

Letter of instruction

Information for users

The following document:

NR/L2/AMG/02106 Issue 4

has had changes made to it, most recently, with effect from **23 September 2013**.

Instructions for use

It is essential that you first read and understand each letter of instruction pertaining to the standard before proceeding to use the standard. You must then apply the requirements of each letter to the standard.

NR/BS/LI/305	Issue 1	23 September 2013	Proceed to letter ►
NR/L2/AMG/02106	Issue 4	01 June 2008	Proceed to standard ►

For further information, please contact:

IHS Customer Support

Please click here to proceed to the Network Rail Standards' 'Support Contacts' for their latest contact details.

Ref:	NR/L2/AIF/02106
Issue:	4
Date:	01/06/2008
Compliance date:	26/08/2008

Level 2

The provision of track category and traffic data (formerly NR/L2/AMG/02106)

CHANGE OF OWNERSHIP

This temporary front sheet facilitates change of ownership.

The reference above will be formally allocated to this standard when it is next changed. In the meantime the contents, date and issue number of this Network Rail Standard are **UNCHANGED**.

This document is the property of Network Rail. It shall not be reproduced in whole or part nor disclosed to a third party without the written permission of Network Rail.

© Copyright 2010 Network Rail.

Uncontrolled copy once printed from its electronic source.

Published and Issued by Network Rail, Kings Place, 90 York Way, London. N1 9AG.



Ref:	NR/L2/AMG/02106
Issue:	4
Date:	1 June 2008
Compliance date:	26 August 2008

Level 2

The provision of track category and traffic data

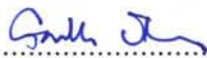
Endorsement and Authorisation

Endorsed by:



Stephen Rivers, Working Group Chair

Authorised by:



Gareth Jenkins, Steering Group Chair

Accepted for issue by:



Mick McManus, National Standards Manager

This document is the property of Network Rail. It shall not be reproduced in whole or part nor disclosed to a third party without the written permission of Network Rail.
© Copyright 2008 Network Rail.

Uncontrolled copy once printed from its electronic source.

Published and Issued by Network Rail, 40 Melton Street, London NW1 2EE.



Ref:	NR/L2/AMG/02106
Issue:	4
Date:	1 June 2008
Compliance date:	26 August 2008

Issue record

Issue	Date	Comments
1	June 2003	RT/E/P/02106 Management of the Effects of Changing Traffic Flows on Maintenance – first issued with original title and reference.
2	August 2005	Fully updated and new reference used to reflect current responsibilities and reference scheme. Some details moved to newly-issued supporting work instruction NR/WI/BUS/02107 .
3	December 2007	Additional post of Territory Engineer [Civils] added to list of recipients for information. This document was formerly NR/SP/BUS/02106.
4	June 2008	Phase 2A/Engineering reorganisation responsibility change.

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

See clause 3

Disclaimer

In issuing this document for its stated purpose, Network Rail makes no warranties, express or implied, that compliance with all or any documents it issues is sufficient on its own to ensure safe systems of work or operation. Users are reminded of their own duties under health and safety legislation.

Supply

Copies of documents are available electronically, within Network Rail's organisation. Hard copies of this document may be available to Network Rail people on request to the relevant controlled publication distributor. Other organisations may obtain copies of this document from IHS (Technical Indexes Ltd) tel: 01344 328039.

Ref:	NR/L2/AMG/02106
Issue:	4
Date:	1 June 2008
Compliance date:	26 August 2008

Contents

1 Purpose	4
2 Scope	4
3 Reference Documentation	4
4 Definitions	4
5 Responsibilities	5
6 Process Flow Chart	6
7 Procedure	7

Ref:	NR/L2/AMG/02106
Issue:	4
Date:	1 June 2008
Compliance date:	26 August 2008

1 Purpose

To define the process for identifying, evaluating and providing information about track category, planned traffic flows and short-term changes to traffic. This enables informed decisions to be made about asset stewardship, inspection, maintenance and renewal.

2 Scope

This procedure applies to all lines where Network Rail is responsible for maintenance and renewal of the track. It covers annual and short-term planning and applies to the Engineering, Maintenance and Information Management teams. It sets out the process for:

- identifying and communicating planned traffic flows and their effect on track categories
- identifying and communicating changes in traffic flows and their effect on track categories.

This procedure is supported by a Work Instruction ([NR/L3/BUS/02107](#)), which sets out the process to be followed in more detail.

3 Reference Documentation

[GC/RT5023](#) *Categorisation of Track*

4 Definitions

Equivalent Million Gross Tonnes Per Annum (EMGTPA)

A measure of the annual tonnage carried by a section of track, taking into account variations in track damage caused by normal traffic types. EMGTPA is a key component of the track category calculation.

Track Category

Track Category is an estimate of the impact of traffic on track, based on 7 category bands – 6, 5, 4, 3, 2, 1, 1A – where 6 indicates the lowest impact and 1A the highest. It is produced by measuring EMGTPA against the speed of traffic and is used to determine inspection frequencies and renewals specifications.

Master Traffic Database

Network Rail's Master Traffic Database is used to monitor train numbers; train consists; line speeds; track configuration and to calculate EMGTPA and track category.

Ref:	NR/L2/AMG/02106
Issue:	4
Date:	1 June 2008
Compliance date:	26 August 2008

5 Responsibilities

5.1 The Asset Systems Application Manager shall:

- Populate and maintain the Master Traffic Database

5.2 The Positioning Systems and Traffic Specialist shall:

- Carry out data quality checks on the traffic data held within the Master Traffic Database and take appropriate action on any significant issues as they arise
- Notify the Principal Maintenance Support Engineer [Track] and Territory Civil Engineer of the baseline track categories and of any amendments to track category that arise from changes in traffic flow or infrastructure
- In exceptional circumstances, arrange the manual calculation of track categories

5.3 The Principal Maintenance Support Engineer [Track] shall:

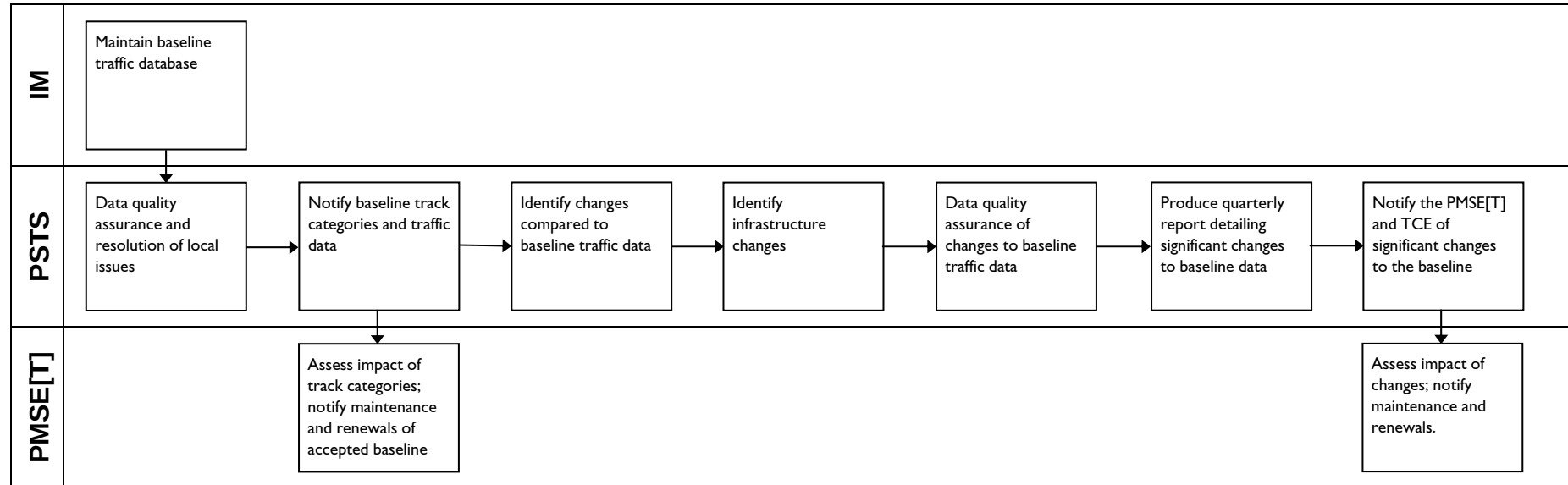
- Review track categories (particularly category changes), tonnage (including EMGTPA) and traffic type
- Assess the impact upon inspection frequencies and maintenance regimes
- Decide if routes with increases can carry traffic safely
- Consult the Maintenance team as appropriate in respect of the above
- Notify the baseline Track Categories and any changes to those involved in maintenance and renewal activities

Copyright Network Rail

Ref:	NR/L2/AMG/02106
Issue:	4
Date:	1 June 2008
Compliance date:	26 August 2008

6 Process Flow Chart

6.1 Establishing the baseline Annual Tonnage, EMGTPA and Track Category levels



NOTE PMSE[T] = Principal Maintenance Support Engineer [Track]; TCE = Territory Civil Engineer; PSTS = Positioning Systems and Traffic Specialist; IM = Information Management

Ref:	NR/L2/AMG/02106
Issue:	4
Date:	1 June 2008
Compliance date:	26 August 2008

7 Procedure

7.1 Maintaining the Traffic Database

The Asset Systems Application Manager shall populate the Master Traffic Database with the bulk data necessary to produce EGMPA. He or she will then use the Master Traffic Database to establish the Track Category for each track section where Network Rail is responsible for maintenance and renewal of the track.

7.2 Assurance of the data quality held within the Traffic Database

The Positioning Systems and Traffic Specialist shall correct any errors or omissions in the Traffic Database. They shall highlight any significant data quality issues to the Principal Maintenance Support Engineer [Track] and the Asset Systems Application Manager as soon as they become apparent.

7.3 Notifying the baseline Track Categories

The Positioning Systems and Traffic Specialist shall notify the Principal Maintenance Support Engineer [Track] and Territory Civil Engineer of the baseline Track Categories as they become available in the Traffic Database.

7.4 Review of baseline Track Category levels and impact upon maintenance and renewals.

The Principal Maintenance Support Engineer [Track], consulting with the Maintenance team as appropriate, shall review the baseline Track Categories and assess the impact on inspection frequencies and maintenance regimes. The baseline Track Categories shall then be notified to those involved in maintenance and renewal activities.

The Principal Maintenance Support Engineer [Track], consulting with the Maintenance team as appropriate, shall decide if routes with increased tonnage can carry traffic safely.

7.5 Evaluating short-term traffic flows and infrastructure changes

7.5.1

The Positioning Systems and Traffic Specialist shall identify potential and actual short-term traffic flow changes. Details of future engineering blockades, traffic diversions, route and service introductions, changes and deletions, and traffic type (vehicle/consist) changes shall be obtained from Operations Notices and by liaison with the Operational Planning team. Actual changes are identified by comparing current traffic against baseline.

7.5.2

Using the relevant master data source for each asset type, the Positioning Systems and Traffic Specialist shall identify changes to infrastructure that affect track category.

7.6 Assurance of Track Category data quality

The Positioning Systems and Traffic Specialist shall carry out data quality checks to establish if changes to the baseline track categories are correct. Any significant data quality issues are to be notified, as soon as they arise, to the Principal Maintenance

Ref:	NR/L2/AMG/02106
Issue:	4
Date:	1 June 2008
Compliance date:	26 August 2008

Support Engineer [Track] and the Asset Systems Application Manager as appropriate.

7.7 Identifying significant changes to the baseline Track Category levels

The Positioning Systems and Traffic Specialist shall produce a quarterly report identifying any changes to the baseline Track Category levels. This shall be made available to the Principal Maintenance Support Engineer [Track] and Territory Civil Engineer.

7.8 Notifying significant changes to the baseline

The Positioning Systems and Traffic Specialist shall inform the Principal Maintenance Support Engineer [Track] and Territory Civil Engineer of any changes to the Track Category levels that result from changes in traffic flows and infrastructure.

7.9 Reviewing the impact of changes to baseline Track Category levels

7.9.1

The Principal Maintenance Support Engineer [Track] shall review track categories, tonnage (including EMGTPA) and traffic type and inform the Maintenance team of all changes to track category, and any other significant changes.

7.9.2

The Principal Maintenance Support Engineer [Track], consulting the Maintenance team as appropriate, shall assess the impact of changes on inspection and maintenance frequencies and renewal regimes.

7.9.3

The Principal Maintenance Support Engineer [Track], consulting the Maintenance team as appropriate, shall assess whether routes with increased tonnage can carry traffic safely.

7.10 Traffic Analysis

In addition to the reporting specified above, the Principal Maintenance Support Engineer [Track] (or others) may request traffic analysis to cover specific scenarios or route sections that may be of concern. The Positioning Systems and Traffic Specialist shall arrange for such analysis using the data systems available, issue traffic analysis reports and, as appropriate, incorporate conclusions into the quarterly short-term traffic reports.

<p>Purpose: To define the process for identifying, evaluating and providing information about track category, planned traffic flows and short-term changes to traffic. This enables informed decisions to be made about asset stewardship, inspection, maintenance and renewal.</p>	<p>The following teams require awareness briefing:</p> <p>Executive Management Group ☐</p> <p>Commercial Property ☐</p> <p>Contracts and Procurement ☐</p> <p>Strategic Change ☐</p> <p>CTRL ☐</p>				
<p>Scope: This procedure applies to all lines where Network Rail is responsible for maintenance and renewal of the track. It covers annual and short-term planning and applies to the Engineering, Maintenance and Information Management teams. It sets out the process for:</p> <ul style="list-style-type: none"> identifying and communicating planned traffic flows and their effect on track categories identifying and communicating changes in traffic flows and their effect on track categories. <p>This procedure is supported by a Work Instruction (NR/L3/BUS/02107), which sets out the process to be followed in more detail.</p>	<p>Engineering</p> <p>Asset Management ☒</p> <p>Civil Engineering ☒</p> <p>E&P Engineering ☐</p> <p>Enhancements Engineering ☐</p> <p>Ergonomics ☐</p> <p>Future Railway Programme ☐</p> <p>Ops Principles & Standards ☐</p> <p>Rail Vehicle Engineering ☐</p> <p>Railway Systems ☐</p> <p>Telecoms Engineering ☐</p> <p>Track Engineering ☒</p> <p>Signal Engineering ☐</p>				
<p>What's New/Changed: Document reference amended. Job titles affected by Network Rail phase 2A reorganisation amended to agree with new template.</p> <p>Territory Engineer [Track] amended to Principal Maintenance Support Engineer [Track]</p> <p>Territory Engineering Knowledge Manager amended to Positioning Systems and Traffic Specialist</p> <p>Territory Engineer [Civils] amended to Territory Civil Engineer</p>	<p>Finance ☐</p> <p>Funding ☐</p> <p>Govt & Corp Affairs ☐</p> <p>Human Resources ☐</p> <p>Information Management ☒</p> <p>Infrastructure Investment</p> <p>Crossrail ☐</p> <p>Track ☐</p> <p>Programme Management ☐</p> <p>Contracts & Procurement ☐</p> <p>HSQE ☐</p> <p>Sig. