

# Using Network Alteration Notices (NANs) for Configuration Change Management

EGW-03-01

## Applicability

ARTC Network Wide

SMS

## Publication Requirement

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# 1 Introduction

## 1.1 Purpose

The purpose of this work instruction is to provide instruction on how to use Network Alteration Notices (NANs) for configuration change management.

Configuration change management covers the requirement for the advice, approval (if required) and notification of Network alterations which alter the asset type, operational capability, configuration, documentation or safe working requirements of the ARTC Network and the maintenance of ARTC operational systems.

A Network alteration can be any software component, release, tool, documentation or hardware unit required for the purpose of creating or supporting ARTC Network deliverables.

## 1.2 Scope

### IN SCOPE

- Instructions on how to use Network Alteration Notices (NANs) for configuration change management.
- All Network alterations undertaken by ARTC, Alliance Partners and/or Contractors are required to conform to *EGP-03-01 Rail Network Configuration Management*.

## 1.3 Risks Controlled

This work instruction is a control for the change management risks associated with altering the rail network configuration and ensuring the associated systems, documents, etc, are updated as a result of the alteration and stakeholders notified.

## 1.4 Responsibilities

<i>Role</i>	<i>Responsibility</i>
General Manager Asset Management	Implementation of configuration change management within their area of responsibility in accordance with procedure <i>EGP-03-01 Rail Network Configuration Management</i> .
Change Initiator	The person responsible for initiating the change and for completing the configuration change management process outlined in this work instruction.
ARTC Contractors	Responsible for working in accordance with the Network Alteration Notice process and supplying documents / drawings/ software, etc. for updating ARTC systems / documents.
ARTC Alliance Partners	Responsible for working in accordance with the Network Alteration Notice process and supplying documents / drawings/ software, etc. for updating

	ARTC systems / documents.
System Owners	Once advised of a configuration change, the owners of the systems / documents that require updating are required to promptly perform the changes to their relevant systems/documents and provide written verification that the change has been implemented or is pending.
Configuration Manager	Responsible for the development of the Configuration Management system and the provision of training in configuration management.

## 1.5 Parent Procedure

*EGP-03-01 Rail Network Configuration Management.* - This is the parent procedure and must be read and used in conjunction with this Work Instruction.

*EGN-03-01 Configuration Management Manual* – This manual will provide a higher-level overview of all aspects of configuration management.

## 1.6 Reference Documents

The following documents support this work instruction:

- AS/ NZ 10007 – 2003 Guidelines for Configuration Management
- EGN-03-01 Configuration Management Manual
- EGP-03-01 Rail Network Configuration Management
- EGW-03-02 Using Ellipse for Configuration Change Management
- EGP0301F-01 Network Alteration Notice (Form)
- EGP-20-01 Project Management
- EGH-20-01 Project Management Data Deliverable Descriptions
- RSK-PR-001 Risk Management Procedure
- OPE-PR-001 Preparation & Distribution of Operational Notices.
- EGP-03-02 Equipment Register Updating and Maintenance
- EGP-21-01 New Equipment and System Approvals
- EGP-10-01 Asset Management System
- EGW-10-06 Work Order Management
- EGW-10-10 Annual Works Program – Project Work Orders
- ARTC SharePoint Tech Learning Centre – AMIP Support - Training Materials

## 1.7 Definitions

The following terms and acronyms are used within this document:

Term or acronym	Description
Approved Alternative Item	An item that has been type approved in accordance with <i>EGP-21-01 New Equipment and System Approvals</i> and that fulfils the function of the original item that it replaces.
ARTC	Australian Rail Track Corporation Ltd
Configuration	The Functional and Physical characteristics of an existing or planned product, or a combination of products. One of a series of sequentially created variations of a product.
Configurable Item	A non-specific term used to denote any product, including systems, materials, parts, software, subassemblies, sets, accessories, etc.
Configuration Management	<p>Technical and organisational activities comprising of configuration identification, configuration control, configuration status accounting and configuration auditing and provides the necessary management controls that enable:</p> <ul style="list-style-type: none"> <li>▪ The orderly establishment, recording, and maintenance of a product's performance, functional and physical characteristics.</li> <li>▪ Orderly management and control of changes to the product's characteristics.</li> </ul>
Equipment Register (Ellipse)	A register of all items of Network equipment and data within the Network. Refer to <i>EGP-03-02 Equipment Register Updating &amp; Maintenance</i> .
Network Information Books and Diagrams	Network Information Books (NIBs) and associated line diagrams can be found on the ARTC website at <a href="https://www.artc.com.au/customers/operations/nib/">https://www.artc.com.au/customers/operations/nib/</a>
Network	Any defined infrastructure or operational system, on/off track maintenance/measuring equipment that's required for the purpose of creating or supporting ARTC deliverables.
Network Alteration Notice (NAN)	The form used to coordinate the notification and authorisation of a configuration change. Refer to <i>EGW-03-01 Using Network Alteration Notices (NANs) for Configuration Change Management</i> .
Product	Something that is used or produced to satisfy a need or is as a result of a process (e.g. documents, facilities, firmware, hardware, materials, processes, services, software, systems,).
NAN Register	An excel spreadsheet register that provides the unique identifying NAN ID number and holds an overview of the status of the NAN.
NAN Directory	The directory on the ARTC network S:\ drive to store the NANs and any associated documents / drawings and signed approvals.

## 2 Overview

### 2.1 When can NANs be used for Configuration Change Management ?

NANs may be used as the configuration change management tool when :

- The configuration change *requires approval* (as per *Section 2.2 Is Approval for the Change Required ?*).
- The configuration change *does not require approval*.

### 2.2 Is Approval for the Change Required ?

There are some circumstances where a configuration change may not require the full Approval Authority process to be conducted (as per *EGP-03-01 Rail Network Configuration Management*), however still requires the configuration management process be undertaken to ensure systems are updated and stakeholders are informed.

Approval Authority is not required when :

- **Exactly the same manufacturer and part number item** is replaced during maintenance or projects. Generally, this is only an asset management change and it's the Asset Management System that may be required to be updated. *This is not considered a configuration change and hence does not need to adhere to this process.*
- **Type Approved Alternative items** are used as a replacement during maintenance or projects **PROVIDED they don't result in any changes in asset type (eg underbridge to culvert; timber to concrete turnout), or changes to the operational capability, network configuration, or safe-working** requirements of the ARTC Network. *Whilst approval authority is not required, this is still considered to be a configuration change and is required to adhere to this procedure for communicating the change and updating the relevant systems.*

**NOTE :** *If the Type Approved Alternative does change asset type, or affect operational capability, network configuration, or safe-working, then approval authority will be required and the Network Alteration Notice process will be required to be followed as per this Work Instruction [EGW-03-01 Using Network Alteration Notices \(NANs\) for Configuration Management](#).*

### 2.3 When Should I Create the NAN ?

- *Complex Projects* – For complex projects the NAN is generally written in the *Project Assessment Phase* and forms part of the project approval.
- *Simple Projects / AWP Projects / Maintenance* - For simple projects the NAN is generally written in the *Project Assessment Phase* and forms part of the project approval.
- *AWP Projects / Maintenance* - For AWP projects and maintenance the NAN is written at the commencement of the project, or when maintenance actions leads to a necessary configuration change.

## 2.4 How's it Work ?

A Network alteration can be any software component, release, tool, documentation or hardware unit required for the purpose of creating or supporting ARTC Network deliverables.

*All Network alterations undertaken by ARTC, Alliance Partners and / or Contractors are required to conform to EGP-03-01 Rail Network Configuration Management.*

The basic NAN concept is :

- The NAN is a word document (*EGP0301F-01 Network Alteration Notices - Template*) that's completed by the Change Initiator.
- There's an excel spreadsheet *NAN Register* to obtain the next unique identifying number for the NAN, and to maintain a record of the status of the NAN as it progresses through its stages.
- There's a *NAN Directory* on the ARTC network S:\ drive to store the NANs and any associated documents / drawings and signed approvals.
- The NAN form is completed from the template with all the details of the project, a listing of all the Configuration Items that will change, the systems / documents that will require updating and their owners, and the stakeholders that will require notification of the change.
- The NAN form is sent to the Approval Authority for approval (if required).
- Communicate to stakeholders and system / document owners of the pending change.
- Implement the change.
- Manage any scope changes – e.g. further approvals, communication.
- Advise system / document owners of the completed change and request them to update their systems / documents.
- Communicate to stakeholders the completed change.
- Receive written advice from system / document owners that updates have been completed.
- Close-out the configuration change management method.

## 2.5 Tools to Assist in Creating NANs

Tools are available on the *Project Management SharePoint* site (via the *Configuration Management page*) at the below link :

<https://artcau.sharepoint.com/sites/ARTCProjectManagement/SitePages/Configuration%20Management.aspx>

- **CCL Generator Tool** - This spreadsheet assists in creating a starting baseline list for the *Configuration Change List (CCL)*. It allows the user to select a work/project type (e.g. Level Crossings, Loops, Signalling, etc) and then it provides a list of all the potential systems/documents that may be affected by that type of project/work type. There are descriptions in the list assisting the user to understand what that system is, and why it might be required to be updated. The user then scrolls down the list, identifies which systems/documents are relevant for the scope of the project/work being undertaken by typing a "y" in the "Required ?" cell. The user then clicks the "CCL" button and the CCL list is generated. The CCL can then be attached to the NAN. NOTE: The user will still need to edit this starting CCL with all the remaining details for each configurable item.
- **All System List** - This provides a list of all the potential systems that may require updating, together with a description of what the system is, and when it may require updating. It also identifies the roles that would be responsible for updating the systems in ARTC.
- **Stakeholder Notification Contact List** - PART 3 of the NAN Form is "*Notification of Alteration*" to the relevant stakeholders and systems/document owners. The NAN form has the position titles/roles on the form, but not the actual name of the person in that role. The reason for this is that each Business Unit / Corridor may have a different person fulfilling that role. This spreadsheet provides a listing of the names of each person fulfilling each of the roles in the different Business Units / Corridors.
- **Examples of Past NANs** - It's often easier when you see examples of NANs that have been completed in the past to assist you in completing yours. You get an understanding of the detail that's required. There are a range of NANs that have been completed well that you can view.

## 2.6 Do Incidents Require a NAN ?

NAN's are only required for items that will incur a permanent change.

For incidents, a NAN shall be retrospectively issued if permanent changes to the infrastructure will result from any restoration works.

## 2.7 Auditing

The relevant Business Unit *General Manager Asset Management* shall ensure the audit of the progress and completion of NAN's and CCL's as per this procedure. Emphasis shall also be given to auditing that NAN's are approved prior to the commencement of any physical configuration changes.



## 3 Process

### 3.1 Create the NAN

- 1 Using the form template *EGP0301F-01 Network Alteration Notices* the change initiator creates a new NAN document.
- 2 The new unique NAN ID number for the document is obtained from the *NAN Register* spreadsheet. Open the *NAN Register* at the link below, select the next available number and record it in the *PART 1 – Section 1.1* of the new NAN document. (*NOTE : The NAN Register may only be opened by one user at a time, so if it's locked, return at a later time*).

<S:\Configuration Management\CM Registers\Network Alteration Notice Register\NAN Register.xls>

- 3 Enter the project and status information into the *NAN Register* at the row associated with your new unique NAN ID number. Save and close the *NAN Register*.

#### NOTES :

In the case of approved alternative item replacements the Status column of the NAN register shall be filled in with “*Approval not required*”

During the project or works, the status and other NAN details are to be updated to reflect the progress of the configuration change process. The NAN may have the following status:

- “*Awaiting Approval*” – before approval of the changes indicated on the NAN has been gained.
- “*Approved*” – the changes proposed on the NAN have been approved.
- “*On Hold*” – the changes indicated on the NAN are put on hold.
- “*Cancelled*” – the changes indicated on the NAN have been cancelled.
- “*Closed Out*” – All changes indicated on the NAN have been completed and all required Configuration systems / documents updated, regulators informed where necessary (as per NAN *PART 3 - Notification of Alteration, Section 11*) and the completed Configuration Change List (CCL) has been signed off.
- “*Approval not Required*” - Network alterations that do not alter the operational capability, configuration or safeworking requirements of the ARTC Network do not require approval i.e. approved alternative item replacement.

