Division / Business Unit: Asset Management
Function: All Disciplines
Document Type: Guideline

ARTC Track Configuration Datasets – Track Data

AMT-GL-003

Applicability

ARTC Network Wide

Publication Requirement

Internal & External

Primary Source

Document Status

Version #	Date Reviewed	Prepared by	Reviewed by	Endorsed	Approved
1.0	19 Feb 2024	Linear Referencing Systems Lead	Asset Management Systems Manager (Interstate)	Manager Asset Planning & Investment (Interstate) Manager Engineering (Hunter Valley)	General Manager Development & Planning (Interstate) 20 May 2024

Amendment Record

Amendment Version #	Date Reviewed	Clause	Description of Amendment
1.0	19 Feb 2024	All	First issue of document

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1 Introduction

1.1 Purpose

The purpose of this procedure is to define the purpose, system and data schemas of the TrackData system used to maintain linear network configuration data.

1.2 Scope

This procedure covers:

- Track Data System Overview
- Configuration Data contained within the Track Data System inc;
- Business Owner, Administrator and Data Schemas
- Project Deliverables and Process for Submission and Storage

1.3 Procedure Owner

The Asset Management Systems Manager is the Procedure Owner and is the initial point of contact for all queries relating to this procedure.

1.4 Responsibilities

The General Manager Asset Management or equivalent of each Business Unit is responsible for the implementation of this procedure.

The delegate of the General Manager Asset Management or equivalent of each Business Unit is responsible for managing the process.

1.5 Parent Procedure

The following documents support this procedure:

Document Number	Document Title
EGG-20-01	Project Management Data Deliverable Descriptions

1.6 Subordinate Documents

The following documents are subordinate to this procedure:

Document Number	Document Title
AMT-FM-006	TrackData Template – Ballast
AMT-FM-007	TrackData Template – Rail
AMT-FM-008	TrackData Template - Sleepers

1.7 Definitions

The following terms and acronyms are used within this document:

Term or acronym	Description
ARTC	Australian Rail Track Corporation Ltd.
TrackData	The generic term used for the tabular database used by ARTC to store Network Configuration Information such as rail, sleeper and ballast types, location and installation dates.
SQL	Structured query language (SQL) is a programming language for storing and processing information in a relational database. A relational database stores information in tabular form, with rows and columns representing different data attributes and the various relationships between the data values.
SharePoint	SharePoint is a Microsoft Product that facilitates the storage, retrieval, searching, archiving, tracking, management, and reporting on electronic documents and records. ARTC utilises sharepoint as its corporate document management system.
GIS	Geographic Information System
LRS	Linear Referencing System

2 TrackData System

2.1 Current System

Currently ARTC's TrackData system is in a transient state after the recent end of life shutdown of the historic SQL based system of the same name.

At present, data is being maintained in a non-production status whilst the business plans the next iteration of TrackData and reviews its appropriateness.

During this time, a copy of the old database is maintained within an excel document stored on the TrackData Sharepoint, and new records and updates are being recorded on template submissions and will be resolved once the new system is designed and built.

At present, ARTC is investigating this new system being the ARTC Linear Referencing System utilising the GIS Event Data capabilities, however ARTC also needs to determine the correct data owners, required schemas and management processes to ensure it meets the businesses strategic and regulatory requirements.

2.1.1 Historical System

The TrackData database was largely inherited from Rail Infrastructure Corporation, and has been updated over time to a somewhat varying degree to both improve information quality and to reflect on-going renewals.

2.2 System Schema

All TrackData attribute records are maintained with at least the following information in addition to the attribute configuration details;

- Track Basecode
- Start Kilometrage
- End Kilometrage
- Installation Date

3 TrackData Datasets

The following datasets are currently maintained within the TrackData system, now housed within the ARTC GIS Linear Referencing System.

- Ballast
- Rail
- Sleepers

3.1 Ballast

3.1.1 Asset Owner

The Ballast dataset is owned by the following ARTC Positions for their appropriate Business Units:

Interstate Business Unit:	General Manager Asset Management or equivalent
Hunter Valley Business Unit:	General Manager Asset Management or equivalent

3.1.2 Asset Administrator

The Ballast dataset is maintained by the following ARTC Positions for their appropriate Business Units:

Interstate Business Unit:	Delegate of General Manager Asset Management or equivalent
Hunter Valley Business Unit:	Delegate of General Manager Asset Management or equivalent

3.1.3 Asset Schema

Ballast Supplier - Quarry

3.2 Rail

3.2.1 Asset Owner

The Rail dataset is owned by the following ARTC Positions for their appropriate Business Units:

Interstate Business Unit:	General Manager Asset Management or equivalent
Hunter Valley Business Unit:	General Manager Asset Management or equivalent

3.2.2 Asset Administrator

The Rail dataset is maintained by the following ARTC Positions for their appropriate Business Units:

Interstate Business Unit:	Delegate of General Manager Asset Management or equivalent
Hunter Valley Business Unit:	Delegate of General Manager Asset Management or equivalent

3.2.3 Asset Schema

- Railside (Up or Dn or Third Rail)
- Manufacturer
- Supplier
    - Inc. Flash Butt Welding Location
- Supply Lengths
- Rail Condition
    - New, Used, Transposed
- Rail Section
    - Size and Profile
- Grade
    - Standard Carbon or Head Hardened
- Rolled
    - Rolling Date
- Heat or Leg No
    - See Additional Information
- Comments
    - For additional information about the installed rail, specifically comments such as;
        - Used second hand rail from x location or y network
        - Transposed rail with y% life remaining

3.2.4 Additional Information

Rail types

It Is important that track maintenance staff be able to recognise the various sections of rail used in the RailCorp system.

There is a manufacturer's brand on the web of each rail. The rail brand shows:

1. The name of the manufacturer.
2. The year the section became Australian Standard.
3. The section of rail.
4. The month and year the rail was rolled.

The "heat" number, which gives the batch or ingot from which the rail was rolled is found on the web of the rail on the opposite side of the rail brand.

If there is no rail brand, you can identify the rail by its size.

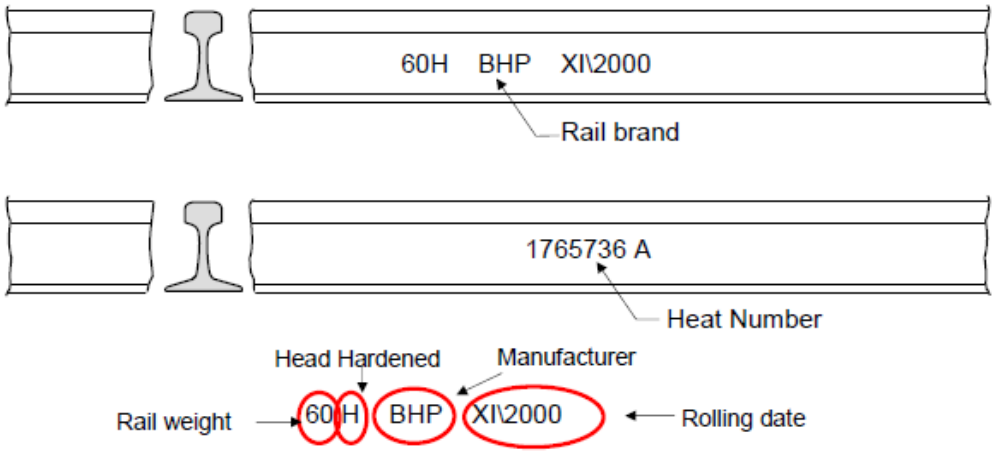

Figure 81 – Modern Rail identification

Figure 82 – Old Rail identification

3.3 Sleepers

3.3.1 Asset Owner

The Sleepers dataset is owned by the following ARTC Positions for their appropriate Business Units:

Interstate Business Unit:	General Manager Asset Management or equivalent
Hunter Valley Business Unit:	General Manager Asset Management or equivalent

3.3.2 Asset Administrator

The Sleepers dataset is maintained by the following ARTC Positions for their appropriate Business Units:

Interstate Business Unit:	Delegate of General Manager Asset Management or equivalent
Hunter Valley Business Unit:	Delegate of General Manager Asset Management or equivalent

3.3.3 Asset Schema

- Sleeper Type
  - Material
  - Gauge
  - Profile
  - Clip Type
  - Replacement Pattern (1:1, 1:2, 1:3)
  - Insulated
  - Application (eg Standard Sleeper, Turnout, Transom, Deck Bridge, Slab)
- Manufacturer
- Comments
  - For additional information about the installed sleeper, specifically comments such as;
    - Used second hand sleepers
    - Sleepers modified 47kg plate to cater for 60kg foot
    - 1 in 4 concrete timber pattern

4 Maintenance of TrackData

4.1 Updates and Project Work Submissions

At present, TrackData is maintained in a non-production state. As such, all project works are to complete the appropriate template for the works completed as per EGG-20-01, and submit the completed form to the appropriate administrator.

The administrator is responsible for reviewing and accepting the submission ensuring its completeness and then shall store it within the TrackData Sharepoint.