

# Engineering Document Control

EGP-01-01

## Applicability

ARTC Network Wide SMS

## Publication Requirement

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2.0	23 Dec 15		Incorporation of Efficiency and Effectiveness review initiatives. Update to interface with risk management process.
2.1	15 Feb 17		Include the nominated resource reviews related SWMS for any impact by the proposed change.
2.2	14 Mar 17	1.6, 7.1	Added definition for 'Technical Note'
2.3	21 Feb 18	1.5.2, 3.4, 3.8, 5, 6	Minor editorial changes to amend reference documents, clarify that notifications are grouped by engineering discipline and that EGP0101F-03 can be added to discussion board, remove references to intranet and correct typo.
2.4	22 Jan 19	1.5.2, 3.8, 4.2 & 6	Incorporation of Corporate Procedure COR-PR-015 Management of Change.

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2.5	21 May 19	1.2, 1.5.2, 1.6, 3.3, 3.6, 4.2 & 7	Minor editorial updates including incorporating the use of the EDCA form for new equipment & system approvals, adding a hold point for business unit representatives to nominate a priority for significant changes as well as referencing of new guideline for preparation of implementation plans for track & civil engineering documents.
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## **1 Introduction**

### **1.1 Purpose**

The purpose of this Procedure is to provide guidelines for the preparation, registration, accessing and approval of engineering documents and supporting documents.

This Procedure also details the steps to be taken for implementing changes to approved engineering documents, or preparation of new documents based on existing approved documents.

### **1.2 Scope**

This Procedure applies to the following ARTC Engineering documents:

- Standards
- Procedures
- Codes of Practice

and to all ARTC engineering supporting documents.

It also applies to new equipment & system approvals.

### **1.3 Procedure Owner**

The Manager Standards is the Procedure Owner and is the initial point of contact for all queries relating to this Procedure.

### **1.4 Responsibilities**

Responsibilities for the preparation, review, endorsement and approval of engineering documents and supporting documents are outlined in Appendix 1 Engineering Documentation Responsibilities.

The Manager Standards is responsible for the engineering document and supporting document preparation and change process.

### **1.5 Reference Documents**

#### **1.5.1 Australian Standards**

- AS 4292.1 Railway Safety Management – General Requirement  
Section 2.7 Document and Data Control

#### **1.5.2 ARTC Documents**

- management of change
- change proposal and impact assessment
- ARTC records management policy
- risk management
- BIC submission procedure

- engineering document change approval (edca) form
- consultation comment form
- new equipment and system approvals
- new equipment and system approval proforma
- ARTC safety management system (SMS).

### 1.5.3 External Documents

Guidelines for changes to accreditation documents as published by Rail Safety Regulators:

- Preparation of a Rail Safety Management System Guideline – Office of the National Rail Safety Regulator

## 1.6 Definitions

The following terms are used within this document:

Term	Description
Codes of Practice	A consolidation of Standards, Procedures, and guidelines.
Engineering Instructions	Identification of actions to be performed. These may be one off instructions, or standing instructions until Standards or Procedures are updated.
Engineering Manuals	Guidelines for engineering design, construction, inspection or maintenance, which clarify or expand upon requirements contained in Standards and Procedures.
New Equipment & System Approvals	New equipment and systems to be introduced into the ARTC network are managed in accordance with the new equipment & system approvals procedure. They are also known as type approvals.
Procedures	A defined set of steps to be followed to complete a required action or function.
Specifications	Details of requirements to be fulfilled during supply or construction, derived from Standards and Procedures.
Stakeholder	An entity that has an interest in the ARTC Engineering documentation and can include, but is not limited to, Standards department; Other ARTC departments; Train Operators; Alliance Partners; Track Owners or Lessees; Other relevant Government Departments and Statutory Bodies.
Standards	The specified performance requirements for the function, fit, form and finish of assets and the planning, production and proving process procedures related to the work on assets.
Technical Note	A document that contains information that relates to ARTC's engineering requirements. The Technical Note should be read alongside the relevant standard, manual or guideline and has the same status in the Safety Management System as the document it supports.
Version	Issue – an alpha or numeric index indicating the stage of development of a document Revision – A number indicating the change status of a document within an issue
Work Instructions	A defined set of steps to be followed to complete a required action or function, in more detail than described in Procedures.

