ellipse equipment register is developed in the ellipse data format using the Data Classification Work Instruction for the applicable discipline.</p> <p>All ARTC network infrastructure alterations will be provided with altered equipment data to provide accurate records of ARTC assets in all disciplines.</p> <ul style="list-style-type: none"> • Signalling/Wayside Systems • Communications/Telemetry • Track & Civil - Track Equipment e.g. Rail Lubricators/Turnouts • Track & Civil - Structures e.g. Bridges/Tunnels/Culverts • Electrical <p>All new or altered equipment is provided to ARTC local asset owner (eg. structures, track & civil, signalling) and Corridor/Maintenance Manager (or delegate) as per EGP-03-02 for approval to upload with a completed Authority to Change form EGP0302F-01.</p>
Changes to the data	<p>Equipment Register - Ellipse</p> <p>The addition of new asset records, or the removal / modification of existing asset records in the Equipment Register is the responsibility of Asset Management Support (AMMSA/ASSO) with approval of the local asset owner (eg. structures, track & civil, signalling) and Corridor/Maintenance Manager (or delegate).</p>

Specific Project Data Deliverables

	<p>The change initiator will provide updated equipment and data details in Ellipse format and a completed Change Authorisation Form as per EGP-03-02 detailing any:</p> <ol style="list-style-type: none"> 1. New – New equipment and data installed 2. Removed / Disposed - Equipment and data removed permanently 3. Updated / Modified - Equipment and data renamed/ relocated 4. Updated / Modified - Interlocking Data Software Versions 5. Updated / Modified - Level Crossing Predictor Software Versions 6. Updated / Modified – “Approved Alternative” equipment and data 7. Change Authorisation Form EGP0302F-01 <p>The updated equipment spreadsheets are submitted to the Ellipse System Asset Data Administrator (along with the NAN forms) for upload in to the ARTC equipment register.</p>
Users of the data	Project Managers, Asset Data Administrators (ADA) / Area Support Officers (ASO), Area Manager, Signal Maintenance Engineer, Structures Manager, ARTC Maintenance
Procedural coverage and associated documentation	<p>EGP-03-01 Rail Network Configuration Management</p> <p>EGP-03-02 - Equipment Register – Updating and Maintenance</p> <p>ETE-00-03 Civil Technical Maintenance Plan</p> <p>EGW-10-04 Data Classification – Track & Civil</p> <p>EGW-10-03 Data Classification – Signal Systems</p> <p>EGW-10-01 Data Classification - Structures</p> <p>Ellipse Equipment Register (MSE600)</p> <p>Network Alteration Notices (NAN)</p>
Other clarifying commentary (why is the data required)	<p>All network alteration equipment and data changes are captured by the change initiator and updated in the ARTC Asset Management System.</p> <p>This provides an accurate record of all assets in the respective corridors for all interested ARTC business units.</p>

2.4.2 Maintenance Scheduled Tasks - Ellipse

Description	Maintenance Scheduled Tasks - Ellipse
Project Phase	5
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-03-02
Item Type	Maintenance Information
ARTC Update Location	Ellipse
Detailed description of the Deliverables	<p>All ARTC assets affected by the network alteration are required to have the Maintenance Scheduled Tasks updated in Ellipse as per ARTC EGP-03-02 and respective Data Classification Work Instruction.</p> <p>The change initiator must request from the Asset Systems Support Officer (ASSO) an export and download of all current Maintenance Scheduled Tasks (MST) for active assets in the location identified by the "Limits of Work" detailing the "FROM" and "TO" kms in the respective disciplines.</p> <p>The Ellipse asset data in the Maintenance Scheduled Tasks (MST) will be provided by the ASSO in a spreadsheet in Ellipse data format to identify equipment affected by the alteration.</p> <p>MST's affected by the alteration are then highlighted and identified by the change initiator with the respective ACTION as per EGP-03-02:</p> <ul style="list-style-type: none"> • New • Removing/Disposing • Updating/Modifying <p>All new MSTs to be added to Ellipse are developed in the Ellipse format using data from Technical Maintenance Plans for the applicable discipline as per EGP-03-02.</p> <p>Technical Maintenance Plans identify the equipment to be maintained, type of inspection and frequency of maintenance visit for the respective discipline. The MST data can be found at:</p> <p>Signalling: TMP ESM-26-02</p> <p>Track & Civil: TMP ETE-00-03</p> <p>All ARTC network infrastructure alterations will be provided with changed MST data to provide accurate records of ARTC assets in all disciplines.</p> <ul style="list-style-type: none"> • Signalling/Wayside Systems • Communications/Telemetry • Track & Civil - Track Equipment e.g. Rail Lubricators/Turnouts • Track & Civil - Structures e.g. Bridges/Tunnels/Culverts • Electrical • Environmental <p>All new or altered Maintenance Scheduled Tasks are provided to ARTC local asset owner (eg. structures, track & civil, signalling) and Corridor/Maintenance Manager (or delegate) as per EGP-03-02 for approval to upload on an Authority to Change form EGP0302F-01.</p>

Changes to the data	<p>Maintenance Scheduled Tasks (MST) - Ellipse</p> <p>The addition of new asset records, or the removal / modification of existing asset records in the Equipment Register is the responsibility of Asset Management Support (AMMSA/ASSO) with approval of the local asset owner (eg. structures, track & civil, signalling) and Corridor/Maintenance Manager (or delegate).</p> <p>The change initiator will provide updated Maintenance Scheduled Tasks details in Ellipse format and a completed Change Authorisation Form as per EGP-03-02 detailing any:</p> <ol style="list-style-type: none"> 1. New – New equipment and data installed 2. Removed / Disposed - Equipment and data removed permanently 3. Updated / Modified - Equipment and data renamed/ relocated 4. Updated / Modified - Interlocking Data Software Versions 5. Updated / Modified - Level Crossing Predictor Software Versions 6. Updated / Modified - “Approved Alternative” equipment and data 7. Change Authorisation Form EGP0302F-01 <p>The updated MST spreadsheets are submitted to the Ellipse System Asset Data Administrator (along with the NAN forms) for upload in to the ARTC equipment register.</p>
Users of the data	Project Managers, Approval Authority, Asset Data Administrators (ADA) / Area Support Officers (ASO), Area Manager, Signal Maintenance Engineer or Structures Manager, ARTC Maintenance Staff
Procedural coverage and associated documentation	<p>EGP-03-01 Rail Network Configuration Management</p> <p>EGP-03-02 - Maintenance Scheduled Tasks – Updating and Maintenance</p> <p>EGW-10-03 Data Classification – Signal Systems</p> <p>EGW-10-04 Data Classification – Track & Civil</p> <p>EGW-10-01 Data Classification - Structures</p> <p>ETE-00-03 Civil Technical Maintenance Plan</p> <p>Network Alteration Notices (NAN)</p> <p>ETE-00-03 - Track & Civil Technical Maintenance Plan (TMP)</p> <p>ESM-26-02 - Signalling Technical Maintenance Plan (TMP)</p>
Other clarifying commentary (why is the data required)	<p>All network alteration Maintenance Schedule Task changes are captured by the change initiator then forwarded for approval on a Change Authorisation Form EGP0302F-01 and updated in the ARTC Asset Management System.</p> <p>An accurate and timely delivery of updated Maintenance Schedule Tasks for all network infrastructure alterations is critical for ARTC equipment maintenance responsibilities as per EGP-03-02.</p>

2.4.3 Defects – Register, Closed and Amended

Description	Defects – Register, Closed and Amended
Project Phase	5
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-03-02
Item Type	Maintenance Information
ARTC Update Location	Ellipse
Detailed description of the Deliverables	<p>All ARTC Network Infrastructure that is subject to change during network alteration works that has current Defects attributed against the equipment or its operation must be provided to the Change Initiator for defect amendment as per EGP-03-02.</p> <p>As the network alteration progresses the equipment with defects that is updated, modified or removed or replaced by new equipment will require the defect to be amended.</p> <p>Any defects or non-conformances found with materials at any time must be immediately raised with the Project Manager and Area Manager or delegate if there are immediate safety issues.</p> <p>The amendments/closure/register of the defects is provided to the Asset Data Administrator on a completed Change Authorisation Form to be approved and then updated in Ellipse. The register of defects will be in an ellipse spreadsheet format accompanied by the Network Alteration Notice (NAN).</p>
Changes to the data	<p>Defects – Register, Closed and Amended</p> <p>Defect register from an ARTC infrastructure alteration will include the equipment defect amendments with other required information applicable to the alteration provided, such as, but not limited to:</p> <ol style="list-style-type: none"> 1. For all equipment with defects that is removed and /or replaced by new equipment the defect is closed. 2. For all equipment with defects that is updated or modified to reduce the impact of the defect in the equipment the defect is amended. 3. For all equipment that has minor defective operation and is accepted by the applicable Area Manager/Signal Manager a defect will be raised during commissioning and recorded for maintenance defect management in ellipse 4. Defect details supplied with EGP0302F-01 - Work Order/Defect No, Asset No, Required Change or Closed Text, Closed By, Closed Date 5. Completed Change Authorisation Form EGP0302F-01
Users of the data	Asset Data Administrator (ADA)/Area Support Officer (ASO), Project Manager, Project Administrator, ARTC Maintenance.
Procedural coverage and associated documentation	EGP-03-01 - Rail Network Configuration Management

Specific Project Data Deliverables

	EGP-03-02 - Equipment Register – Updating & Maintenance Ellipse Asset Management System Network Alteration Notice (NAN)
Other clarifying commentary (why is the data required)	<p>All defects & equipment removed from the network require work orders against the equipment to be updated to not generate work orders for removed equipment and the defect list to be updated.</p> <p>All defects and equipment removed or amended are forwarded to the ADA/ASO and Area Manager for approval to ensure the alteration is captured and recorded. Once approved the equipment is then updated in Ellipse to capture the alteration.</p>

2.4.4 Network Data Sheets – Equipment & NamePlate Data

Description	Network Data Sheets – Equipment & NamePlate Data
Project Phase	5
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-03-02 (With Maintenance Scheduled Tasks – MST)
Item Type	Maintenance Information
ARTC Update Location	Ellipse
Detailed description of the Deliverables	<p>Network Data Sheets are to be completed in accordance with EGP-03-01 Rail Network Configuration Management. Select the appropriate equipment network data sheet from the links in Configuration Management SharePoint.</p> <p>As the equipment is altered the Network Data Sheets are completed to capture details for the Asset Management System – Ellipse. Data required is in various formats some of which includes:</p> <ul style="list-style-type: none"> • Corridor • Section Location • Asset Code • Type • Make • Length • Date Installed • Km Location • GPS Location • Commissioned/Decommissioned <p>Project change initiator will forward the completed Network Data Sheets to the Area Manager, Signal Maintenance Engineer or Structures Manager as per respective discipline to be approved and then loaded into Ellipse.</p> <p>The Network Data Sheets communicating the equipment update for the alteration are forwarded for approval with the Change Authorisation Form EGP0302F-01.</p>
Changes to the data	<p>Network Data Sheets – Equipment & NamePlate Data</p> <p>The Network Data Sheets are separated into disciplines then equipment types to select and provide the data for:</p> <ol style="list-style-type: none"> 1. Rail 2. Signalling 3. Operations 4. Corridor/Property 5. Geotechnical 6. Environmental – flood flow / depth monitoring, groundwater monitoring wells, permanent sediment traps, fauna structures, noise walls, on property noise or drainage treatments etc. 7. Wayside

Specific Project Data Deliverables

Users of the data	Project Managers, Area Managers, ADA/ASO, Project Administrators & ARTC Maintenance
Procedural coverage and associated documentation	EGP-03-01 - Rail Network Configuration Management EGP-03-02 - Equipment Register – Updating and Maintenance
Other clarifying commentary (why is the data required)	Network Data Sheets provide ARTC asset and maintenance management systems an accurate record of infrastructure in the ARTC Network. The data provided can be used to load into the equipment NamePlate for equipment and asset management systems.

2.5 Geospatial Information System

2.5.1 GIS (Assets) – Assets

Description	GIS (Assets) – Assets									
Project Phase	4-6									
Discipline	Engineering General									
Delivery Date Deliverables	30 days following commissioning of each asset									
Item Type	Maintenance Information									
ARTC Update Location	ARTC GIS, ARTCMap, Ellipse, KM2ME									
Detailed description of the Deliverables	<p>A completed INF-FM-101 ARTC Assets Field Data Dictionary Template Geodatabase is to be completed in accordance with INF-SP-101 Technical Specification for Asset Field Data Collection.</p> <p>As the equipment is altered the Geodatabase(s) is completed to capture spatial asset details for both the Asset Management System – Ellipse and ARTC GIS Systems. Data required is in a single submission format and includes, but not limited to;</p> <ul style="list-style-type: none">• Basecode• Asset Type• Make• Length• Date Installed• Km Location• GPS Location• Commissioned/Decommissioned <p>Project change initiator will forward the completed Geodatabase to AMS GIS to load into ARTC’s Dev environment and seek approval from the Area Manager, Signal Maintenance Engineer or Structures Manager as per respective discipline to be approved and then loaded into GIS Production.</p> <p>The Geodatabase communicating the equipment update for the alteration is forwarded for approval with the Change Authorisation Form EGP0302F-01.</p> <p>All data shall be supplied in compliant GDA94 with AHD(Ellipsoid09).</p>									
Changes to the data	<p>INF-FM-101 ARTC Assets Field Data Dictionary Template Geodatabase</p> <p>INF-FM-101 is the template Geodatabase that needs to be completed for each project in which a change occurs to any of the following Assets and Features that are documented and outlined in INF-SP-101 Technical Specification for Asset Field Data Collection;</p> <table><tr><td>3.1 Auxiliary Supply Transformers</td><td>3.20 Miscellaneous Equipment</td></tr><tr><td>3.2 Bridge</td><td>3.22 Overhead Structure (inc Signal Gantries and Cantilevers)</td></tr><tr><td>3.3 Building</td><td>3.24 Platform</td></tr><tr><td>3.4 Catch Point</td><td>3.25 Points</td></tr></table>		3.1 Auxiliary Supply Transformers	3.20 Miscellaneous Equipment	3.2 Bridge	3.22 Overhead Structure (inc Signal Gantries and Cantilevers)	3.3 Building	3.24 Platform	3.4 Catch Point	3.25 Points
3.1 Auxiliary Supply Transformers	3.20 Miscellaneous Equipment									
3.2 Bridge	3.22 Overhead Structure (inc Signal Gantries and Cantilevers)									
3.3 Building	3.24 Platform									
3.4 Catch Point	3.25 Points									

Specific Project Data Deliverables

	<p>3.5 Check Rail</p> <p>3.6 Communications Tower</p> <p>3.7 Culvert</p> <p>3.8 Diamond</p> <p>3.9 Earthworks</p> <p>3.10 Enclosure (inc. Signal Houses)</p> <p>3.11 Gate</p> <p>3.13 Ground Frame</p> <p>3.14 Incursion</p> <p>3.15 Insulated Rail Joint</p> <p>3.16 Kilometre Post</p> <p>3.17 Kilometrage Change Anomaly</p> <p>3.18 Level Crossing</p> <p>3.19 Level Crossing Signal</p> <p>3.26 Powerline</p> <p>3.27 Rail</p> <p>3.28 Rail Monument</p> <p>3.29 Signage</p> <p>3.30 Signal</p> <p>3.31 Signals Mains Supply</p> <p>3.32 Sleeper Configuration</p> <p>3.33 Subsurface Utilities</p> <p>3.34 Survey Control Marks</p> <p>3.35 Track Alignment</p> <p>3.36 Track Centreline</p> <p>3.37 Train Detection (inc Track Circuits)</p> <p>3.38 Tunnel</p> <p>3.39 Turnout</p> <p>3.40 Wayside</p>
Users of the data	Project Managers, Area Managers, ADA/ASO, Project Administrators & ARTC Maintenance
Procedural coverage and associated documentation	<p>INF-SP-101 - Technical Specification for Asset Field Data Collection</p> <p>INF-FM-101 ARTC Assets Field Data Dictionary Template Geodatabase</p> <p>EGP-03-01 - Rail Network Configuration Management</p> <p>EGP-03-02 - Equipment Register – Updating and Maintenance</p>
Other clarifying commentary (why is the data required)	<p>INF-FM-101 ARTC Assets Field Data Dictionary Template Geodatabase provides ARTC asset and maintenance management systems an accurate record of the spatial information of infrastructure in the ARTC Network.</p> <p>The data provided is utilised to provide the following ARTC functions;</p> <ul style="list-style-type: none"> • Ellipse • eTap Safe Working • eWorks Mobility (Ellipse Mobility) • KM2ME • ARTCMap <p>The standardised and consistent capture of asset data in GIS format provides the necessary location information to be stored as the central point of truth for location data at ARTC. With this structure in place, successful data integrations can occur to maximise the power of visualising and analysing asset data that is stored within GIS.</p>

2.5.2 GIS (Assets) – Track Centreline and Alignment

Description	GIS (Assets) – Track Centreline and Alignment
Project Phase	4-6
Discipline	Engineering General
Delivery Date Deliverables	30 days following commissioning of each asset
Item Type	Corporate Information, Maintenance Information
ARTC Update Location	ARTC GIS, ARTCMap, Ellipse, KM2ME
Detailed description of the Deliverables	<p>GIS – Track Centreline and Alignment aligns with ARTC Track & Civil Standard ETC-00-02 and the Track & Civil CoP Section 5 Track Geometry.</p> <p>New track construction, upgrades and maintenance works where new tracks are installed or a track is totally reconstructed and new rails are used as per the Track & Civil CoP Section 5 Track Geometry.</p> <p>Alterations to the track require measurement of the track geometry, alignment and to capture any alterations to track equipment associated with the new or reconstructed track.</p> <p>Track Centreline and Alignment Data captured in as-constructed configuration and include, but not limited to:</p> <ul style="list-style-type: none"> • Track Gauge • Grade • Basecodes • Track Centreline (as 3D String) • Track Alignment • Curvature • Kilometre Posts • Kilometre Equality Points • Earthworks • Turnouts <p>All Track Centreline and Alignment supplied creates a record of the track configuration to be used for maintenance, testing and asset lifecycles. Any alteration to track configuration from any works is captured and supplied for updating ARTC Track Centreline and Alignment.</p> <p>All data shall be supplied in compliant GDA94 with AHD(Ellipsoid09).</p>

Changes to the data	<p>GIS (Assets) – Track Centreline and Alignment</p> <p>On completion of the network infrastructure alteration affecting Track Centreline and Alignment the change initiator will provide the data for ARTC GIS – Track Centreline and Alignment system information Deliverables below, as applicable:</p> <ol style="list-style-type: none"> 12. Completed Esri Geodatabase containing; <ol style="list-style-type: none"> a. Section 3.9 Earthworks – INF-SP-101 Technical Specification for Asset Field Data Collection b. Section 3.16 Kilometre Post – INF-SP-101 Technical Specification for Asset Field Data Collection c. Section 3.35 Track Alignment – INF-SP-101 Technical Specification for Asset Field Data Collection d. Section 3.36 Track Centreline – INF-SP-101 Technical Specification for Asset Field Data Collection & INF-GL-102 ARTC GIS Centreline Guideline e. Section 3.39 Turnout – INF-SP-101 Technical Specification for Asset Field Data Collection 13. Accompanying Final Survey Data (and CAD Drawings in .dwg) including the as-constructed location of the track including chainage, line, level, superelevation, tangent points, transitions and turnout coordinates (as shown on Works as Executed Track & Civil Drawings) <p>If the surveyed kilometrage contains survey adjustments or a km change equality the following must also be included in the Geodatabase submission;</p> <ol style="list-style-type: none"> a. Section 3.17 Kilometrage Change Anomaly – INF-SP-101 Technical Specification for Asset Field Data Collection
Users of the data	<p>Approval Authority, Engineering Compliance Manager, Asset Management, ARTC Maintenance, Asset Performance, Project Administrator & Engineering Compliance, Assets Data Administrator & Area Managers</p>
Procedural coverage and associated documentation	<p>INF-SP-101 Technical Specification for Asset Field Data Collection</p> <p>INF-GL-102 ARTC GIS Centreline Guideline</p> <p>New Track Construction ETC-00-01</p> <p>Track & Civil CoP Section 5 Track Geometry</p> <p>Track & Civil CoP Section 0 Track and Civil Management System</p>

Specific Project Data Deliverables

Other clarifying commentary (why is the data required)	<p>Track Centreline and Alignment are the pivotal data sources for ARTC's GIS and impending Linear Referencing System. This data allows ARTC to perform spatial analysis and to provide the business with up to date GIS based tools.</p> <p>The standardised and consistent capture of asset data in GIS format provides the necessary location information to be stored as the central point of truth for location data at ARTC. With this structure in place, successful data integrations can occur to maximise the power of visualising and analysing asset data that is stored within GIS.</p>
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2.5.3 GIS (Assets) – Survey Track Alignment Monument Installation and Survey Control Marks

Description	GIS (Assets) – Survey Track Alignment Monument Installation and Survey Control Marks
Project Phase	4-6
Discipline	Engineering General
Delivery Date Deliverables	30 days following commissioning of each asset
Item Type	Maintenance Information
ARTC Update Location	ARTC GIS, ARTCMap
Detailed description of the Deliverables	<p>Track Alignment Monuments – as per Section 3.35 Track Alignment of INF-SP-101 Technical Specification for Asset Field Data Collection – are installed along the corridor to provide a required alignment marker in field to maintain tamping and track centres to.</p> <p>Survey Control Marks – as per Section 3.34 Survey Control of INF-SP-101 Technical Specification for Asset Field Data Collection – are the location in which projects utilise for the point of truth for all Survey activities on a project worksite.</p> <p>New track construction, upgrades and maintenance works where new tracks are installed or a track is totally reconstructed, and new rails are used as per the Track & Civil CoP Section 5 Track Geometry.</p> <p>Alterations to the track require measurement of the track geometry, alignment and to capture any alterations to track equipment associated with the new or reconstructed track.</p> <p>All TAMS locations and plaque information and Survey Control Marks are required to be maintained to ensure Track is maintained to design and is fit for purpose.</p>
Changes to the data	<p>GIS (Assets) – Survey Track Alignment Monument Installation</p> <p>On completion of the network infrastructure alteration affecting Track Alignment and the installation or modification of TAMS the change initiator will provide the data for ARTC GIS system. Information Deliverables below, as applicable:</p> <ol style="list-style-type: none"> 1. Completed Esri Geodatabase as per Section 3.35 Track Alignment – INF-SP-101 Technical Specification for Asset Field Data Collection

Specific Project Data Deliverables

	<p>On the installation or modification of Survey Control marks the change initiator will provide the data for ARTC GIS system. Information Deliverables below, as applicable:</p> <p>2. Completed Esri Geodatabase as per Section 3.34 Survey Control Marks – INF-SP-101 Technical Specification for Asset Field Data Collection</p>
Users of the data	Approval Authority, Engineering Compliance Manager, Asset Management, TrackData, ARTC Maintenance, Asset Performance, Project Administrator & Engineering Compliance, Assets Data Administrator & Area Managers
Procedural coverage and associated documentation	<p>Technical Specification for Asset Field Data Collection INF-SP-101</p> <p>Track Alignment Monument Installation and Surveying 0-0000-900-PSV-00-SP-0011_0</p> <p>Alignment Surveys ETD-00-03</p> <p>Control Surveys ETD-00-04</p>
Other clarifying commentary (why is the data required)	Maintaining a register of as designed/as built alignment allows ARTC to maintain to a known geometry that is fit for purpose and meets the designed operational capabilities. Maintaining this data will allow track to be tamped and maintained accurately and avoid track centre clearance issues.

2.6 Network Control Systems

2.6.1 Train Planning Documents & Data

Description	Network Control Systems – Train Planning Documents & Data
Project Phase	5
Discipline	Operational
Delivery Date Deliverables	30 days prior to commissioning of each track section.
Item Type	Operations Information
ARTC Update Location	Corporate Project Management SharePoint Site
Detailed description of the Deliverables	<p>All network alterations that impact the management of Trains will require the change initiator to provide details to update the Train Management Systems and Train Control Graphs as per OPE-PR-002.</p> <p>Network controllers use train control graphs to manage train movements to plan and record in permanent form details about:</p> <ul style="list-style-type: none"> • Train and track vehicle movements; • Work on track authorities; • Conditions Affecting the Network (CANS) • Times, location and relevant details of all events requiring recording; • Train Control Graphs are pre-printed, and show, where applicable: • Locations, Kilometrages, lengths of sidings (refuges), crossing loops • Safe workings are listed down the side of the Train Graph. • Time intervals across the page, for 24 hour period • Planned train paths (Freight and Passenger).
Changes to the data	<p>Train Management Systems – Training Planning Documents & Data</p> <p>If the network alterations modify the location of the physical infrastructure used for the Train Graph the alteration details are provided to Operation Planning Manager to include the alterations in the Train Control Graphs, Train Management Systems & Trim Train Planning. The infrastructure alterations include, but not limited to:</p> <ol style="list-style-type: none"> 1. Location or Kilometres (KMs) alterations 2. New/Altered Safe Working Systems (e.g. ATMS or TOW) 3. Altered Lengths or New Sidings (Refuges) 4. New /Altered Balloon Loops 5. New/Altered Crossing Loops locations 6. Altered Infrastructure impacting train speed 7. New/Altered Signalling Systems (e.g. Bi Directional) 8. New/Altered Track Systems
Users of the data	Project Managers, Project Engineers, Train Transit Managers, Operations Compliance Managers, Operation Planning Manager, Trim Train Planning & Network Control

Specific Project Data Deliverables

Procedural coverage and associated documentation	EGP-20-01 - Project Management EGW-20-01 - Managing Complex Projects OPE-PR-002 - Compiling Train Control Graphs Train Alteration Advice Safe Notice PP-163 - Speed Restriction Management
Other clarifying commentary (why is the data required)	The software, data and documents produced from the network alteration is captured and provided to ARTC Network Control to manage and plan train movements.

2.6.2 Electronic Track Access Protection - eTAP

Description	Network Control Systems – Electronic Track Access Protection (eTAP)
Project Phase	5
Discipline	Operational
Delivery Date Deliverables	7 days prior to commissioning of each track section.
Item Type	Operations Information
ARTC Update Location	eTAP
Detailed description of the Deliverables	<p>Network Controllers use eTAP to manage access to the track and provide a safe environment for field personnel as follows:</p> <ul style="list-style-type: none"> • Track vehicle movements; • Work on track authorities; • Corridor Access Approvals (CAA) • Conditions Affecting the Network (CAN) • Special Proceed Authority (SPA) • Infrastructure Booking Advice (IBA)
Changes to the data	<p>Network Control Systems – Electronic Track Access Protection (eTAP)</p> <p>If the network alterations modify the location of the physical infrastructure used for eTAP, the alteration details are provided to the eTAP Product Manager to include the alterations in the eTAP system. The data required to be submitted for infrastructure alterations include, but not limited to:</p> <p><u>New or Removed Locations</u></p> <ul style="list-style-type: none"> • Infrastructure Added or Removed • Network Control Board • Location Name • Location Boundary Limits <ul style="list-style-type: none"> ○ KM ○ Lat/Long Coordinates <p><u>New, Updated or Removed Infrastructure (non-track)</u></p> <ul style="list-style-type: none"> • Infrastructure Added, Updated or Removed • Network Control Board • Location Name • Infrastructure Type (Signal, Points, Level Crossing etc) • Infrastructure Name (same as per NIBS, Phoenix, TMCS etc) • Infrastructure Data <ul style="list-style-type: none"> ○ KM ○ Lat/Long Coordinates <p><u>New or Removed Track, Loops, Sidings etc</u></p> <ul style="list-style-type: none"> • Infrastructure Added or Removed • Network Control Board • Location Name • Line (Up Main, Down Main etc) • Track Centreline Data (new only) • KM (new only)

Specific Project Data Deliverables

Users of the data	Protection Officers (Safe Working Personnel), Network Controllers, Train Transit Managers, Work Group Leaders, Area Managers, Area Planners, Planning Managers
Procedural coverage and associated documentation	EGP-20-01 - Project Management EGW-20-01 - Managing Complex Projects Network Rules and Procedures Template Asset Update Spreadsheet available from eTAP Product Manager on request
Other clarifying commentary (why is the data required)	The data produced from the network alteration is captured and provided to ARTC Network Control to safely manage access to the Network and for Safe Working Personnel to undertake location assurance confirmation.

2.7 Signalling

2.7.1 Technical Drawings – Signalling Plan (NSW/QLD)

Description	Signalling Technical Drawings – Signalling Plan (NSW/QLD)
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Maintenance Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>Signalling & Communications network infrastructure alterations are shown on Signalling Plans for the duration of the project construction phases - Design to As built as per EGP-04-01</p> <p>All versions of network alteration Signal Plan drawings are to be supplied for upload into Drawing Management System (DMS) for a record of progress in design, construction to pre – commissioning construction phases with updated metadata as per EGP-04-01.</p> <p>When design modifications are approved and new copies of design drawings are created the new version is recorded in the title block and is uploaded into the DMS as the latest version as per ESC-21-02.</p> <p>As network alteration works are commissioned with marked up alterations to design, testings and checking of commissioned works are completed the Signalling Plan is dated, stamped and certified by a Commissioning Manager as per ESC-21-02.</p> <p>The final certified copy is known as an As Commissioned, Certified Office Copy (COC) or Certified Commissioned Copy (CCC) which is loaded into the DMS and used as the Interim Maintenance Copy (IMC).</p> <p>When the network alteration works are complete and certified an Interim Maintenance Copy (IMC) is issued from the DMS to ARTC Maintenance for the network alteration on site while As Built drawings are developed, issued & approved.</p> <p>As Built Signal Plan drawings are forwarded to ARTC DMS with metadata as final records of the change as per EGP-04-01.</p> <p>For all Victorian Drawings see: Signalling Technical Drawings – Signalling Arrangement Plan (VIC)</p>
Changes to the data	<p>Signalling Technical Drawings – Signalling Plan (NSW/QLD)</p> <p>All drawings to be provided in readable drawing formats and specifications listed in ARTC EGP-04-01, as applicable to alteration:</p> <ol style="list-style-type: none"> 1. Signalling Plan (SP) As Designed (CAD/Pdf) 2. Signalling Plan (SP) Issued For Commissioning - IFC (Pdf) 3. Signalling Plan (SP) As Commissioned - CCC, COC (Pdf)

Specific Project Data Deliverables

	<p>4. Signalling Plan (SP) Interim Maintenance Copy – IMC (Pdf)</p> <p>5. Signalling Plan (SP) As Built (CAD/Pdf)</p>
Users of the data	Project Managers, Third Party Project Managers, Configuration Manager, Configuration Administrator, Project Administrator & ARTC Maintenance Staff
Procedural coverage and associated documentation	<p>EGP-04-01 - Engineering Drawings and Documentation</p> <p>EGP-04-02 - Drawing Management System</p> <p>ESD-25-01 - CAD & Drafting Manual for Signal Drawings</p> <p>ESI-21-02 - Inspection and Testing of Signalling – Plans, Programs, Documentation and Packages</p>
Other clarifying commentary (why is the data required)	<p>The supply of drawings during the progression of works provides an accurate account of the alteration for ARTC maintenance.</p> <p>Signal Plan (CAD) As Built is to be provided to ARTC Geospatial Information (GIS). The purpose is to provide guidelines for the usage of the system for management of engineering drawings pertaining to the Australian Rail Track Corporation (ARTC) network, through the Drawing Management System (DMS).</p>

2.7.2 Technical Drawings – Track Insulation Plan (NSW/QLD)

Description	Signalling Technical Drawings – Track Insulation Plan (NSW/QLD)
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Maintenance Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>Signalling Track Insulation network infrastructure alterations are shown on Track Insulation Plans for the duration of the project construction phases - Design to As built as per EGP-04-01</p> <p>All versions of network alteration Track Insulation drawings are to be supplied for upload into Drawing Management System (DMS) for a record of progress in design, construction to pre – commissioning construction phases with updated metadata as per EGP-04-01.</p> <p>When design modifications are approved and new copies of design drawings are created the new version is recorded in the title block and is uploaded into the DMS as the latest version as per ESC-21-02.</p> <p>As network alteration works are commissioned with marked up alterations to design, testings and checking of commissioned works are completed the Track Insulation Plan is dated, stamped and certified by a Commissioning Manager as per ESC-21-02.</p> <p>The final certified copy is known as an As Commissioned, Certified Office Copy (COC) or Certified Commissioned Copy (CCC) which is loaded into the DMS and used as the Interim Maintenance Copy (IMC).</p> <p>When the network alteration works are complete and certified an Interim Maintenance Copy (IMC) is issued from the DMS to ARTC Maintenance for the network alteration on site while As Built drawings are developed, issued & approved.</p> <p>As Built Track Insulation Plan drawings are forwarded to ARTC DMS with metadata as final records of the change as per EGP-04-01.</p> <p>For all Victorian Track Circuit and Bonding Plan Drawings see:</p> <p>Signalling Technical Drawings – Track Circuit and Bonding Plan (VIC)</p>
Changes to the data	<p>Signalling Technical Drawings – Track Insulation Plan (NSW/QLD)</p> <p>All drawings to be provided in readable drawing formats and specifications listed in ARTC EGP-04-01, as applicable to alteration:</p> <ol style="list-style-type: none"> 1. Track Insulation (TIP) As Designed (CAD/Pdf) 2. Track Insulation (TIP) As Commissioned - CCC, COC (Pdf) 3. Track Insulation (TIP) Interim Maintenance Copy – IMC (Pdf) 4. Track Insulation (TIP) As Built (CAD/Pdf)

Specific Project Data Deliverables

Users of the data	Project Managers, Third Party Project Managers, Configuration Manager, Configuration Administrator, Project Administrator & ARTC Maintenance Staff
Procedural coverage and associated documentation	EGP-04-01 - Engineering Drawings and Documentation EGP-04-02 - Drawing Management System ESD-25-01 - CAD & Drafting Manual for Signal Drawings ESI-21-02 - Inspection and Testing of Signalling – Plans, Programs, Documentation and Packages
Other clarifying commentary (why is the data required)	The supply of drawings during the progression of works provides an accurate account of the alteration for ARTC maintenance. Track Insulation Plan (CAD) As Built is to be provided to ARTC Geospatial Information (GIS). The purpose is to provide guidelines for the usage of the system for management of engineering drawings pertaining to the Australian Rail Track Corporation (ARTC) network, through the Drawing Management System (DMS).

2.7.3 Technical Drawings – Circuit Books (NSW/QLD)

Description	Signalling Technical Drawings – Circuit Books (NSW/QLD)
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Maintenance Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>All Signalling & Communications network infrastructure circuit alterations are shown on Circuit Books for the duration of the project construction phases - Design to As built as per EGP-04-01</p> <p>All versions of network alteration Circuit Books drawings are to be supplied for upload into Drawing Management System (DMS) for a record of progress in design, construction to pre – commissioning construction phases with updated metadata as per EGP-04-01.</p> <p>When design modifications are approved and new copies of circuit design drawings are created the new version is recorded in the amendment page and is uploaded into the DMS as the latest version as per ESC-21-02.</p> <p>As network alteration works are commissioned with marked up alterations to design, testings and checking of commissioned works are completed the Circuit Book is stamped, dated and certified on all changed pages by a Commissioning Manager as per ESC-21-02.</p> <p>The final certified copy is known as an As Commissioned, Certified Office Copy (COC) or Certified Commissioned Copy (CCC) which is loaded into the DMS and used as the Interim Maintenance Copy (IMC).</p> <p>When the network alteration works are complete and certified an Interim Maintenance Copy (IMC) is issued from the DMS to ARTC Maintenance for the network alteration on site while As Built drawings are developed, issued & approved.</p> <p>As Built Circuit Books drawings are forwarded to ARTC DMS with metadata as final records of the change as per EGP-04-01.</p> <p>For all Victorian Circuit Book Drawings see: Signalling Technical Drawings – Circuit Book (VIC)</p>
Changes to the data	<p>Signalling Technical Drawings – Circuit Books (NSW/QLD)</p> <p>All drawings to be provided in readable drawing formats and specifications listed in ARTC EGP-04-01, as applicable to alteration:</p> <ol style="list-style-type: none"> 1. Circuit Book/s (CB) As Designed White Copy (CAD/Pdf) 2. Circuit Book/s (CB) Correlation Blue Copy (Pdf) 3. Circuit Book/s (CB) Construction Green Copy (Pdf) 4. Circuit Book/s (CB) Test Pink Copy (Pdf) 5. Aspect Sequence Charts

Specific Project Data Deliverables

	6. Circuit Book/s (CB) As Commissioned - CCC, COC Pink (Pdf) 7. Circuit Book/s (CB) Interim Maintenance Copy – IMC Yellow (Pdf) 8. Circuit Book/s (CB) As Built White (CAD/Pdf)
Users of the data	Project Managers, Third Party Project Managers, Configuration Manager, Configuration Administrator, Project Administrator & ARTC Maintenance Staff
Procedural coverage and associated documentation	EGP-04-01 - Engineering Drawings and Documentation EGP-04-02 - Drawing Management System ESD-25-01 - CAD & Drafting Manual for Signal Drawings ESI-21-02 - Inspection and Testing of Signalling – Plans, Programs, Documentation and Packages
Other clarifying commentary (why is the data required)	<p>The purpose is to provide guidelines for the usage of the system for management of engineering drawings pertaining to the Australian Rail Track Corporation (ARTC) network, through the Drawing Management System (DMS).</p> <p>Accurate records of Signalling Circuits As designed to As built with data for the installation and operation of signalling infrastructure are vital for future circuit alterations.</p>

2.7.4 Technical Drawings – Drivers Diagram (NSW/QLD)

Description	Signalling Technical Drawings – Drivers Diagram (NSW/QLD)
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Maintenance Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>Signalling network infrastructure alterations are shown on Drivers Diagrams for the duration of the project construction phases - Design to As built as per EGP-04-01</p> <p>All versions of network alteration Drivers Diagram drawings to be supplied for upload into Drawing Management System (DMS) for a record of progress in design, construction to pre – commissioning construction phases with updated metadata as per EGP-04-01.</p> <p>When design modifications are approved and new copies of design drawings are created the new version is recorded in the title block and is uploaded into the DMS as the latest version as per ESC-21-02.</p> <p>Where applicable, delivery of the final master copy of the Drivers Diagram is required prior to commissioning as per EGP-04-01. The Master Drivers Diagram is required for the Safe/Train Notice development, ARTC approval and circulation.</p> <p>As Built Drivers Diagram drawings are forwarded to ARTC DMS with metadata as final records of the change as per EGP-04-01.</p> <p>For all Victorian Signalling Diagram Drawings see: Signalling Technical Drawings – Signalling Diagram (VIC)</p>
Changes to the data	<p>Signalling Technical Drawings – Drivers Diagram (NSW/QLD)</p> <p>All drawings to be provided in readable drawing formats and specifications listed in ARTC EGP-04-01, as applicable to alteration:</p> <ol style="list-style-type: none"> 1. Drivers Diagram (DD) As Designed (CAD/Pdf) 2. Drivers Diagram (DD) As Commissioned (Pdf) 3. Drivers Diagram (DD) As Built (CAD/Pdf)
Users of the data	Project Managers, Third Party Project Managers, Configuration Manager, Configuration Administrator, Project Administrator & ARTC Maintenance Staff
Procedural coverage and associated documentation	<p>EGP-04-01 - Engineering Drawings and Documentation</p> <p>EGP-04-02 - Drawing Management System</p> <p>ESD-25-01 - CAD & Drafting Manual for Signal Drawings</p> <p>ESI-21-02 - Inspection and Testing of Signalling – Plans, Programs, Documentation and Packages</p>

Specific Project Data Deliverables

Other clarifying commentary (why is the data required)	<p>The supply of drawings during the progression of works provides an accurate account of the alteration for ARTC maintenance.</p> <p>The purpose is to provide guidelines for the usage of the system for management of engineering drawings pertaining to the Australian Rail Track Corporation (ARTC) network, through the Drawing Management System (DMS).</p>
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2.7.5 Technical Drawings – Detailed Site Survey (NSW/QLD)

Description	Signalling Technical Drawings – Detailed Site Survey (NSW/QLD)
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Maintenance Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>Cable design, cable and utilities route/path way plans in network alterations are shown on Detailed Site Survey drawings for the duration of the project construction phases - Design to As built as per EGP-04-01</p> <p>Signalling Detailed Site Survey drawings shall be fully dimensioned to show the location of every kilometre and half kilometre post, the final cable routes, underline crossings (ULX's), station buildings, signal boxes, relay rooms, housings, location cases and lineside equipment with reference to the running face of the nearest railway line and, where applicable, existing buildings which are to remain and/or overhead wiring structures as per ESD-25-01.</p> <p>All versions of network alteration Detailed Site Survey drawings are to be supplied for upload into Drawing Management System (DMS) for a record of progress in design, construction to pre – commissioning construction phases with updated metadata as per EGP-04-01.</p> <p>When design modifications are approved, and new copies of design drawings are created the new version is recorded in the title block and is uploaded into the DMS as the latest version as per ESC-21-02.</p> <p>The final certified copy is known as an As Commissioned which is loaded into the DMS.</p> <p>As Built Detailed Site Survey drawings are forwarded to ARTC DMS with metadata as final records of the change as per EGP-04-01.</p>
Changes to the data	<p>Signalling Technical Drawings – Detailed Site Survey (NSW/QLD)</p> <p>All drawings to be provided in readable drawing formats and specifications listed in ARTC EGP-04-01, as applicable to alteration:</p> <ol style="list-style-type: none"> 1. Detailed Site Survey (DSS) As Designed (CAD/Pdf) 2. Detailed Site Survey (DSS) As Commissioned (Pdf) 3. Detailed Site Survey (DSS) As Built (CAD/Pdf)
Users of the data	Project Managers, Third Party Project Managers, Configuration Manager, Configuration Administrator, Project Administrator & ARTC Maintenance Staff

Specific Project Data Deliverables

<p>Procedural coverage and associated documentation</p>	<p>EGP-04-01 - Engineering Drawings and Documentation EGP-04-02 - Drawing Management System ESD-25-01 - CAD & Drafting Manual for Signal Drawings ESI-21-02 - Inspection and Testing of Signalling – Plans, Programs, Documentation and Packages</p>
<p>Other clarifying commentary (why is the data required)</p>	<p>The purpose is to provide guidelines for the usage of the system for management of engineering drawings pertaining to the Australian Rail Track Corporation (ARTC) network, through the Drawing Management System (DMS). Detailed Site Survey drawing As Built (CAD) is to be provided to ARTC Geospatial Information (GIS). The supply of drawings during the progression of works provides an accurate account of the alteration for ARTC maintenance.</p>

2.7.6 Technical Drawings – Signalling Arrangement Plan (VIC)

Description	Signalling Technical Drawings – Signalling Arrangement Plan (VIC)
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Maintenance Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>Signalling & Communications network infrastructure alterations are shown on Signalling Arrangement Plans for the duration of the project construction phases - Design to As built as per EGP-04-01</p> <p>Versions of network alterations Signalling Arrangement Plan drawings are to be supplied for upload into ARTC Drawing Management System for a record of progress in design, construction to pre – commissioning construction phases with updated metadata as per EGP-04-01.</p> <p>When design modifications are approved and new copies of design drawings are created the new version is recorded in the title block and is uploaded into the ARTC DMS as the latest version as per ESC-21-02.</p> <p>As network alteration works are commissioned with marked up alterations to design, testings and checking of commissioned works completed the Signalling Arrangement Plan is dated, stamped and certified by a Commissioning Manager as per ESC-21-02.</p> <p>The final certified copy is known as an As Commissioned, Certified Office Copy (COC) or Certified Commissioned Copy (CCC) which is loaded into the ARTC DMS and used as the Interim Maintenance Copy (IMC).</p> <p>When the network alteration works are complete and certified an Interim Maintenance Copy (IMC) is issued from the ARTC DMS to ARTC Maintenance for the network alteration on site while As Built drawings are developed, issued & approved.</p> <p>As Built Victorian Signalling Arrangement Plans are forwarded to VIC PTV DMS with metadata as final records of the change as per EGP-04-01.</p> <p>For all (NSW/QLD) Drawings see: Signalling Technical Drawings – Signalling Plan (NSW/QLD)</p>
Changes to the data	<p>Signalling Technical Drawings – Signalling Arrangement Plan (VIC)</p> <p>All drawings to be provided in readable drawing formats (micrstation8) and specifications listed in PTV Vic DMS (detailed in EGP-04-01), as applicable to alteration:</p> <ol style="list-style-type: none"> 1. Signalling Arrangement Plan (SAP) As Designed (CAD/Pdf) 2. Signalling Arrangement Plan (SAP) As Commissioned - CCC, COC (Pdf) 3. Signalling Arrangement Plan (SAP) Interim Maintenance Copy – IMC (Pdf)

Specific Project Data Deliverables

	4. Signalling Arrangement Plan (SAP) As Built (CAD/Pdf)
Users of the data	Project Managers, Third Party Project Managers, Configuration Manager, Configuration Administrator, Project Administrator & ARTC Maintenance Staff
Procedural coverage and associated documentation	EGP-04-01 - Engineering Drawings and Documentation PTV Vic DMS - Public Transport Victoria Drawing Management System Victorian Rail Industry Operators Group Standards (VRIOGS) ESD-25-01 - CAD & Drafting Manual for Signal Drawings ESI-21-02 - Inspection and Testing of Signalling – Plans, Programs, Documentation and Packages
Other clarifying commentary (why is the data required)	The supply of drawings during the progression of works provides an accurate account of the alteration for ARTC maintenance. Signalling Arrangement Plan (CAD) As Built is to be provided to ARTC Geospatial Information (GIS). Drawing ownership and management in Victoria resides with Public Transport Victoria (PTV) and Victorian Drawing Management System procedures apply.

2.7.7 Technical Drawings – Track Circuit and Bonding Plan VIC

Description	Signalling Technical Drawings – Track Circuit and Bonding Plan VIC
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Maintenance Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>Victorian Signalling & Communications Track Circuit and Bonding network infrastructure layout alterations are shown on Track Circuit and Bonding Plans for the duration of the project construction phases - Design to As built as per EGP-04-01</p> <p>Versions of network alteration Track Circuit and Bonding Plans drawings are to be supplied for upload into ARTC Drawing Management System for a record of progress in design, construction to pre – commissioning construction phases. with updated metadata as per EGP-04-01.</p> <p>When design modifications are approved and new copies of design drawings are created the new version is recorded in the title block and is uploaded into the ARTC DMS as the latest version as per ESC-21-02.</p> <p>As network alteration works are commissioned with marked up alterations to design, testings and checking of commissioned works completed the Track Circuit and Bonding Plans are dated, stamped and certified by a Commissioning Manager as per ESC-21-02.</p> <p>The final certified copy is known as an As Commissioned, Certified Office Copy (COC) or Certified Commissioned Copy (CCC) which is loaded into the ARTC DMS and used as the Interim Maintenance Copy (IMC).</p> <p>When the network alteration works are complete and certified an Interim Maintenance Copy (IMC) is issued from the ARTC DMS to ARTC Maintenance for the network alteration on site while As Built drawings are developed, issued & approved.</p> <p>As Built Victorian Signalling Arrangement Plans are forwarded to VIC PTV DMS with metadata as final records of the change as per EGP-04-01.</p> <p>For all Track Insulation Plan (NSW/QLD) Drawings see: Signalling Technical Drawings – Track insulation Plan ((NSW/QLD)</p>
Changes to the data	<p>Signalling Technical Drawings – Track Circuit and Bonding Plan VIC</p> <p>All drawings to be provided in readable drawing formats (micrstation8) and specifications listed in PTV Vic DMS (detailed in EGP-04-01) as applicable to alteration:</p> <ol style="list-style-type: none"> 1. Track Circuit and Bonding Plan (VIC) As Designed (CAD/Pdf) 2. Track Circuit and Bonding Plan (VIC) As Commissioned - CCC, COC (Pdf) 3. Track Circuit and Bonding Plan (VIC) Interim Maintenance Copy – IMC (Pdf)

Specific Project Data Deliverables

	4. Track Circuit and Bonding Plan (VIC) As Built (CAD/Pdf)
Users of the data	Project Managers, Third Party Project Managers, Configuration Manager, Configuration Administrator, Project Administrator & ARTC Maintenance Staff
Procedural coverage and associated documentation	EGP-04-01 - Engineering Drawings and Documentation PTV Vic DMS - Public Transport Victoria Drawing Management System Victorian Rail Industry Operators Group Standards (VRIOGS) ESD-25-01 - CAD & Drafting Manual for Signal Drawings ESI-21-02 - Inspection and Testing of Signalling – Plans, Programs, Documentation and Packages
Other clarifying commentary (why is the data required)	The supply of drawings during the progression of works provides an accurate account of the alteration for ARTC maintenance. Track Circuit and Bonding Plan As Built (CAD) is to be provided to ARTC Geospatial Information (GIS) Drawing ownership and management in Victoria resides with Public Transport Victoria (PTV) and Victorian Drawing Management System procedures apply.

2.7.8 Technical Drawings – Circuit Books (VIC)

Description	Signalling Technical Drawings – Circuit Books (VIC)
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Maintenance Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>Victorian Signalling & Communications network infrastructure circuit alterations are shown on Circuit Books for the duration of the project construction phases - Design to As built as per EGP-04-01.</p> <p>Versions of network alteration Circuit Books drawings are to be supplied for upload into ARTC Drawing Management System for a record of progress in design, construction to pre – commissioning construction phases with updated metadata for upload as per EGP-04-01.</p> <p>When design modifications are approved and new copies of circuit design drawings are created the new version is recorded in the amendment page and is uploaded into the ARTC DMS as the latest version as per ESC-21-02.</p> <p>As network alteration works are commissioned with marked up alterations to design, testings and checking of commissioned works are completed the Circuit Book is stamped, dated and certified on all changed pages by a Commissioning Manager as per ESC-21-02.</p> <p>The final certified copy is known as an As Commissioned, Certified Office Copy (COC) or Certified Commissioned Copy (CCC) which is loaded into the ARTC DMS and used as the Interim Maintenance Copy (IMC).</p> <p>When the network alteration works are complete and certified an Interim Maintenance Copy (IMC) is issued from the ARTC DMS to ARTC Maintenance for the network alteration on site while As Built drawings are developed, issued & approved.</p> <p>As Built Victorian Circuit Books are forwarded to VIC PTV DMS with metadata as final records of the change as per EGP-04-01.</p> <p>For all NSW/QLD Circuit Book Drawings see: Signalling Technical Drawings – Circuit Book (NSW/QLD)</p>
Changes to the data	<p>Signalling Technical Drawings – Circuit Books (VIC)</p> <p>All circuit drawings to be provided in readable drawing formats (microstation8) and pdf with drawing specifications listed in PTV Vic DMS (detailed in ARTC EGP-04-01). Circuit Book pages are WHITE (exception 9. Commissioning Plans - Red) with circuit changes highlighted in the various stage colours as per Vic DMS (VRIOSG), as applicable to the alteration.</p> <ol style="list-style-type: none"> 1. Circuit Book/s (CB) Stage Work Plans (Red) 2. Circuit Book/s (CB) Stage Work Plans (Yellow) 3. Circuit Book/s (CB) Final Construction Plans (Red)

Specific Project Data Deliverables

	<ol style="list-style-type: none"> 4. Circuit Book/s (CB) Final Construction Plans (Yellow) 5. Circuit Book/s (CB) Office Copy (Red) 6. Circuit Book/s (CB) Office Copy (Yellow) 7. Circuit Book/s (CB) Maintenance Copy Advance Issue (Red) 8. Circuit Book/s (CB) Maintenance Copy Advance Issue (Yellow) 9. Control Tables / Aspect Sequence Charts 10. Commissioning Plans <u>Blue Paper</u> (Red) 11. Commissioning Plans (Yellow) 12. Amended Final Plans as In Service 13. Amended Final Plans as In Service (Plastic paper – Duresta) 14. Circuit Book/s (CB) As Commissioned - CCC, COC 15. Circuit Book/s (CB) Interim Maintenance Copy – IMC (Site Copy) 16. Circuit Book/s (CB) As Built White (CAD/Pdf)
Users of the data	Project Managers, Third Party Project Managers, Configuration Manager, Configuration Administrator, Project Administrator & ARTC Maintenance Staff
Procedural coverage and associated documentation	<p>EGP-04-01 - Engineering Drawings and Documentation</p> <p>EGP-04-02 - Drawing Management System</p> <p>ESD-25-01 - CAD & Drafting Manual for Signal Drawings</p> <p>ESI-21-02 - Inspection and Testing of Signalling – Plans, Programs, Documentation and Packages</p> <p>PTV Vic DMS - Victorian Drawing Management System</p> <p>Victorian Rail Industry Operators Group Standards (VRIOGS)</p>
Other clarifying commentary (why is the data required)	<p>Drawing ownership and management in Victoria resides with Public Transport Victoria (PTV) and Victorian Drawing Management System procedures apply.</p> <p>Accurate records of Signalling Circuits As designed to As built with data for the installation and operation of signalling infrastructure are vital for future circuit alterations.</p>

2.7.9 Technical Drawings – Signalling Diagram (VIC)

Description	Signalling Technical Drawings – Signalling Diagram (VIC)
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Maintenance Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>Victorian Signalling network infrastructure alterations are shown on Signalling Diagram for the duration of the project construction phases - Design to As built as per EGP-04-01</p> <p>Versions of network alteration Signalling Diagram drawings are to be supplied for upload into ARTC Drawing Management System (DMS) for a record of progress in design, construction to pre – commissioning construction phases with updated metadata as per EGP-04-01.</p> <p>When design modifications are approved and new copies of design drawings are created the new version is recorded in the title block and is uploaded into the DMS as the latest version as per ESC-21-02.</p> <p>Where applicable, delivery of the final master copy of the Signalling Diagram is required prior to commissioning as per EGP-04-01.</p> <p>As Built Victorian Signalling Diagrams are forwarded to VIC PTV DMS with metadata as final records of the change as per EGP-04-01.</p> <p>For all NSW/QLD Drivers Diagram Drawings see:</p> <p>Signalling Technical Drawings – Drivers Diagram (NSW/QLD)</p>
Changes to the data	<p>Signalling Technical Drawings – Signalling Diagram (VIC)</p> <p>All Signalling Diagram drawings to be provided in readable drawing formats in CAD (microstation8) and Pdf with drawing specifications listed in PTV Vic DMS (detailed in ARTC EGP-04-01), as applicable to alteration:</p> <ol style="list-style-type: none"> 1. Signalling Diagram As Designed (CAD/Pdf) 2. Signalling Diagram As Commissioned (Pdf) 3. Signalling Diagram As Built (CAD/Pdf)
Users of the data	Project Managers, Third Party Project Managers, Configuration Manager, Configuration Administrator, Project Administrator & ARTC Maintenance Staff

Specific Project Data Deliverables

Procedural coverage and associated documentation	EGP-04-01 - Engineering Drawings and Documentation EGP-04-02 - Drawing Management System ESD-25-01 - CAD & Drafting Manual for Signal Drawings ESI-21-02 - Inspection and Testing of Signalling – Plans, Programs, Documentation and Packages PTV Vic DMS - Victorian Drawing Management System Victorian Rail Industry Operators Group Standards (VRIOGS)
Other clarifying commentary (why is the data required)	The supply of drawings during the progression of works provides an accurate account of the alteration for ARTC maintenance. Drawing ownership and management in Victoria resides with Public Transport Victoria (PTV) and Victorian Drawing Management System procedures apply.

2.7.10 Technical Drawings – Circuit Books (SA)

Description	Signalling Technical Drawings – Circuit Books (SA)
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Maintenance Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>South Australian Signalling & Communications network infrastructure circuit alterations are shown on Circuit Books for the duration of the project construction phases - Design to As-built as per EGP-04-01</p> <p>All versions of network alterations Circuit Books drawings are to be supplied for upload into Drawing Management System (DMS) for a record of progress in design, construction to pre – commissioning construction phases with updated metadata for upload in to ARTC – DMS as per EGP-04-01.</p> <p>When design modifications are approved, and new copies of circuit design drawings are created the new version is recorded in the amendment page and is uploaded into the DMS as the latest version as per ESC-21-02.</p> <p>As network alteration works are commissioned with marked up alterations to design, testings and checking of commissioned works are completed the Circuit Book is stamped, dated and certified on all changed pages by a Commissioning Manager as per ESC-21-02.</p> <p>The final certified copy is known as an As Commissioned, Certified Office Copy (COC) or Certified Commissioned Copy (CCC) which is loaded into the DMS and used as the Interim Maintenance Copy (IMC).</p> <p>When the network alteration works are complete and certified an Interim Maintenance Copy (IMC) is issued from the DMS to ARTC Maintenance for the network alteration on site while As Built drawings are developed, issued & approved.</p> <p>As Built Circuit Books drawings are forwarded to ARTC DMS with metadata as final records of the change as per EGP-04-01.</p> <p>For all Victorian/NSW/QLD Circuit Book Drawings see:</p> <p>Signalling Technical Drawings – Circuit Book (VIC)</p> <p>Signalling Technical Drawings – Circuit Book (NSW/QLD)</p>
Changes to the data	<p>Signalling Technical Drawings – Circuit Books (SA)</p> <p>All drawings to be provided in readable drawing formats and specifications listed in ARTC EGP-04-01</p> <ol style="list-style-type: none"> 1. Circuit Book/s (CB) As Designed White Copy (CAD/Pdf) 2. Circuit Book/s (CB) Correlation Blue Copy (Pdf) 3. Circuit Book/s (CB) Construction Green Copy (Pdf) 4. Circuit Book/s (CB) Test Pink Copy (Pdf)

Specific Project Data Deliverables

	<ul style="list-style-type: none"> 5. Control Tables / Aspect Sequence Charts 6. Circuit Book/s (CB) As Commissioned - CCC, COC Pink (Pdf) 7. Circuit Book/s (CB) Interim Maintenance Copy – IMC Yellow (Pdf) 8. Circuit Book/s (CB) As Built White (CAD/Pdf)
Users of the data	Project Managers, Third Party Project Managers, Configuration Manager, Configuration Administrator, Project Administrator & ARTC Maintenance Staff
Procedural coverage and associated documentation	<p>EGP-04-01 - Engineering Drawings and Documentation</p> <p>EGP-04-02 - Drawing Management System</p> <p>ESD-25-01 - CAD & Drafting Manual for Signal Drawings</p> <p>ESI-21-02 - Inspection and Testing of Signalling – Plans, Programs, Documentation and Packages</p>
Other clarifying commentary (why is the data required)	<p>The supply of drawings during the progression of works provides an accurate account of the alteration for ARTC maintenance.</p> <p>The purpose is to provide guidelines for the usage of the system for management of engineering drawings pertaining to the Australian Rail Track Corporation (ARTC) network, through the Drawing Management System (DMS).</p> <p>Drawing ownership and management in Victoria resides with Public Transport Victoria (PTV) and Victorian Drawing Management System procedures apply.</p>

2.7.11 Technical Drawings – Track Plan (SA)

Description	Signalling Technical Drawings – Track Plan (SA)
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Maintenance Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>South Australian Signalling & Communications network infrastructure layout and cable design plan alterations are shown on Track Plans for the duration of the project construction phases - Design to As-built as per EGP-04-01</p> <p>All versions of network alteration Track Plan drawings are to be supplied for upload into Drawing Management System (DMS) for a record of progress in design, construction and pre-commissioning construction phases with updated metadata as per EGP-04-01.</p> <p>When design modifications are approved, and new copies of Track Plan design drawings are created the new version is recorded in the amendment page and is uploaded into the DMS as the latest version as per ESC-21-02.</p> <p>As network alteration works are commissioned with marked up alterations to design, testings and checking of commissioned works are completed the Track Plan is stamped, dated and certified on all changed pages by a Commissioning Manager as per ESC-21-02.</p> <p>The final certified copy is known as an As Commissioned which is loaded into the DMS and used as the Interim Maintenance Copy (IMC).</p> <p>When the network alteration works are complete and certified an Interim Maintenance Copy (IMC) is issued from the DMS to ARTC Maintenance for the network alteration on site while As Built drawings are developed, issued & approved.</p> <p>As Built Circuit Books drawings are forwarded to ARTC DMS with metadata as final records of the change as per EGP-04-01.</p>
Changes to the data	<p>Signalling Technical Drawings – Track Plan (SA)</p> <p>All drawings to be provided in readable drawing formats and specifications listed in ARTC EGP-04-01:</p> <ol style="list-style-type: none"> 1. Track Plan - As Designed (CAD/Pdf) 2. Track Plan - As Commissioned (Pdf) 3. Track Plan - Interim Maintenance Copy (Pdf) 4. Track Plan - As Built (CAD/Pdf)
Users of the data	Project Managers, Third Party Project Managers, Configuration Manager, Configuration Administrator, Project Administrator & ARTC Maintenance Staff

Specific Project Data Deliverables

Procedural coverage and associated documentation	EGP-04-01 - Engineering Drawings and Documentation EGP-04-02 - Drawing Management System ESD-25-01 - CAD & Drafting Manual for Signal Drawings ESI-21-02 - Inspection and Testing of Signalling – Plans, Programs, Documentation and Packages
Other clarifying commentary (why is the data required)	<p>The supply of drawings during the progression of works provides an accurate account of the alteration for ARTC maintenance.</p> <p>The purpose is to provide guidelines for the usage of the system for management of engineering drawings pertaining to the Australian Rail Track Corporation (ARTC) network, through the Drawing Management System (DMS).</p> <p>Drawing ownership and management in Victoria resides with Public Transport Victoria (PTV) and Victorian Drawing Management System procedures apply.</p>

2.7.12 Design Data – Signals, Interlockings & Level Crossings

Description	Signalling Design Data – Signals, Interlockings & Level Crossings
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-20-01
Item Type	Engineering Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>All signalling infrastructure network alterations require the build design data to be provided for ARTC Asset and Maintenance system records. The signalling design data is provided as per EGP-04-01.</p> <p>All Drawings, Documents and Data will be provided as per EGP-04-01</p> <p>Signals Design Data changes could be the result of network infrastructure alterations, but not limited to:</p> <ul style="list-style-type: none"> • Signals relocated • New Computer Based Interlocking • Loop or Siding Removal • Construction/Connection to a third-party site • Signalling and interlocking arrangements for a new crossover • Level Crossing upgrade • Signal Location Removal/Relocation • Loop Extension • Wayside devices • Introduction of new safe working arrangements – TOW or ATMS • New Train Detection system - Track Circuit / Axle Counters • Signalling system “Approved Alternative” works • Alterations to the line speed of traffic or permanent speed restrictions instituted for operational Deliverables • Software Version upgrade • Introduce new Solar or Wind Turbine Power systems <p>All Communications & Wayside Device Design data see:</p> <p>Communications Design Data – Communication & Wayside Devices</p>
Changes to the data	<p>Signalling Design Data – Signals, Interlockings & Level Crossings</p> <p>The network alteration information will be provided in various formats in drawings (CAD/Pdf as required), data, photos, documents, as applicable to alteration:</p> <ol style="list-style-type: none"> 1. Signalling Technical Drawings 2. Signal Sighting Data 3. Computer Based Interlocking Data and Configuration Table 4. Grade Crossing Predictor Data/Configuration/Design

Specific Project Data Deliverables

	<ol style="list-style-type: none"> 5. Train detection / Track Circuit Configuration/Design 6. VDU Signal Control Systems Data and screen Designs 7. Telemetry Remote System Data/Configuration/Design 8. Any configuration or other data in data communications links for CBI or Telemetry Systems 9. Level Crossing Monitor Data and Configuration 10. ALCAM data provided for Level Crossing Management system 11. Copies of all software executables & version history logs deployed in the delivered assets 12. New Equipment and Type Approvals 13. Copies of any software code developed that is present in the delivered system 14. Copies of all software used to convert software code to software executables 15. Power Supply Design calculations 16. Cable Design and Cable Test results 17. Signalling Asset Design report and Calculation Sheets 18. Control Table and Aspect Sequence Chart 19. Signalling Photos /Level Crossing Quadrant Photos 20. Wayside Device Documentation & Data 21. GPS Data 22. Interface Agreements 23. Engineering Design Drawings 24. Signage Installed/Removed 25. Equipment Spares
Users of the data	Approval Authorities, Project Managers, Signal Maintenance Engineers, ARTC Maintenance Staff
Procedural coverage and associated documentation	<p>EGP-03-01 - Rail Network Configuration</p> <p>EGP-04-01 - Engineering Drawings and Documentation</p>

Specific Project Data Deliverables

Other clarifying commentary (why is the data required)	<p>All network change information to be captured for maintenance, asset and risk management systems.</p> <p>Accurate records of Signalling Data As-Designed to As Built for the installation operation of signalling infrastructure is vital for future design alterations.</p>
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2.7.13 ARTC Works Packages-Signalling, Communications & Wayside Equipment

Description	ARTC Works Packages-Signalling, Communications & Wayside Equipment
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per ESC-21-02
Item Type	Engineering Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>All signalling network alterations in the ARTC network is defined in ESC-21-02</p> <p>This Standard defines the planning, programming, documentation and work packages required for the inspection and testing, quality of installation and commissioning work necessary for safety assurance of new and altered signalling works on ARTC infrastructure.</p> <p>The Deliverable is for the implementation of an effective, proven auditable process for verification and validation of the safety integrity of the signalling system and verification of compliance of the new or altered system to ARTC Engineering Procedures and Standards.</p> <p>The process shall include the retention of the records providing objective evidence of the planning, implementation and evaluation of the inspection, testing and commissioning.</p>
Changes to the data	<p>ARTC Works Packages-Signalling, Communications & Wayside Equipment</p> <p>All ARTC Signalling & Communications network alterations will require an ARTC work package. Project Change Initiator will provide copies of the deliverables below as required for the works as per ESC-21-02</p> <ol style="list-style-type: none"> 1. Installation Work Package 2. Commissioning Work Package 3. Minor Work Package
Users of the data	Project Managers, Project Engineers, Area Managers, Signal Managers, Project Administrators & ARTC Maintenance
Procedural coverage and associated documentation	<p>EGP-20-01 - Project Management</p> <p>ESC-21-02 - Inspection and Testing of Signalling – Plans, Programs, Documentation and Packages</p>
Other clarifying commentary (why is the data required)	<p>The Signalling Works packages provide the path of installation and inspection and testing of all signalling alterations from major or minor works in the network.</p> <p>The installation and inspection and testing deliverables are good tools for locating operational or functional issues with signalling systems or equipment.</p>

2.8 Interlockings

2.8.1 Interlocking Configuration – Computer Based Interlocking (CBI)

Description	Interlocking Configuration – Computer Based Interlocking (CBI)
Project Phase	3 & 5/6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Engineering Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>All signalling infrastructure Computer Based Interlocking (CBI) network alterations require the build design data to be provided for ARTC Asset and Maintenance system records. The signalling CBI interlocking design data is provided as per EGP-04-01.</p> <p>The change initiator will provide version control for all software and hardware used for the CBI system, design system, simulator, maintenance terminal, event logger and test equipment.</p> <p>Each and every change to any aspect of the CBI system design, hardware or software shall be verified and validated to at least the same level as the original validated design</p> <p>Computer Based Interlocking CBI systems control the operation of rail interlockings throughout the ARTC network. There are various types of Computer Based Interlockings – CBI comprising of:</p> <ul style="list-style-type: none"> • Ansaldo - Microlok II • Alstom - VPI • Invensys - Westrace I • Invensys - Westrace II • Invensys - SSI • Invensys - Westlock • GE Harmon - VHLC • GE - EC4 • GE - ElectroLogIXS <p>All Drawings, Documents and Data will be provided as per EGP-04-01</p>
Changes to the data	<p>Interlocking Configuration – Computer Based Interlocking (CBI)</p> <p>All network infrastructure alterations to the interlocking configuration in a Computer Based Interlocking will be provided by the change initiator, including:</p> <ol style="list-style-type: none"> 1. (CBI) - Control Tables 2. (CBI) - Interlocking Bit Lists 3. (CBI) - Interlocking Data Design

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	<ul style="list-style-type: none"> 4. (CBI) - Interlocking Correspondence Testing 5. (CBI) - Interlocking Data As Built 6. (CBI) - Interlocking Interface As Designed 7. (CBI) - Interlocking Interface Test Plan 8. (CBI) - Interlocking Interface As Built 9. (CBI) - Interlocking Software Data/Version 10. (CBI) - Interlocking Testing Files 11. (CBI) - Licences 12. (CBI) - Test Certificates
Users of the data	Project Managers, Approval Authorities, ARTC Control System Engineers, Signalling Managers & Project Administrators
Procedural coverage and associated documentation	EGP-04-01 - Engineering Drawings and Documentation
Other clarifying commentary (why is the data required)	<p>Engineering drawings, related documentation and data are required to show how infrastructure has been designed and constructed and are part of the permanent records of our organisation as required by law.</p> <p>Accurate records of design to As Built data for the installation of Computer Based Interlockings are vital for future interlocking alterations.</p>

2.8.2 Interlocking Configuration – Mechanical Interlocking

Description	Interlocking Configuration – Mechanical Interlocking
Project Phase	3 & 5/6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Engineering Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>All signalling infrastructure Mechanical Interlocking network alterations require the build design data to be provided for ARTC Asset and Maintenance system records. The signalling Mechanical Interlocking design data is provided as per EGP-04-01.</p> <p>All Drawings, Documents and Data will be provided as per EGP-04-01</p>
Changes to the data	<p>Interlocking Configuration – Mechanical Interlocking</p> <p>All network infrastructure alterations to the interlocking configuration in a Mechanical Interlocking will be provided by the change initiator, including:</p> <ol style="list-style-type: none"> 1. Signal Technical Drawings (Inc Control Tables) 2. Mechanical Interlocking - Locking Tables 3. Mechanical Interlocking - Locking Diagram
Users of the data	Project Managers, Approval Authorities, ARTC Signalling Managers & Project Administrators
Procedural coverage and associated documentation	EGP-04-01 - Engineering Drawings and Documentation
Other clarifying commentary (why is the data required)	<p>Engineering drawings, related documentation and data are required to show how infrastructure has been designed and constructed and are part of the permanent records of our organisation as required by law.</p> <p>Accurate records of As Design to As Built data for the installation of Mechanical Interlockings are vital for future interlocking alterations.</p>

2.9 Electrical

2.9.1 Technical Drawings – Schematics

Description	Electrical Technical Drawings – Schematics
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Maintenance Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>Electrical network infrastructure alterations are shown on Electrical Schematic Drawings for the duration of the project construction phases - Design to As-built as per EGP-04-01</p> <p>All versions of network alteration Electrical Schematic drawings to be supplied for upload into Drawing Management System (DMS) for a record of progress in design and construction. All network alteration drawings will be supplied with updated metadata for upload in to ARTC – DMS.</p> <p>When design modifications are approved, and new copies of design drawings are created the new version is recorded in the title block and is uploaded into the DMS as the latest version.</p> <p>As network alteration works are commissioned with marked up alterations to design, testings and checking of commissioned works are completed the Electrical Schematic is dated, stamped and certified by a Commissioning Manager.</p> <p>As Built Electrical Schematic drawings are forwarded to ARTC DMS with metadata as final records of the change as per EGP-04-01.</p> <p>For all Electrical power calculations, energy authority arrangements and energy certificates of compliance see: Energy Design Data</p>
Changes to the data	<p>Electrical Technical Drawings – Schematics</p> <p>All drawings to be provided in readable drawing formats and specifications listed in ARTC EGP-04-01, as applicable to the alteration:</p> <ol style="list-style-type: none"> 1. Electrical Schematic Drawings - As Designed (CAD/Pdf) 2. Electrical Schematic Drawings - As Commissioned (Pdf) 3. Electrical Schematic Drawings - As Built (CAD/Pdf)
Users of the data	Project Managers, Third Party Project Managers, Configuration Manager, ARTC Electrical Managers, Configuration Administrator, Project Administrator & ARTC Maintenance.
Procedural coverage and associated documentation	<p>EGP-03-01 - Rail Network Configuration Management</p> <p>EGP-04-01 - Engineering Drawings and Documentation</p> <p>EGP-04-02 - Drawing Management System</p>

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Other clarifying commentary (why is the data required)	<p>Accurate records of High Voltage Electrical drawings As Designed to As Built for the installation operation of electrical infrastructure is vital for future design alterations.</p> <p>All network alteration information to be captured for maintenance, asset and risk management systems.</p> <p>The purpose is to provide guidelines for the usage of the system for management of engineering drawings pertaining to the Australian Rail Track Corporation (ARTC) network, through the Drawing Management System (DMS).</p>
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2.9.2 Energy Design Data – High Voltage Power

Description	Energy Design Data – High Voltage Power
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Engineering Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	All High Voltage Power infrastructure network alteration requires the build design data to be provided for ARTC Asset and Maintenance system records. All Drawings, Documents and Data will be provided as per EGP-04-01.
Changes to the data	<p>Energy Design Data – High Voltage Power</p> <p>The High Voltage network alteration information will be provided in various formats in drawings (CAD/Pdf as required), data, photos, documents , as applicable to the alteration:</p> <ol style="list-style-type: none"> 1. Energy Design Data - High Voltage Drawings (Inc. in Electrical Technical Drawings CAD – Pdf as applicable) 2. Energy Design Data - Engineering Design Drawings 3. Energy Design Data – Cable Design and Cable Testing 4. Energy Design Data – Power Calculations 5. Energy Design Data – Energy Authority Power Arrangements 6. Energy Design Data – Interface Agreements 7. Energy Design Data – Energy Certificates of Compliance 8. Energy Design Data – Signage Installed
Users of the data	Approval Authorities, Project Managers, Electrical Engineers, Signal Maintenance, ARTC Maintenance
Procedural coverage and associated documentation	EGP-03-01 - Rail Network Configuration EGP-04-01 - Engineering Drawings and Documentation
Other clarifying commentary (why is the data required)	All network change information to be captured for maintenance, asset and risk management systems.