The NAN register also requires the dates for when certain events have occurred during the NAN process. These are to be entered as the NAN progresses.

- 4 For each unique NAN ID number there will be an individual *NAN Directory* available to store all the signed/unsigned NANs and documents/drawings/etc. that relate to the NAN. The directories are sub-directories from the following directory where the *NAN Register* resides. Save the new NAN document into this directory.

**S:\Configuration Management\CM Registers\Network Alteration Notice Register\**

- 5 Complete the NAN document *PART 1 – Details and Approval of Alteration, Sections 1 to 7* with details of the project.

## NOTES :

*PART 1 – Section 3, Details of Proposed Alterations & Works*, - Provide as much overall detail as possible on the scope of the project and the proposed changes as this will assist the Approval Authority in understanding the configuration change they're approving.

*PART 1 – Section 5, Does this Work Affect Network Operation ?* - To reach a decision whether the project will affect network operations, the initiator may need to seek guidance from Corridor Operations Managers or Train Transit Managers to determine how significant the affect would be. If the project is considered to affect network operations, then the relevant Operations Manager must approve the Network Alteration Notice. Details of the effect on operations are to be published via a Train / Safe Notice as per *OPE-PR-001 Preparation & Distribution of Operational Notices*.

*PART 1 – Section 6, Organisations Affected by the NAN* - Provide details of external stakeholders who may be affected during and after the alterations. Stakeholders identified in this section must also be included in *PART 3 – Notification of Alteration* to ensure they receive notification during distribution of the NAN to stakeholders.

*PART 1 – Section 7, Attachments*

*7.1 Risk Assessment* – Dependent upon the size, significance, and risk implications of the proposed changes, a risk assessment may be required at the discretion of the Approval Authority.

*7.2 Schematics* – Dependent upon the proposed changes, schematic drawings and plans are very important to fully understand the changes and to review the list of configurable items proposed to change in *PART 5 - Configuration Change List*.

### 3.2 Identify the Configurable Items and Systems to Update

*PART 5 – Configuration Change List* is to be completed by identifying the Configurable Items (CI) that are going to change as a result of the project or maintenance. This could include, but is not limited to :

- The addition of new assets.
- The disposal of existing assets.
- The renewal or upgrade of existing assets.
- A change in location (i.e. km) of existing assets.
- A change in operating systems or software.
- A change in documentation / manuals / procedures / drawings / etc.
- A change in Safeworking

These configurable items are to be entered into the *Configuration Change List (CCL)* together with :

- The systems / document that will require updating as a result of the change,
- The actual change required in the system / document (e.g. modify / add / remove, etc),
- The person responsible for updating the system / document,
- The Ellipse equipment number, if available
- The commissioning date (if known, or an approximation)

NOTE : There are tools available to assist in identifying the relevant stakeholders and system / document owners. See *Section 2.5 Tools to Assist Creating NANs*

### 3.3 Identify Stakeholders and System Owners

*PART 3 – Notification of Alteration, Section 11* is required to be completed if the *Office of the Rail Safety Regulator, ONRSR*, is required to be notified of the change as per ARTCs Safety Management System (SMS). I.e. *Notification of Change to Railway Operations (NOC)*, or, *Application of Variation of Accreditation (AVA)*.

*PART 3 – Notification of Alteration, Sections 13, 14, 15* requires the identification of stakeholders and system / document owners that require notification of the change. Some of these will be already be listed as Mandatory and **must** be advised, others are at the discretion of the change initiator based on the type of change being performed. NOTE : There are tools available to assist in identifying the relevant stakeholders and system / document owners. See *Section 2.5 Tools to Assist in Creating NANs*

There are three notification points throughout the NAN / project stages :

- After Approval of NAN (If approval required).
- Prior to Construction / Work Beginning – 2 weeks prior.
- After Infrastructure Commissioning / Decommissioning.

When creating the NAN, and prior to approval, tick the box for those stakeholders that are “required” to be notified (i.e. double click the check box and a pop-up window will appear - select “Checked”).

### 3.4 Conduct an Independent Review

After the NAN is completed and has been signed by the change initiator, and prior to it being sent to the Approval Authority, it’s recommended that an independent review be performed from within the Business Unit (e.g. Subject Matter Expert, Assurance, Asset Owner) to ensure the

completeness and accuracy of the NAN and CCL. This is not compulsory, but highly recommended for best practice.

### 3.5 Obtain Approval of the NAN

If approval is required, as per *Section 2.2 Is Approval for the Change Required ?*, then *PART 1 – Section 8* must be completed by sending the NAN form to obtain the signatures of the three approving authorities. This must be approved prior to any changes being implemented. The signed NAN forms are to be stored as a record in the NAN Directory associated with that NAN number.

### 3.6 Notify Stakeholders and System Owners of the Alteration

The stakeholders identified in *Section 3.3 Identify Stakeholders and System Owners* are to be notified of the NAN and CCL at the relevant notification points of the NAN project stages.

There are three notification points throughout the NAN / project stages :

- After Approval of NAN (If approval required).
- Prior to Construction / Work Beginning – 2 weeks prior.
- After Infrastructure Commissioning / Decommissioning.

*PART 3 – Notification of Alteration* is to be updated once the stakeholders identified have been notified. Tick the box to show they've been "advised" (double click the check box and a pop-up window will appear -select "Checked").

### 3.7 Manage any Changes in Scope

There may be minor or major changes to the NAN scope during the Detailed Design or Project Implementation :

- *Minor Changes* - In the case of minor changes to the NAN that do not alter the project objectives the project proceeds as planned, and the NAN is updated with all such minor changes prior to commissioning.
- *Major Changes* - In the case of major changes that impact on project objectives, the amended NAN shall be re-approved by the Approval Authority in *PART 2 – Change of Scope* on the previously approved NAN form. For complex projects, a revision to the Configuration Management Plan should also be conducted and approved. The signed NAN forms are to be stored as a record in the NAN Directory associated with that NAN number.

If changes are required to previously issued NAN's and Train / Safe Notices regarding the planned dates or extensions to agreed track closures then, notice shall be given to the Operations project representative and the Assistant Planner (or Train Transit Manager (TTM) outside of normal business hours) as soon as possible. An amended Train / Safe Notice shall be issued identifying when the works will be completed and referencing the previous versions of the Train / Safe Notice.

### 3.8 Update the Systems / Documents

Once the project or maintenance changes have occurred and the system / documents updated, the date that these updates occurred is to be entered into *PART 5 – Configuration Change List*.

The completion of the system / document updates must be verified in writing by the system / document owner that the change has been made. This written advice is to be maintained with the project records, and a copy should be saved in the NAN Directory for audit purposes.

*NOTE : It's acknowledged that some changes may take time to implement, hence it's at the discretion of the system / document owner whether to provide verification of the change prior to it being fully implemented in the system / document (i.e. if the system owner provides written verification that the change is pending and will occur subsequently, then the change initiator may sign-off that the change may be considered as being completed for the purposes of the NAN). It's the responsibility of the system / document owner to then ensure the updates occur*

Once all systems / documents have been updated, the Change Initiator (or representative) is to sign-off the bottom section of the CCL to verify they have managed the completion of all the updates. This signed copy is to be maintained with the project records, and a copy should be saved in the NAN Directory for audit purposes.

### 3.9 Close-Out the NAN

*PART 4 – Close-Out* is used for the change initiator to sign-off:

- All work has been completed and commissioned, and
- The Configuration Change List is completed and signed-off, and
- The NAN Register fully completed, and
- The NAN & CCL fully completed and saved to the NAN Directory.

The change initiator shall sign off and date the NAN.

The completed NAN shall be electronically stored in the NAN Directory and the original hardcopy be stored with the project records.

The change initiator is responsible for ensuring that the NAN Register is updated to indicate the NAN has been "Closed Out" in the status column, and the date the NAN was closed out shall be entered into the "Close Out Date" column.

**4 APPENDIX A – Flowchart of the NAN Process**