## **2 Document Format**

### **2.1 Cover page**

All engineering documents and supporting documents are to have a cover page which clearly states the title, version and number of the document.

### **2.2 Document Status and Amendment Record**

All engineering documents and supporting documents are to include:

- Document Status indicating the document version (issue and revision), date of version and the relevant authorities for preparation, review, endorsement and approval
- Document Amendment Record which clearly identifies the current version (issue and revision), date of change and outline of the nature of amendment.

### **2.3 Version Status**

The following alpha-numeric indices are to be used for identifying the various stages of Draft, Preliminary, Final, Amended and Reissued documents.

Draft	Issue A – Revision 0
Preliminary	Issue B – Revision 0
Final	Issue 1 – Revision 0 (Version 1.0)
Amendment 1	Issue 1 – Revision 1 (Version 1.1)
Amendment 2	Issue 1 – Revision 2 (Version 1.2)
Reissue	Issue 2 – Revision 0 (Version 2.0)
Amendment 1	Issue 2 – Revision 1 and so on.

### **2.4 Headers and Footers**

Headers and footers are to be used on each page to include the title and number of the document, the version of the document, date of last revision, page numbers and “This document is uncontrolled when printed.”

## **3 Document Control**

### **3.1 Preparation, Review and Approval**

The ARTC officers responsible for engineering documentation preparation, review and approval are detailed in Appendix 1 Engineering Documentation Responsibilities.

Document approval shall include ensuring that documents are constructed in a manner such that they can be easily understood.

Requirements of Regulators relating to the notification of changes to documents shall be complied with.

### 3.2 Approved Documents

Approved engineering documents and supporting documents are available electronically to all ARTC staff and external parties via the ARTC extranet. Internal only documents are available to ARTC staff via Connect. Controlled hard copies are not issued and printed copies are uncontrolled.

The master copy will be held and maintained by the Standards & Procedures Administrator.

### 3.3 Registration

All approved engineering documents are to be registered on the Master Engineering Document Register.

All approved new equipment & system approvals are to be registered on the New Equipment & System Approval Register.

### 3.4 Notification

Notification of every new or changed engineering document or supporting document should be sent by the Standards & Procedures Administrator by global email to relevant stakeholders on the relevant distribution list. This will include the document number, name, a brief description of the change and the location of the approved document. A soft copy of the email notification will be saved by the Standards & Procedures Administrator. The responsibility lies with individual stakeholders to periodically check the ARTC internet (extranet) engineering pages for the most recent published versions of documents.

The distribution list is maintained by the Standards & Procedures Administrator. This forms the basis of Standards Groups in Outlook which are used for the email notifications. Standards Groups are sorted into engineering discipline.

### 3.5 Drafts

When ready for stakeholder review, unapproved engineering documents and supporting documents will be made available to stakeholders on the Standards SharePoint site for stakeholder consultation, with a link to the site provided to the Consultation Facilitators via email. The Consultation Facilitators, nominated by the corridors, will then ensure that appropriate Stakeholders provide their feedback in the discussion.

### 3.6 Implementation Plan

The Implementation Plan for a new or revised ARTC Engineering Document shall consider all impacts on resources (personnel, budgets, tools, test equipment, spares) to introduce the changes as well as the impact on annual budgets going forward. All users and Stakeholders to the document should be notified that a new or revised document is about to be made effective and the operation dates of the change. Some changes may involve the need for relevant users and Stakeholders to be briefed on the content of the document, e.g. through Toolbox Briefings or other similar platforms, so they can understand the implications the change has on their duties.

**Refer to the guideline for the preparation of implementation plans – track & civil, which describes the template to follow for the creation of an implementation plan for ARTC Track and Civil Engineering Documents.** Implementation plans describe how implementation issues and risks identified in the risk assessment of new or revised ARTC Engineering Documents are actioned with each risks associated control strategies and estimated time of completion.



## 3.7 Document Change

### 3.6.1 AS 4292 Requirements

“Changes to documents and data shall be reviewed and approved by the same functions/organizations that performed the original review and approval, unless specifically designated otherwise.”

## 3.8 Change Classification

A change is classified as Class I (Significant) if it affects significant characteristics of a product or document at that point in time in an agreed configuration baseline. A Class I (Significant) change will be indicated if it impacts on, but not limited to:

- Performance;
- Risk profile;
- Stakeholder costs;
- Reliability and maintainability;
- Service life;
- Interface characteristics;
- Electromagnetic characteristics;
- Other product characteristics in the baselined specifications;
- Interchangeability at the CI level and to all sub-assemblies and parts except the pieces and parts of non-repairable sub-assemblies;
- Compatibility or interoperability with interfacing CIs, support equipment, support software, spares, trainers, training equipment or training software;
- Configuration to the extent that retrospective fit action is required;
- Delivered operation or maintenance manuals;
- Sources of CIs or repairable items at any level defined by source control drawings; or
- Skills, resources, training or human engineering design.

The initiator of a Class I (Significant) change to engineering documents should first refer to Corporate Procedure, Management of Change.

Otherwise, the change is classified as a Class II (Minor) change. Class II (Minor) changes to engineering documents are classified as:

- Editorial changes or corrections to spelling or format;
- Consequential changes resulting from updates to related documents;
- Changes involving negligible impact on ARTC or stakeholder costs, risk profiles, or resource requirements.

### **3.9 Reporting**

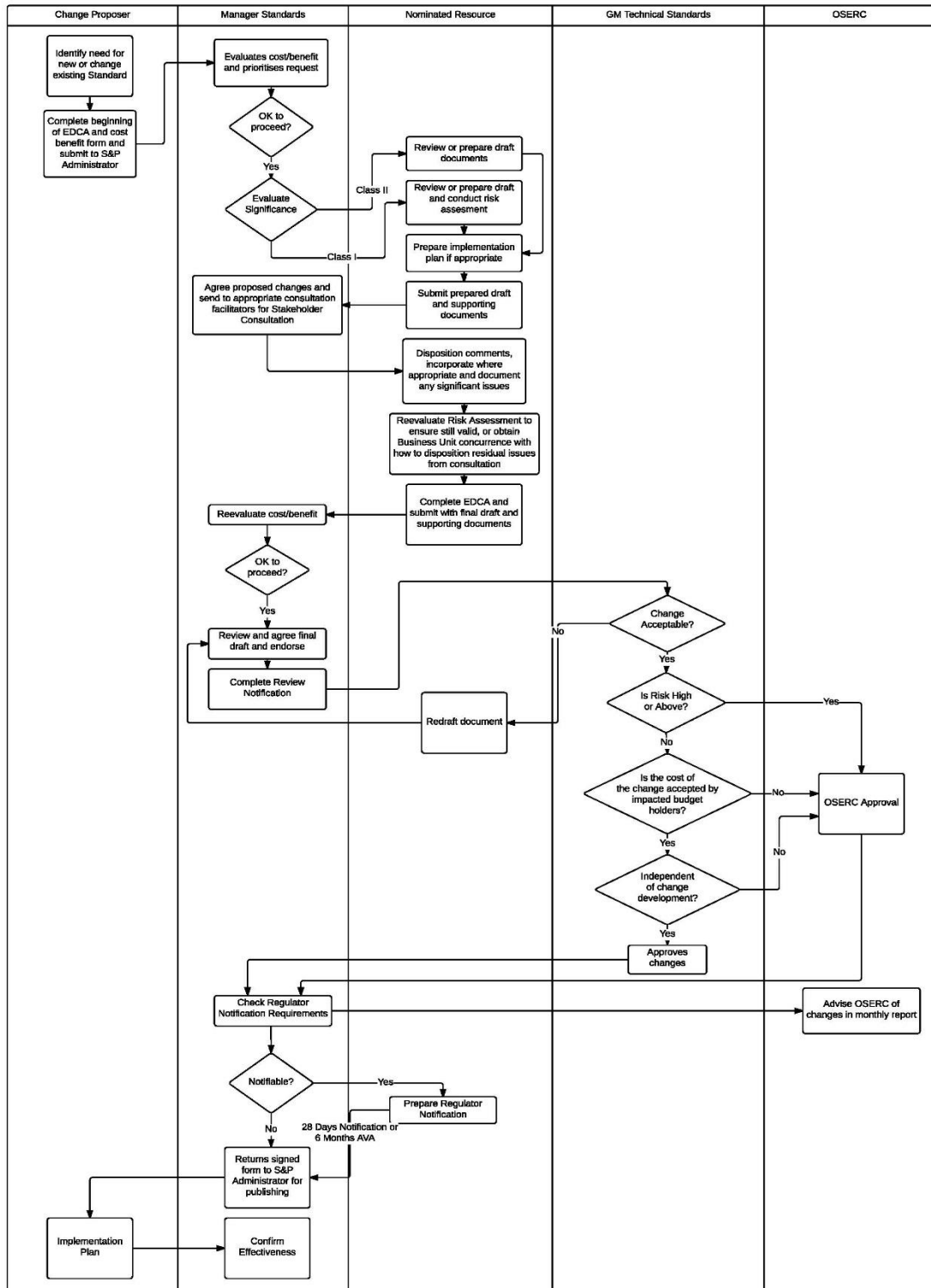
The Manager Standards is to advise the Operational Safety & Environment Review Committee (OSERC) each month of documents approved in accordance with Section 7.1 during the previous month.

The monthly report to OSERC shall also advise of current documents under review.

## 4 Engineering Document Change Process

### 4.1 Flowchart

The following flowchart summarises the engineering document change process. Refer to Sections 4.2, 5 and 6 for a more detailed step by step description of the process.



## 4.2 Step by Step procedure

The following steps shall be followed for all proposed changes:

- Step 1 – Change proposer completes the first section of EDCA form (or identifies an issue and alerts Technical Standards). If applicable, Change Proposer drafts new document on ARTC template or makes changes proposed on a new revision of the existing document and identifies them by switching on 'Track Changes'. Templates or word versions of documents must be obtained from the Standards & Procedures Administrator who will allocate a number for a new document or record that an existing document is booked out for amendment. For new equipment & system approvals, a number will also be allocated and the procedure for new equipment & system approvals must be followed. For significant changes involving potentially high costs and/or risks in multiple business divisions, the use of form Change Proposal and Impact Assessment may be required in line with the Management of Change procedure.
- Step 2 – The EDCA, along with any prepared draft or supporting detail, is submitted to Standards & Procedures Administrator for registration. This may be accomplished by the Change Proposer, or by a member of Technical Standards. A unique number is allocated to each EDCA and recorded on the EDCA Register.
- Step 3 - The form, along with any prepared draft or supporting detail, is then submitted to the Manager Standards for initial evaluation of cost/benefit and prioritisation.
- Step 4 - Manager Standards to evaluate Class I or Class II significance and allocate to a nominated resource. If the change is deemed to be of Class I significance, the Manager Standards seeks review by relevant business unit representatives to determine a priority before allocating resources.

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### Notes:

- *Depending on prioritisation, the proposed change may not be made immediately; however the proposal will be included on the Engineering Document Issues Register until such time as it is addressed.*
  - *Use of form Change Proposal and Impact Assessment is an acceptable alternative to the EDCA form when submitting change proposals.*
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### 4.2.1 Class II / Minor Changes

If changes are identified as Class II (as per Section 3.8) then Steps 5-15, Section 5 apply.

### 4.2.2 Class I / Significant Changes

If changes are identified as Class I (as per Section 3.8) then Steps 5-20, Section 6 apply.

## 5 Procedure – Class II / Minor Changes

Following completion of Steps 1 to 4, Section 4:-

- Step 5 - The nominated resource reviews the prepared draft or prepares a draft as required.
- Step 6 - The nominated resource reviews related SWMS for any impact by the proposed change.
- Step 7 - If appropriate an implementation plan is drafted. The reviewed/prepared draft and supporting documents are submitted to the Manager Standards.
- Step 8 – If stakeholder consultation is deemed necessary by the Manager Standards, the Standards & Procedures Administrator places the draft document on the ARTC Stakeholder Consultation SharePoint site for stakeholder consultation. The Standards & Procedures Administrator then informs identified Stakeholders that the document is available for review and comment by a nominated cut-off date. Business Units may identify a position within their organisation to act as a facilitator for comments on the proposed change. ARTC Corporate WHS Manager, and Principal Advisors – Safety and Environment (HV and Interstate) are to be included in the consultation list for all Standards, Procedures and Work Instructions. The Change Proposer shall be included as a Stakeholder.
- Step 9 – Stakeholders review the document and provide comments on the relevant SharePoint discussion board. Alternatively, comments can be provided on the consultation comment form and added to the discussion board or submitted via email to standards@artc.com.au. Comments should be made by the nominated cut-off date for review by the nominated resource.
- Step 10 – The nominated resource reviews comments, incorporates them where appropriate and records acceptance actions or reason for rejection for each comment. If substantive changes are made, Manager Standards may determine that the draft is to be re-notified to Stakeholders for further review and comment. The nominated resource then completes the EDCA form.
- Step 11 – The final draft is submitted to Standards & Procedures Administrator to confirm document format. The reviewed document, completed EDCA, consultation comments and other supporting documents are submitted to Manager Standards for endorsement.
- Step 12 – Manager Standards re-evaluates the cost/benefit of the change. This will include the costs of enacting the implementation plan. Manager Standards then reviews final draft and supporting documents and signs the EDCA, indicating recommended significance. Manager Standards signs Review Notification and submits along with endorsed document, EDCA and supporting documents to General Manager Technical Standards. General Manager Technical Standards then agrees judgement of significance and approves endorsed document.
- Step 13 – General Manager Technical Standards returns the signed EDCA, approved document and supporting documents to the Standards & Procedures Administrator.
- Step 14 – Standards & Procedures Administrator enters the new document status in the appropriate Document Registers in accordance with the publishing checklist, removes the previous version from the extranet if applicable, adds the new version to the extranet and sends email notification. All documents associated with the change, including the EDCA form are to be filed in Standards records.

- Step 15 – The Change proposer instigates the Implementation Plan.
- Step 16 – Manager Standards confirms the effectiveness of the document change.

## 6 Procedure – Class I / Significant Changes

Following completion of Steps 1 to 4, Section 4:-

- Step 5 - The nominated resource reviews the prepared draft or prepares a draft as required.
- Step 6 - The nominated resource reviews related SWMS for any impacts caused by the proposed change.
- Step 7 – The nominated resource arranges a risk assessment in accordance with Safety Procedure Risk Management (unless the proposed changes have been risk assessed prior to preparation of the document). ARTC Corporate WHS Manager, and Principal Advisors – Safety and Environment (HV and Interstate) are to be invited to all risk assessments.
- Step 8 - If appropriate an implementation plan is drafted. The reviewed/prepared draft and supporting documents, including risk assessment, are submitted to the Manager Standards.
- Step 9 – If stakeholder consultation is deemed necessary by the Manager Standards, the Standards & Procedures Administrator places the draft document on the ARTC Stakeholder Consultation SharePoint site for stakeholder consultation. The Standards & Procedures Administrator then informs identified Stakeholders that the document is available for review and comment by a nominated cut-off date. Business Units may identify a position within their organisation to act as a facilitator for comments on the proposed change. ARTC Corporate WHS Manager, and Principal Advisors – Safety and Environment (HV and Interstate) are to be included in the consultation list for all Standards, Procedures and Work Instructions. The Change Proposer shall be included as a Stakeholder.
- Step 10 – Stakeholders review the document and provide comments on the relevant SharePoint discussion board. Alternatively, comments can be provided on the consultation comment form and added to the discussion board or submitted via email to [standards@artc.com.au](mailto:standards@artc.com.au). Comments should be made by the nominated cut-off date for review by the nominated resource.
- Step 11 – The nominated resource reviews comments, incorporates them where appropriate and records acceptance actions or reason for rejection for each comment. If substantive changes are made, Manager Standards may determine that the draft is to be re-notified to Stakeholders for further review and comment.
- Step 12 - Risk assessment reviewed to ensure validity or obtain Business Unit concurrence with how to disposition residual issues from consultation. The nominated resource then completes the EDCA form.
- Step 13 – The final draft is submitted to the Standards & Procedures Administrator to confirm document format. The reviewed document, completed EDCA, consultation comments and other supporting documents including Risk Assessment, are submitted to Manager Standards for endorsement.
- Step 14 – Manager Standards re-evaluates the cost/benefit of the change. This will include the costs of enacting the implementation plan. Manager Standards then reviews final draft and supporting documents and signs the EDCA, indicating recommended significance.

Manager Standards signs Review Notification and submits along with endorsed document, EDCA and supporting documents to General Manager Technical Standards.

- Step 15 – General Manager Technical Standards then determines if the risk is high or above, and if the cost is accepted by the impacted budget holders. If high, or if the cost is not accepted, change is be submitted to OSERC for approval. General Manager Technical Standards determines independence from change development, then agrees judgement of significance and approves endorsed document.
- Step 16 – General Manager Technical Standards returns the signed EDCA, approved document and supporting documents to the Standards & Procedures Administrator.
- Step 17 –The Manager Standards informs the Operational Safety & Environment Review Committee of document updates in monthly report and checks regulator notification requirements to determine if change is notifiable.

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*Note: If the change is a Notifiable change, Steps 17a and 17b apply. Otherwise proceed to Step 18.*

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- Step 17a – Nominated Resource prepares submission of approved documentation on behalf of General Manager Risk & Safety for notification to the relevant Regulators in accordance with their requirements.
- Step 17b – Following expiration of any prescribed Regulator notice period, proceed to Step 18.
- Step 18 – Manager Standards returns the signed EDCA, approved document and supporting documents to Standards & Procedures Administrator.
- Step 19 – Standards & Procedures Administrator enters the new document status in the appropriate Document Registers in accordance with the publishing checklists, removes the previous version from the extranet if applicable, adds the new version to the extranet and sends email notification. All documents associated with the change, including the EDCA form are to be filed in Standards records.
- Step 20 – The Change proposer instigates the Implementation Plan.
- Step 21 – Manager Standards confirms the effectiveness of the document change.

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*Note: If there are significant implementation implications, a commentary or other similar implementation document must be prepared to detail how the changes will be implemented.*

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## 7 Appendix 1: Engineering Documentation Responsibilities

### 7.1 Class II / Minor Change

Document	Preparation	Review	Endorsement	Approval
<b>Engineering Documents &amp; Supporting Documents</b>				
Standards	Standards Department	Stakeholders	Manager Standards	General Manager Technical Standards
Procedures	Standards Department or relevant Department Manager	Stakeholders	Manager Standards	General Manager Technical Standards
Codes of Practice	Standards Department	Stakeholders	Manager Standards	General Manager Technical Standards
Specifications	Standards Department	Stakeholders	Manager Standards	General Manager Technical Standards
Manuals	Standards Department	Stakeholders	Manager Standards	General Manager Technical Standards
Instructions	Standards Department	Stakeholders	Manager Standards	General Manager Technical Standards
Technical Note	Standards Department	Stakeholders	Manager Standards	General Manager Technical Standards
Other Engineering Supporting Documents	Standards Department	Stakeholders	Manager Standards	General Manager Technical Standards
New Equipment & System Approvals	Standards Department	Review Panel	Manager Standards	General Manager Technical Standards



## 7.2 Class I / Significant Change

Document	Preparation	Review	Endorsement	Approval
<b>Engineering Documents</b>				
Standards	Standards Department	Stakeholders	Manager Standards	General Manager Technical Standards
Procedures	Standards Department or relevant Department Manager	Stakeholders	Manager Standards	General Manager Technical Standards
Codes of Practice	Standards Department	Stakeholders	Manager Standards	General Manager Technical Standards
New Equipment & System Approvals	Standards Department	Review Panel	Manager Standards	General Manager Technical Standards

## 7.3 Class I / Notifiable Change

Document	Preparation	Review	Endorsement	Approval	Notification
<b>Engineering Documents</b>					
Standards	Standards Department	Stakeholders	Manager Standards	General Manager Technical Standards	Regulator
Procedures	Standards Department	Stakeholders	Manager Standards	General Manager Technical Standards	Regulator
Codes of Practice	Standards Department	Stakeholders	Manager Standards	General Manager Technical Standards	Regulator
New Equipment & System Approvals	Standards Department	Review Panel	Manager Standards	General Manager Technical Standards	Regulator