2.9.3 ARTC Works Packages – Electrical High Voltage

Description	ARTC Works Packages – Electrical High Voltage
Project Phase	1- 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-20-01
Item Type	Engineering Information
ARTC Update Location	Enterprise Content Management System
Detailed description of the Deliverables	<p>The Approval Authority is responsible for overseeing all aspects of the project and to ensure controls are in place, and monitored, for project success. The Approval Authority is to be able to provide guidance and assist in decision making as required during the project.</p> <p>Specific activities that the Approval Authority is responsible for are listed at paragraphs 3.2.2 for Simple Projects and 3.3.2 for Complex Projects in EGP-20-01.</p> <p>The Approval Authority Project Checklist EGP2001T-04 is available to assist Approval Authorities with their responsibilities.</p> <p>All ARTC projects are required to comply with the WHS Act and its Regulations. The projects that meet the definition of a “Construction Project” (see s1.4 Definitions) have additional WHS Deliverables, and guidance for meeting these Deliverables is set out in the referenced documents in Appendix 2, EGP-20-01.</p>
Changes to the data	<p>ARTC Works Packages – Electrical High Voltage</p> <p>All ARTC Electrical High Voltage network alterations will require an ARTC work package as a Simple, Simple – Work Package or Complex Project as per EGP-20-01.</p> <ol style="list-style-type: none"> 1. Complex Project Management Plan 2. Complex Project Work Package 3. Complex Project Checklists 4. Simple Project Management Plan 5. Simple Project Work Package 6. Simple Project Checklist
Users of the data	Project Managers, Project Engineers, Area Managers, Project Administrators & ARTC Maintenance

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Procedural coverage and associated documentation	EGP-20-01 - Project Management EGW-20-01 - Complex Project EGW2001T-12 - Complex Project Work Package EGW2001T-01 - Complex Project Management Plan EGW2001T-02 - Complex Project Checklist Phase 1 EGW2001T-03 - Complex Project Checklist Phase 2 EGW2001T-04 - Complex Project Checklist Phase 3 EGW2001T-05 - Complex Project Checklist Phase 4 EGW2001T-06 - Complex Project Checklist Phase 5 EGW-20-02 - Simple Project EGW2002T-01 - Simple Project Management Plan EGW2002T-03 - Simple Project Work Package EGW2002T-04 - Simple Project Checklist
Other clarifying commentary (why is the data required)	<p>Approval Authorities, Project Managers and Project Staff are required to keep records of the current status of actions they are responsible for in each project they are involved in.</p> <p>As Approval Authorities, Project Managers and/or Project Staff change over, incoming staff shall ascertain which tasks they are responsible for which remain to be accomplished for the project to capture the infrastructure change.</p>

2.10 Communications**2.10.1 Design Data – Communication & Wayside Devices**

Description	Communications Design Data – Communication & Wayside Devices
Project Phase	3/5 & 6
Discipline	Engineering General
Delivery Date Deliverables	As per EGP-04-01
Item Type	Engineering Information
ARTC Update Location	Drawing Management System
Detailed description of the Deliverables	<p>All communications infrastructure network alterations require the build design data to be provide for ARTC Asset and Maintenance system records. The communications design data is provided as per EGP-04-01.</p> <p>All Drawings, Documents and Data will be provided as per EGP-04-01</p> <p>Communications Design Data alterations could be the result new installations, removals or upgrades of network infrastructure in, but not limited to:</p> <ul style="list-style-type: none"> • Network Control Centre • Phoenix Systems • Software Data Version • Telemetry Remote Control Data Systems • Level Crossing Monitor Data Systems • Advanced Train Management System • Computer Based Interlocking Data Systems • Wayside Systems • Signalling and interlocking arrangements for a new crossover • Level Crossing upgrade • Signal Location Removal/Relocation • Loop Extension • Introduction of new safe working arrangements – TOW or ATMS • New Train Detection system - Track Circuit / Axle Counters • Signals relocated • New Computer Based Interlocking • Loop or Siding Removal • Construction/Connection to a third-party site <p>All Signalling Design Data see:</p> <p>Signalling Design Data – Signals, Interlockings & Level Crossings</p>

<p>Changes to the data</p>	<p>Communications Design Data – Communication & Wayside Devices</p> <p>The network alteration information will be provided in various formats in drawings (CAD/Pdf as required), data, photos, documents , as applicable to alteration:</p> <ol style="list-style-type: none"> 1. Signalling Technical Drawings 2. Engineering Design Drawings 3. Software Version upgrade 4. Telemetry Remote System Data/Configuration/Design 5. Phoenix System Data/Configuration/Design 6. Computer Based Interlocking Data/Configuration/Design 7. Advanced Train Management System Configuration, Design & Data (ATMS) 8. Level Crossing Monitoring System Data 9. GPS Data 10. Wayside Systems Data/Configuration/Design 11. Grade Predictor Data/Configuration/Design 12. VDU Signal Control Systems Data and screen designs 13. Any configuration or other data in data communications links for CBI or Telemetry Systems 14. Copies of all software executables deployed in the delivered assets 15. Software version history logs for all software deployed in the delivered assets 16. Copies of any software code developed that is present in the delivered system 17. Copies of all software used to convert software code to software executables 18. New Equipment & Type Approvals 19. Equipment Spares 20. Communications Architecture
<p>Users of the data</p>	<p>Approval Authorities, Project Managers, Control Systems Engineers, Signal Managers, Signal Maintenance, ARTC Maintenance</p>
<p>Procedural coverage and associated documentation</p>	<p>EGP-03-01 - Rail Network Configuration Management</p>
<p>Other clarifying commentary (why is the data required)</p>	<p>All network change information to be captured for maintenance, asset and risk management systems.</p>

2.11 Geotechnical

2.11.1 Locality Map

Description	Geotechnical – Locality Map
Project Phase	3 & 6
Discipline	Geotechnical
Delivery Date Deliverables	30 days after Geotechnical assessment
Item Type	Engineering Information
ARTC Update Location	Geotech Database, Drawing Management System
Detailed description of the Deliverables	The Locality Map such as a street directory or similar format showing the general area of the site works.
Changes to the data	<p>Geotechnical – Locality Map</p> <p>A locality map showing the general area and shall include, but not limited to:</p> <ol style="list-style-type: none"> 1. Label “From Sydney” and “To Country” at the edge of the map. 2. North point. 3. Circle or polygon to identify the “Site of Works” 4. Track kilometrage 5. Relationship to other pertinent site features 6. GPS coordinates
Users of the data	ARTC Geotechnical Engineer, Project Engineers and ARTC Maintenance
Procedural coverage and associated documentation	ARTC Geotechnical Database EGP-04-01 - ARTC Drawing Management System
Other clarifying commentary (why is the data required)	The location of the geotechnical works is recorded.

2.11.2 Quality Control Records

Description	Geotechnical – Quality Control Records
Project Phase	3/5 & 6
Discipline	Geotechnical
Delivery Date Deliverables	30 days after Geotechnical assessment
Item Type	Engineering Information
ARTC Update Location	Geotech Database
Detailed description of the Deliverables	<p>Geotechnical details of all Earthworks along with materials being used are to be properly recorded so that work of satisfactory quality can be achieved which can also be verified at a later stage.</p> <p>Records are also required to be maintained to develop Works as Executed drawings (As Built) and other details, which shall become permanent records and could be helpful to plan future development, maintenance and remedial measures.</p>
Changes to the data	<p>Geotechnical – Quality Control Records</p> <p>Adequate geotechnical earthworks records need to be kept during construction, including conditions encountered, works as executed records, field and laboratory testing and all variations to the approved specifications and drawings. The following records of quality control need to be provided as appropriate:</p> <ol style="list-style-type: none"> 1. All geotechnical reports and correspondence (investigation reports, design reports, risk assessments, etc. with copies in Pdf format). Daily geotechnical report (generally appropriate for larger projects. Earthworks summary report (generally appropriate for small projects) 2. Levels after stripping. 3. Materials exposed after stripping and the criteria upon which the decision to cease stripping was made. 4. Levels after completion of excavation and filling 5. Location and nature of all areas subject to additional subgrade/foundation treatment, and the criteria upon which the decision to apply the specific treatment was made. 6. The compacted thickness of all fill lifts. The compacted thickness and width of all earthworks layers. 7. Location and level of all compliance tests (material quality and compaction tests) for all materials used in the earthworks, together with Test Certificates. Where a test is a retest of a Lot that was previously rejected, this should be stated. 8. All field and laboratory test reports (material test reports, compaction test reports, etc.). 9. Lot register. 10. Action taken where testing indicated that the specified criteria had not been met.

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	<ol style="list-style-type: none"> 11. All areas in which the fill material or compaction is to be of a lesser standard or a greater standard than elsewhere on the site. 12. Details of test rolling, if undertaken. 13. Source and type of fill material used in various zones/Lots. 14. Quality and Compaction of all materials in earthworks relative to the specification. 15. Details of machineries engaged in execution of earthwork. 16. Anomalies in the works with the history of their treatment. 17. The SUPERINTENDENT's written or electronic diary of activities. 18. Geotechnical Compliance and Design Certification Certificates. 19. Photographic records 20. Request for Information (RFI) and Non Conformance Reports (NCR) 21. Inspection and Test Plans (signed off by the PRINCIPAL or its' Representative). 22. Changes in the project according to the design documents and the justification with the corresponding history.
Users of the data	ARTC Geotechnical Engineer, Project Managers, Project Administration, Project Engineers and ARTC Maintenance Staff
Procedural coverage and associated documentation	ARTC Geotechnical Database Track & Civil CoP Section 8 Earthworks ETC-08-02 - Railway Earthworks ETC-08-03 - Earthworks Materials Specification ETC-08-04 – Earthworks Construction Specification
Other clarifying commentary (why is the data required)	Geotechnical Earthworks Data is required for maintaining ARTC's Geotechnical Database and list of geotechnical assets for asset management, maintenance and risk management purposes.

2.11.3 Works as Executed / As Built Drawings

Description	Geotechnical – Works as Executed / As Built Drawings
Project Phase	5
Discipline	Geotechnical
Delivery Date Deliverables	30 days after Geotechnical assessment
Item Type	Engineering Information
ARTC Update Location	Geotech Database
Detailed description of the Deliverables	<p>Geotechnical details of the Earthworks along with materials being used are to be properly recorded so that work of satisfactory quality can be achieved which can also be verified at later stage as per ARTC ETC-08-04</p> <p>Records are also required to be maintained to develop Works as Executed drawings (As-Built) and other details, which would become permanent records and could be helpful to plan developmental activities and remedial measures if need be in the future.</p> <p>A completion Works as Executed drawing is prepared to show completed details of formations, embankments, cuttings, retaining walls, drainage systems, etc.</p>
Changes to the data	<p>Geotechnical – Works as Executed / As Built Drawings</p> <p>Works as Executed/As Built Drawings shall include, but not limited to (as applicable):</p> <ol style="list-style-type: none"> 1. Applicable surveyed items (e.g. natural features, structures, signal footings, signal troughing, train stops, services, face of platforms, retaining walls, bridge abutments and piers). 2. Location and details of all slope stabilisation measures such as retaining walls, reinforced soil slopes, soil nails, rock bolts, dowels, mesh, and shotcrete. 3. Location and details of all temporary and permanent monitoring and early warning systems such as extensometers, piezometers inclinometers, rainfall gauges, flood flow / depth gauges, remote cameras, and rock fall detection fences. 4. Drainage layout and details (pipe size/type/class; grade and extent of pipe runs / open channels, including pipe invert level at all pit locations), including all changes to existing surface and subsurface drainage. 5. Cross and Long Sections drawn at a suitable and legible scale, including cross-sections of embankments, cutting, formation, drainage channels and basins. Vertical exaggeration can be used to highlight grades. 6. Location and details of scour/erosion protection. 7. Description of the soil/rock exposed at subgrade/foundation level, and in the sides of excavations. 8. Details of foundation/subgrade treatments including depth, location and materials used.

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	<p>9. Location and description of geological features encountered.</p> <p>10. All other relevant miscellaneous changes.</p>
Users of the data	ARTC Geotechnical Engineer, Project Managers, Project Engineers, Project Administration and ARTC Maintenance Staff
Procedural coverage and associated documentation	<p>ARTC Geotechnical Database</p> <p>Track & Civil CoP Section 8 Earthworks</p> <p>ETC-08-02 - Railway Earthworks</p> <p>ETC-08-03 - Earthworks Materials Specification</p> <p>ETC-08-04 – Earthworks Construction Specification</p>
Other clarifying commentary (why is the data required)	<p>Geotechnical Work-as-Executed Drawings are certified plans showing details of work as actually constructed, they also identify departures, additions and deletions from approved design plans.</p> <p>Data for preparing work-as-executed drawings is obtained by measurement and survey as and/or after works are completed.</p>

2.11.4 Asset List

Description	Geotechnical – Asset List
Project Phase	6
Discipline	Geotechnical
Delivery Date Deliverables	30 days after Geotechnical assessment
Item Type	Engineering Information
ARTC Update Location	Geotech Database
Detailed description of the Deliverables	<p>Geotechnical details of the Earthworks along with materials being used are to be properly recorded so that work of satisfactory quality can be achieved which can also be verified at later stage.</p> <ol style="list-style-type: none"> 1. An accurate description of the location of work site for the network alteration is required for ARTC records. A mandatory list to describe the location is: 2. Track Base Code 3. Account Code 4. Track “From and To” Kilometres 5. Track Centreline Offset 6. Trackside (Upside and Downside, etc.) 7. Orientation
Changes to the data	<p>Geotechnical – Asset List</p> <p>The network alteration work site location details are to be supplied for the following:</p> <ol style="list-style-type: none"> 1. New or modified cut and fills greater than 1 m in depth/height (WAE drawings, geology, material types, batter slope angles and height, extent and details of batter slope treatments such as shotcrete, photo of each asset (cut, fill, retaining structure, drainage line, etc.) 2. New or modified track formation, traceable to the applicable QA records 3. Track alignment changes (slews, deviations, etc.) 4. Track name and usage changes (e.g. where a Loop line becomes the Main line or vice versa, a single Main line is renamed as an Up Main line following duplication) 5. Rockbolts, soil nails, dowels, retaining walls, and all other similar earth retaining structures. 6. Surface and subsurface drainage systems including location, type/class, size and invert level of all pipes, sumps, pits, flow dissipaters and detention basins (pit table and pipe table(s).
Users of the data	ARTC Geotechnical Engineer, Project Managers, Project Engineers, Project Administration and ARTC Maintenance Staff

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Procedural coverage and associated documentation	ARTC Geotechnical Database Track & Civil CoP Section 8 Earthworks ETC-08-02 - Railway Earthworks ETC-08-03 - Earthworks Materials Specification ETC-08-04 – Earthworks Construction Specification
Other clarifying commentary (why is the data required)	Geotechnical Earthworks Asset Data is required maintaining ARTC's Geotechnical Database and list of geotechnical assets for asset management, maintenance and risk management purposes.

2.11.5 Asset Maintenance Management Plans

Description	Geotechnical – Asset Maintenance Management Plans
Project Phase	5
Discipline	Geotechnical
Delivery Date Deliverables	30 days after Geotechnical assessment
Item Type	Maintenance Information
ARTC Update Location	Ellipse & Geotechnical Database
Detailed description of the Deliverables	<p>Geotechnical details of the Earthworks along with materials being used are to be properly recorded so that work of satisfactory quality can be achieved which can also be verified at later stage.</p> <p>Asset Maintenance Management Plans - where applicable, detailing the actions and frequency of inspection and maintenance tasks to effectively maintain the ARTC system over its designed lifecycle shall be provided.</p> <p>A programmed maintenance management plan is to be developed as per the Track & Civil CoP Section 8 Earthworks and the Track & Civil Technical Maintenance Plan.</p> <p>Track & Civil Technical Maintenance Plan provides the Type of Inspection by which information on the condition of the infrastructure is collected and recorded.</p> <p>Both Scheduled and Unscheduled Inspections may take the form of a Patrol, General or Detailed Inspection. These types of inspections are detail in as per ETE-00-03, and include;</p> <ul style="list-style-type: none"> • Patrol Inspections - Patrols are carried out by track inspectors who are familiar with the track characteristics and traffic patterns of the section • General Inspections - General inspections are typically visual but may include some elementary site testing and measurement • Detailed Inspections - Detailed inspections address specific aspects of the infrastructure condition or behaviour and may involve visual inspection, measurements, testing and some diagnostic assessment. In addition to the elements included in general inspections they should be at a level of detail sufficient to record the condition of the infrastructure for purposes such as: <ul style="list-style-type: none"> a. determining necessary repairs or remedial actions b. establishing the capacity rating against set condition standards or assessment guidelines <p>Any specific specialised maintenance, inspection or scheduled task Deliverable for assets upgraded or installed will be provided to be recorded for routine inspection regime.</p>
Changes to the data	<p>Geotechnical – Asset Maintenance Management Plans</p> <p>The following will be required to be identified from the Technical Maintenance Plan to meet the Asset Maintenance Plan Deliverables as per ETE-00-03:</p> <ol style="list-style-type: none"> 1. Types of Inspection 2. Description of Infrastructure to be inspected 3. Frequency of the inspection

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	4. Responsible person to conduct the inspection
Data output	Reporting, Due Diligence, Compliance obligations
Users of the data	ARTC Geotechnical Engineer, Project Managers, Project Engineers, Area Managers and ARTC Maintenance Staff
Procedural coverage and associated documentation	ARTC Geotechnical Database Track & Civil CoP Section 8 Earthworks ETC-08-04 - Earthworks Construction Specification ETE-00-03 - Track & Civil Technical Maintenance Plan TMP
Other clarifying commentary (why is the data required)	Geotechnical Earthworks Asset Data is required maintaining ARTC's Geotechnical Database and list of geotechnical assets for asset management, maintenance and risk management purposes.

2.12 Environmental

2.12.1 Works as Executed & Asset List

Description	Environmental - Works as Executed & Asset List
Project Phase	5
Discipline	Environmental
Delivery Date Deliverables	60 days following the completion of the deliverables for each project within the programme.
Item Type	<p>Environmental Infrastructure</p> <p>Monitoring Data / Corporate Data</p> <p>Data is required to be in the correct format, verified and accepted by ARTC and accepted by the system owner.</p>
ARTC Update Location	GreenPoint, EIAMap, Heritage and Property Registers, Contaminated Land Register, Compliance Register, ARTCMap (ARTC Map, Data Dictionary and Naming Convention System)
Data Entry pathway	<p>GreenPoint – Direct entry</p> <p>EIAMap – Direct entry to register. Request to GIS team for upload to ARTCMap</p> <p>Contaminated Land Register – Direct entry</p> <p>ARTCMap - Request to GIS team for upload to ARTCMap. Request to Ellipse team for upload if required</p> <p>Heritage Register – Request to Heritage Manager for upload to register</p>
Detailed description of the Deliverables	<p>ARTC requires construction and maintenance activities to comply with the ARTC EMS and relevant legislation, licences, permits and approvals are being complied with and to ensure continuous improvement against our commitments for managing environmental risks</p> <p>Works as Executed Environmental records will identify measures implemented as a result of project or maintenance alterations to meet ARTC standards and legislation. These records will also include:</p> <ul style="list-style-type: none"> The types of infrastructure installed in support of environmental works (monitoring wells, flora/fauna survey locations, barriers or controls in place to protect cultural heritage sites, permanent erosion and sediment controls etc) Relevant details regarding asset numbering and required maintenance needs for the infrastructure (eg sediment traps or culverts requiring clean out, repair) to ensure they can be entered into the relevant maintenance schedules.

Changes to the data	<p>Environmental - Works as Executed & Asset List</p> <p>A completion drawing showing details of where required environmental measures have been implemented.</p> <p>Drawings shall include (as applicable):</p> <ol style="list-style-type: none"> 1. Noise walls or noise mitigation measures, including on property treatments and details of architectural treatments to dwellings 2. Contaminated or remediated areas 3. Threatened species or communities' areas 4. Fauna furniture, including exclusion fencing 5. Permanent erosion and sediment controls, eg. sediment traps, flow dissipaters 6. Visual amenity treatments, eg. tree planting, bunds, walls 7. Environmental controls or mitigation measures installed under agreement on private property 8. Indigenous heritage sites, items or areas 9. Non-indigenous heritage structures or items 10. Areas subject to ongoing management (e.g. management plans)
Data output	Reporting, Due Diligence, Compliance obligations
Users of the data	Approval Authorities, Project Managers, Environmental Advisors, Project Administrator, Configuration Management & ARTC Staff
Procedural coverage and associated documentation	<p>ENV-PR-001 - Environmental Management System</p> <p>ENV-PR-005 - Environmental Site Inspection</p> <p>ENV-PR-007 - Environmental Management Plan operation (QLD)</p> <p>ENV-PR-008 - Review of Environmental Factors</p>
Other clarifying commentary (why is the data required)	The Project Manager is responsible for ensuring the recommendations are actioned within the agreed timeframes and providing evidence of close out to the Environment Officer.

2.12.2 Environment & Sustainability

Description	Environmental - Impact Assessment, Sustainability and Climate Change Obligations and Management Requirements
Project Phase	3/5 & 6
Discipline	Environmental
Delivery Date Deliverables	60 days following the completion of the deliverables for each project within the programme.
Item Type	Operational Strategies and or Policies associated with a Condition of Approval Monitoring and Management Plans Monitoring Data / Corporate Data Data is required to be in the correct format, verified and accepted by ARTC and accepted by the system owner.
ARTC Update Location	See Environmental data flow map. GreenPoint, EIAMap, Heritage and Property Registers, Contaminated Land Register, Compliance Register, ARTCMap (ARTCMap data Dictionary and Naming convention System)
Data Entry pathway	GreenPoint – Direct entry ERMS – Risk Management System EIAMap – Direct entry to register. Request to GIS team for upload to ARTCMap Contaminated Land Register – Direct entry ARTCMap - Request to GIS team for upload to ARTCMap. Request to Ellipse team for upload if required Heritage Register – Request to Heritage Manager for upload to register
Detailed description of the Deliverables	ARTC requires construction and maintenance activities to comply with the ARTC EMS and relevant legislation, licences, permits and approvals are being complied with and to ensure continuous improvement against our commitments for managing environmental risks. <i>It is noted that project approvals may also contain requirements not directly related to environmental management, eg, level crossing performance, inspection of culverts etc, that are considered in other sections of this document.</i>
Changes to the data	Environmental / Sustainability / Climate Change / Impact Assessment / Obligations and Management Requirements <ol style="list-style-type: none"> 1. Specialist studies e.g. noise, air quality, contamination, ecology, heritage, noise, traffic, socio-economic assessments 2. Environmental impact statements and environmental management plans 3. Environmental and planning conditions permits or approvals AND evidence of compliance with or completion/close out of the relevant requirements attached to these conditions/licenses. 4. Consistency assessment or approved modifications 5. Contamination, remediation and validation reports (including any asbestos clearance certificates) 6. Sampling, chemical analysis and/or waste classification reports for any remaining waste, and/or spoil or ballast stockpiles

Specific Project Data Deliverables

	<ul style="list-style-type: none"> 7. Environmental close-out report including copies of all environmental assessments, audits, environmental licence updates and notices 8. Ongoing environmental management obligations (e.g. contamination management plans, noise monitoring, flood flow / depth monitoring, level crossing performance assessment etc.), and as per Environment Works as Executed & Asset List 9. Deeds of Agreement and/or contracts for environmental controls or mitigation measures installed either by the project, or by others under agreement on private property. 10. Electronic shape files for field work and modelling (e.g. operational noise or air contours or GPS coordinates of sensitive sites) 11. Relevant project environmental risk registers to understand potential legacy risks. 12. Social performance management plans 13. Sustainability and Climate Change strategies and policies
Users of the data	Approval Authorities, Project Managers, Environmental Advisors, Project Administrator, Configuration Management & ARTC Staff
Procedural coverage and associated documentation	<p>ENV-PR-001 - Environmental Management System</p> <p>ENV-PR-005 - Environmental Site Inspection</p> <p>ENV-PR-007 - Environmental Management Plan operation (QLD)</p> <p>ENV-PR-008 - Review of Environmental Factors</p>
Other clarifying commentary (why is the data required)	The Project Manager is responsible for ensuring the recommendations are actioned within the agreed timeframes and providing evidence of close out to the Environment Advisor.

2.12.3 GIS - Environmental

Description	Environmental – Spatial Data Requirements
Project phase	3/5 & 6
Discipline	Environmental
Delivery date deliverables	30 days following the completion of the deliverables for each project.
Item type	Environmental and Heritage Spatial / GIS data
ARTC update location	ARTC GIS, ARTC Map
Data entry pathway	ARTC Map – Provide to GIS team for upload to ARTC GIS including ARTCMap. Ellipse - Request to Ellipse team for upload if required
Detailed description of the deliverables	<p>A template geodatabase should be provided to the service provider and completed in accordance with ENV-SP-001 Specification for Environmental Spatial Data Collection. Where agreed with the service provider, shapefiles that meet the requirements of ENV-SP-001 can be supplied as an alternative to the completed geodatabase,</p> <p>The geodatabase (or shapefiles if agreed) are used to capture environmental and heritage data to support ARTC's environmental impact assessment and compliance processes. Types of spatial data captured will generally be related to specialist studies and may include, but are not limited to:</p> <ul style="list-style-type: none"> • Native flora, fauna and ecological community locations • Indigenous and non-indigenous heritage locations • Contaminated land locations <p>The Project Manager should send the completed geodatabase to the ARTC GIS Specialist to load into ARTC's GIS development environment and seek approval prior to loading to the GIS production environment. The GIS Specialist may request review and input from relevant Environment Advisors prior to publishing.</p>
Changes to the data	<p>ENV-SP-001 Specification for Environmental Spatial Data Collection</p> <p>The template geodatabase needs to be completed by service providers for all projects that capture environmental spatial data. An accepted alternative is an Esri shapefile (where agreed).</p> <p>Multiple spatial data types may be included in the geodatabase depending on the scale of the project.</p> <p>Any associated environmental reports should also be provided as per section 2.11.2.</p>
Users of the data	Project Managers, Environmental Staff, Area Managers, Project Administrators
Procedural coverage and associated documentation	<p>ENV-PR-001 Environmental Management System</p> <p>ENV-SP-001 Specification for Environmental Spatial Data Collection</p>

Specific Project Data Deliverables

	ENV-WI-006 Review of Environmental Factors ENV-WI-005 Task Based Environmental Impact Assessment
Other clarifying commentary (why is the data required)	<p>The Project Manager is responsible for ensuring data is supplied consistent with ENV-SP-001.</p> <p>The data can be used for:</p> <ul style="list-style-type: none">• Environmental impact assessments• Project planning• Due diligence activities

2.13 Property**2.13.1 Third Party Sidings New and Existing Connections**

Description	Property - Third Party Sidings New and Existing Connections
Project Phase	3/5 & 6
Discipline	Property
Delivery Date Deliverables	30 days following the completion of the deliverables for each project within the programme.
Item Type	Corporate Information
ARTC Update Location	Property Management System, Enterprise Content Management System, SIA Register
Detailed description of the Deliverables	<p>Where a Third Party owns and constructs the infrastructure, ARTC Property prepares a suitable Private Siding Connection Agreement to formalise the connection to ARTC's Network.</p> <p>If the connection is new and requires construction follow PRO-PR-003 Major External Party Works Procedure.</p> <p>The Private Siding Connection Agreement also sets out the legal and commercial arrangements for the term of the Agreement, once connected and the Deliverables upon termination.</p> <p>An ARTC Interface Agreement is developed for the management of the private siding.</p>
Changes to the data	<p>Property - Third Party Sidings New and Existing Connections</p> <p>Prior to commencement of construction the following Data is required:</p> <ol style="list-style-type: none"> 1. Statutory Planning Approvals <ol style="list-style-type: none"> a. Baseline Contamination Assessment b. Land use details 2. Planning proposals 3. ARTC Interface Agreement 4. Private Siding Connection Agreement 5. ARTC property Legal and Commercial arrangements for the siding connection and the term of the agreement.
Users of the data	Approval Authorities, Property Managers, Project Managers & Third-Party Project Managers, Environment Managers.

Specific Project Data Deliverables

Procedural coverage and associated documentation	PRO-PR-010 - Sidings Procedure PRO-PR-003 - Major External Party Works Procedure PRO-PR-007 - Leasing and Licencing Out Procedure PP-154 - Implementation of Private Sidings SMS - Safety Interface Coordination Contaminated Land Procedure
Other clarifying commentary (why is the data required)	The Interface Agreement establishes responsibilities and dependencies for maintenance, configuration management, audit and control of entry into the private siding.

2.13.2 Level Crossing Management

Description	Property - Level Crossing Management
Project Phase	3/5 & 6
Discipline	Property
Delivery Date Deliverables	14 days following the completion of the deliverables for each project within the programme.
Item Type	Corporate Information
ARTC Update Location	Enterprise Content Management System, Property Management System, Consultation Management System
Detailed description of the Deliverables	<p>Level Crossings which are proposed for new crossings or proposals to close crossings are to be evaluated, reviewed, approved with arrangements finalised for the management of these crossings on an ongoing basis.</p> <p>All change information including approvals and agreements for New or Existing Level Crossings are to be provided as per PRO-PR-011 ARTC Level Crossing Management Procedure.</p> <p>An Interface Agreement with the road authority is to be developed for the management of risks identified and the maintenance the level crossing.</p> <p>Stakeholder / Community engagement processes are to be documented and recorded within project files. The Consultation Management System shall be updated to reflect the engagement actions undertaken.</p>
Changes to the data	<p>Property - Level Crossing Management</p> <p>Prior to commencement of level crossing change the following Data is required:</p> <ol style="list-style-type: none"> 1. Applicable Risk Assessments i.e. Safety/Environmental 2. Level Crossing Proposal (New/Status Change/Closure) 3. Level Crossing Agreement (Licence), if required 4. Level Crossing Interface Agreement 5. New Level Crossing approvals/or 6. Level Crossing Status/Use approvals/or 7. Level Crossing Closure, Removal and Relocation approvals
Users of the data	Approval Authorities, Property Managers, Project Managers, Third Party Project Managers & ARTC Level Crossing Manager
Procedural coverage and associated documentation	PRO-PR-011 - Level Crossing Management Procedure
Other clarifying commentary (why is the data required)	The Level Crossing Agreement establishes responsibilities and dependencies for maintenance, configuration management, audit and control of the level crossing and road crossing pavement between ARTC and the relevant State Road Authority.

2.13.3 ARTC Communication Towers/Sites

Description	Property - ARTC Communication Towers/Sites
Project Phase	5
Discipline	Property
Delivery Date Deliverables	14 days following the completion of the deliverables for each project within the programme.
Item Type	Corporate Information
ARTC Update Location	Enterprise Content Management System, Property Management System
Detailed description of the Deliverables	All Third Party carriers who require the use of ARTC Communication Towers for the installation and operation of telecommunications equipment including the use of ARTC huts and cable trays will submit an application detailing the proposal, specifications and reports to obtain approval for a licence or consent for use as per PRO-PR-008 ARTC Communication Tower Procedure.
Changes to the data	<p>Property - ARTC Communication Towers/Sites</p> <p>Prior to the use of any ARTC Communication Tower by third parties the following Data is required:</p> <ol style="list-style-type: none"> 1. Third party Communication Tower application form and proposal 2. Installation Technical Specification 3. Frequency Intermodal & Structural Integrity Analysis reports 4. Telecommunications Tower Licence 5. Telecommunications Access Licence (if applicable) 6. Commercial & Binding Agreement with between ARTC and third parties to use ARTC Communication Towers 7. Land Lease details (If applicable)
Users of the data	Approval Authorities, Property Managers, Project Managers, Third Party Project Managers & ARTC Communications
Procedural coverage and associated documentation	PRO-PR-008 - Communication Tower Procedure
Other clarifying commentary (why is the data required)	No equipment will be attached to any ARTC Communication Tower until authorisations (documents, reports and data) have been obtained to ensure the additional equipment can be supported and there is no interference to ARTC or other existing licensee on the tower.

2.13.4 Major External or Third-Party Works

Description	Property - Major External or Third-Party Works
Project Phase	3/5 & 6
Discipline	Property and Environment
Delivery Date Deliverables	30 days following the completion of the deliverables for each project within the programme.
Item Type	Corporate Information
ARTC Update Location	Property Management System, Enterprise Content Management System, SIA Register
Detailed description of the Deliverables	<p>All major Third Party works to be constructed within or adjacent to ARTC property requires a Works Deed prior to the commencement of construction as per PRO-PR-003 Major External Party Works Procedure.</p> <p>The Third Party Works Project Manager appointed by the Business Unit is responsible for worksite access to ARTC property, compliance with works deed, technical, operational and engineering Deliverables, and facilitation of any interface agreements and provision of any non-standard Deliverables to be included in the agreements as a result of the project works.</p>
Changes to the data	<p>Property - Major External or Third Party Works</p> <p>During and on completion of works all agreements, land survey data and As-Built are to be provided.</p> <ol style="list-style-type: none"> 1. Signed and Approved Works Deed 2. Boundary Survey Data 3. GIS Data inclusive of level crossings, third party services in the corridor inclusive of other land data. 4. Any construction details including plans, approvals, survey data or legal Deliverables of infrastructure or buildings erected in and adjacent to the rail corridor or any ARTC Provisioning Centres 5. All signed & approved agreements or ongoing existing agreements that are ARTC responsibility after the project completion and commissioning works. For example Energy (Power) Supply agreements. 6. All interface agreements for any 3rd Party Works performed during project works. 7. Environmental impacts assessments and as constructed infrastructure as it pertains to an environmental aspect (see Environment & Sustainability)
Users of the data	Approval Authorities, Property Managers, Project Managers, ARTC Staff & Third-Party Project Managers, Environment Advisor

Specific Project Data Deliverables

Procedural coverage and associated documentation	PRO-PR-003 - Major External Party Works Procedure PRO-PR-007 - Leasing and Licensing Out Procedure
Other clarifying commentary (why is the data required)	In accordance with the Works Deed a Notice of Completion will be issued to the Project Manager. Subsequent notification will be forwarded to Property confirming completion. Property will then arrange execution of the relevant Agreements.

2.14 Office of the National Rail Safety Regulator (ONRSR)**2.14.1 Application for Variation of Accreditation (AVA)**

Description	Office of the National Rail Safety Regulator (ONRSR) - Application for Variation of Accreditation (AVA)
Project Phase	3 and 4
Discipline	Corporate
Delivery Date Deliverables	30 days after project approval
Item Type	Corporate Information
ARTC Update Location	Accreditation - Risk & Safety
Detailed description of the Deliverables	<p>ARTC proposing change to their permitted railway operations, or any conditions or restrictions imposed on their accreditation, as detailed in the notice of accreditation, may be required to apply for a variation of accreditation pursuant to <u>section 68 of the Rail Safety National Law (RSNL)</u> as per ONRSR accreditation requirements.</p> <p>Application for Variation of Accreditation submitted to GM Risk and Safety with a covering letter, completed prescribed AVA form, with evidence of consultation, identification of risks and how they will be controlled, project plan and supporting documents describing changes to the safety management system, and evidence to demonstrate ARTC has the competence and capacity to manage the risks to safety associated with the proposed change. A cost code also needs to be provided for the application fee charged by ONRSR.</p> <p>When applying for a Variation of Accreditation ARTC should allow at least 6 months for the Office of the National Rail Safety Regulator (ONRSR) to assess the application and are advised to contact the ONRSR early in the process to clarify the Deliverables. This timeframe is reset with each clarification submitted. A fee applies to any applications for variation of accreditation submitted. An invoice will be issued by ONRSR on receipt of the application.</p>
Changes to the data	<p>Office of the National Rail Safety Regulator (ONRSR) - Application for Variation of Accreditation (AVA)</p> <p>To vary ARTC's permitted railway operations, or to vary a condition or restriction imposed on ARTC's accreditation, it must apply to the Regulator for variation of accreditation. The documents required are below</p> <ol style="list-style-type: none"> 1. Evidence of consultation, risk assessment, project plan and documents supporting the variation. 2. Cover letter to ONRSR describing the change that is subject of the Application for Variation of Accreditation 3. ONRSR Application for Variation of Accreditation form 4. Cost code for application fee
Users of the data	ONRSR, ARTC Project Managers & ARTC Risk & Safety, and all affected RTO's.

Specific Project Data Deliverables

Procedural coverage and associated documentation	EGP-20-01 - Project Management Manage Accreditation - Variation and Change, AVA Covering Letter, RSNL Notice of Accreditation, QLD - Notice of Accreditation As per the ONRSR website, including Application for Variation of Accreditation form.
Other clarifying commentary (why is the data required)	ARTC can only carry out railway operations that it is accredited for, as detailed in the notice of accreditation issued by ONRSR. Any changes outside of the scope and nature of permitted railway operations require a variation of accreditation to be granted by ONRSR.

2.14.2 Notification of Change to Railway Operations

Description	Office of the National Rail Safety Regulator (ONRSR) – Notification of Change to Railway Operations
Project Phase	3 and 4
Discipline	Corporate
Delivery Date Deliverables	At least 28 days before the change is implemented
Item Type	Corporate Information
ARTC Update Location	Accreditation - Risk & Safety
Detailed description of the Deliverables	<p>ARTC is required to notify the Office of the National Rail Safety Regulator (ONRSR) of proposed changes to their operations as detailed as per the ONRSR website.</p> <p>A notification of change is required when the proposed change is within the scope and nature of ARTC's permitted railway operations, as specified in the Notice of Accreditation. If the proposed change is outside the scope or nature of the accreditation, then ARTC is required to submit an application for variation of accreditation.</p> <p>Notification of Change to Railway Operations submitted to ARTC GM Risk and Safety with a covering letter and completed prescribed NoC form,</p> <p>It is expected that ARTC will follow its risk management and management of change procedures when introducing a change. Consultation with parties who might be affected by the proposed change should also be undertaken. ARTC needs to provide assurance to ONRSR that these procedures have been or will be followed. In some cases, ONRSR may request evidence to support the change,</p>
Changes to the data	<p>Office of the National Rail Safety Regulator (ONRSR) - Notification of Change to Railway Operations</p> <p>Before certain decisions, events or changes can be introduced, a Notification of Change to Railway Operations needs to be submitted to ONRSR, within the prescribed timeframes. The documents required are below</p> <ol style="list-style-type: none"> 1. Cover letter to ONRSR describing the proposed change signed by General Manager Risk & Safety 2. ONRSR Notification of Change to Railway Operations form
Users of the data	ONRSR, ARTC Project Managers & ARTC Risk & Safety and all affected RTO's.
Procedural coverage and associated documentation	ONRSR Accreditation – Notification to Change, NOC Covering Letter, ARTC - RSNL Notice of Accreditation as per the ONRSR website.
Other clarifying commentary (why is the data required)	It is a prescribed condition of accreditation that ARTC notifies the Rail Safety Regulator of certain decisions, events or changes, as detailed in the Rail Safety Regulations.

2.15 Inventory

2.15.1 Procurement & Contracts

Description	Procurement - Procurement & Contracts
Project Phase	1 - 6
Discipline	Finance
Delivery Date Deliverables	As per FCO-PR-022
Item Type	Corporate Information
ARTC Update Location	Enterprise Content Management System, ARTC Legal
Detailed description of the Deliverables	<p>Project procurement documentation is to be provided for the works as described in FCO-PR-022. Consideration must be given to:</p> <ol style="list-style-type: none"> 1. Number of tenderers and their ability to deliver 2. Current ARTC inventory (when procuring materials) 3. Accurate and comprehensive scope definition 4. Contract securities – bank guarantees 5. Warranties and responsibility for defects rectification 6. Insurance 7. Deliverable for spare parts and user manuals <p>The Project Manager shall identify major services and materials to be procured and discuss with the Procurement and Contract team to utilise available inventory or to go to the market under contract or utilise an already open contract if suitable as per EGW-20-01.</p> <p>Project managers procurement responsibilities is to be in accordance with ARTC's Contract Management Procedure FCO-PR-022</p>
Changes to the data	<p>Procurement - Procurement & Contracts</p> <p>Selecting the appropriate procurement process is fundamentally determined by the risk the procurement represents. The Project Manager will record the project procurement process as per Contract Management Procedure FCO-PR-022</p> <ol style="list-style-type: none"> 1. Procurement Cards for goods or services that are low value, generally < \$2,000 per purchase and low risk. This includes travel and accommodation, off the shelf items and consumables that are not under contract. 2. Standard Purchase Orders are used for off the shelf items and low risk services where there is no design or development involved.

	<p>3. Standing Offers Contracts Letters of Engagement (LOE) FCO-FM-025 are used to engage Standing Offers. LOE are agreed and approved with the Contractor and must contain a clearly defined scope of work, a reference to the Standing Offer (SO) contract number, its terms and conditions, the purchase order number, key dates and a limiting value.</p> <p>4. Contracts must be used where there is any risk that specifically needs to be managed and where the Contractor is required to perform to a certain standard. Standard Contract Templates are available at FCO-PR-022</p> <p>5. Purchase Orders for Contracts Purchase orders are utilised internally to manage the financial aspects of contracts. These orders are not released to the Contractor and are used for internal processing and payment.</p>
Users of the data	Third Party Project Managers, Project Managers, Procurement & Contract Managers, Finance, Project Engineers
Procedural coverage and associated documentation	<p>EGP-20-01 - Project Management</p> <p>EGW-20-01 - Managing Complex Projects</p> <p>EGW-20-02 - Managing Simple Projects</p> <p>FCO-PR-022 - Contract Management Procedure</p> <p>FPR-PR-024 - Purchasing Materials Procedure</p> <p>FPR-PR-031 - Purchase Orders for Contracts Procedure</p>
Other clarifying commentary (why is the data required)	<p>Contracts must be signed by a person with the appropriate level of delegated authority.</p> <p>Staff must not amend, construct or distribute contract documents to third parties without first discussing their planned actions with a representative from the Contracts Services team</p> <p>A clearly written contract is an important factor in any dispute or incident and the process of preparing and negotiating the contract compels the parties to consider the important issues and gives both parties certainty and confidence.</p>