

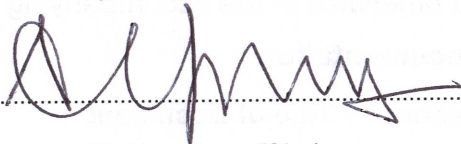
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Level 3

The Specification and Design of Plain Line Track Renewals

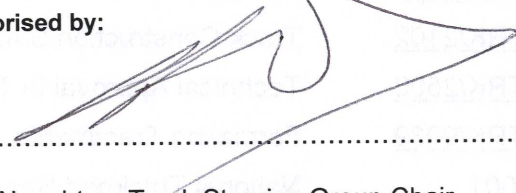
Endorsement and Authorisation

Endorsed by:



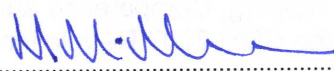
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Accepted for issue by:



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Issue record

Issue	Date	Comments
1	August 2007	1 st issue
2	August 2008	Re-issue as a result of Maintenance and Engineering reorganisation. Roles and responsibilities re-allocated to new posts.

Compliance

This Network Rail standard is mandatory and shall be complied with by Network Rail and its contractors if applicable from 26 August 2008.

When this standard is implemented, it is permissible for all projects that have formally completed GRIP Stage 4 to continue to comply with the Issue of any relevant Network Rail Standards current when GRIP Stage 4 was reached and not to comply with requirements contained herein, unless the designated Standard Owner has stipulated otherwise in the accompanying Briefing Note.

Reference documentation

Document Number	Title of Document
<u>NR/L2/TRK/6001</u>	Renewals Work Bank Management
<u>NR/L3/TRK/6001</u>	Management of a Problem Statement
<u>NR/L2/TRK/2102</u>	Track Construction Standards
<u>NR/L2/TRK/2500</u>	Technical Approval In The Design of Track Infrastructure
<u>NR/L2/TRK/9039</u>	Formation Treatments
<u>NR020/001</u>	National Trackbed Specification
<u>NR/PRC/MPI/CP0047</u>	Application of the Construction Design and Management Regulations – Accountabilities and Responsibilities within Projects & Engineering
<u>NR/SP/CTM/033</u>	Training, Competence and Assessment in the roles as identified by the CDM 2007 Regulations

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1 Purpose

The purpose of this document is to define the procedure to be used for the specification and design of Plain Line Track Renewals (PLTR's) that are required to address asset condition

The objectives are:

- o That the specifications and designs for PLTR's are produced in a consistent and timely manner to a high quality considering business needs and utilising best practice
- o That the specification is optimised considering the financial efficiency of delivering the work and whole life cost
- o To reduce the health and safety risk through specification and design.

2 Scope

The specification and design of PTLR's delivered as items in the Engineering Programme by the I&I Track Programme.

The Design for a plain line renewal comprises (as appropriate):

- o The Particular Specification (PS)
- o The Track Bed Design (included in the PS)
- o The Design Risk Register (included in the PS)
- o The Alignment Design
- o The Drainage Design
- o The OLE Design
- o The Bonding Design.

PLTR's comprise re-railing, re-sleepering, reballasting, formation renewal and track drainage or any combination thereof. Where required, due to existing track construction, supplementary works shall be included by the specifier in the PS as appropriate.

3 Roles and responsibilities

Role	Accountability and Responsibilities
I&I Programme Engineering Manager	Accountable for the application of this procedure from an I&I Perspective. Responsible for appointing a competent Design Engineer. Responsible for I&I compliance with the procedure. Supports the TPEM in implementing the procedure. Through the TPEMs manages the consistent application of the procedure within I&I across the Track Programme. Undertakes a joint annual audit and review with Engineering and recommends improvements to the procedure.

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NREE(T)	Appoints competent PREE(T) and REE(T) based on technical competence and the necessary competence to undertake the role of designer identified by the CDM Regulations – refer to NR/L2/CTM/033.
PREE(T)	Accountable for the application of this procedure from an Engineering Organisation Perspective. Responsible for appointing competent Renewals Engineers. Responsible for Engineering Organisation compliance with the procedure. As Network Rail's representative, monitors that the PREE(T) team discharges the duties of the designer (for Particular Specification only) under the CDM Regulations (2007). Responsible for the continuous development and improvement of the procedure. Undertakes a joint audit/review of the application of the procedure and implementing the necessary improvements across the Engineering Organisation.
REE(T)	Responsible for ensuring that information is provided to the PREE(T) in a timely manner on any structural issues.

4 Definitions & Abbreviations

NBPE(T)	Engineering - Business Planning Engineer (Track)
CDM	Construction Design & Management Regulations (2007)
DE	I&I - Territory (Track) Design Engineer
DRR	Design Risk Register
PM	I&I Project Manager
PS	Particular Specification.
REE (T)	Engineering - Renewals & Enhancements Engineer (Track)
SDE	I&I - Functional Support Team's Senior (Track) Design Engineer
SPEM	I&I - Senior Programme Engineering Manager (Track)
TBIR	Track Bed Investigation Report
PREE (T)	Engineering - Principal Renewals & Enhancements Engineer (Track)
TCE	Engineering - Territory Engineer (Civil Engineer)
PEM	I&I - Territory Programme Engineering Manager

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5 Principles

- 5.1 The Particular Specification (PS) is produced by the Principal Renewals & Enhancement Engineer (Track) PREE(T)
- 5.2 Each PS shall have a unique ID (UID) assigned by the PREE(T) and all designs shall be referenced to the UID.
- 5.3 The UID numbering system is defined in Appendix B.
- 5.4 The PS has expert input from all parties to achieve objectives
- 5.5 The timescales for the production of the PS and design documents are driven by the Access planning framework and are defined elsewhere.
- 5.6 During the preparation of the PS it will progress through 3 stages before being formally issued to the Renewals Contractor. These are: The Outline PS, The Draft PS and The PS.
- 5.7 The PS shall treat the problem statement(s) proposed in the most efficient and cost effective manner having due regards to Asset Policies, Line Specifications, local site conditions, the route strategy, and efficient delivery methodology.
- 5.8 The standards for specification, design and construction will apply unless non-compliance is specifically agreed by the Head of Track Engineering.
- 5.9 The Specification is developed by Engineering in consultation with Maintenance, I&I, the Renewals Contractor and the Principal Route Planner.
- 5.10 A Site Specific Design Risk Register (DRR) is developed alongside the specification and remains a live document throughout the project.
- 5.11 Where the results of investigations and/or specification and/or design may have a material effect on the Access planning requirements then these must be identified and undertaken prior to the production of the Draft PS.
- 5.12 Alignment, drainage and OLE Designs are delivered by I&I. The I&I Design Engineer (DE) will co-ordinate the preparation of the alignment design and the Particular Specification and consults the PREE(T) when there is conflict.
- 5.13 The PS will be prepared using the Track Renewal Proposal Support System (TRPSS).

6 The Outline Particular Specification

- 6.1 Following the validation of a Problem Statement (NR/L3/TRK/6001) the PREE(T) will define the scope of the work item required and create the Outline PS.
- 6.2 The Outline PS is the first state for a work item entry in the Renewals work bank (NR/L2/TRK/6001) and shall identify the location, extent, type of work required, and the design parameters to be used where different from existing.
- 6.3 The PREE(T) will discuss the site with the T.M.E. and consider Asset Policies, Line Specifications, local site conditions, the Route Strategy and efficient delivery methodology (see guidelines in Appendix A).
- 6.4 The PREE(T) will notify the Principal Route Planner of the work item in order that they may identify enhancement opportunities for consideration and agreement by the Route Strategy Planning Group (RSPG).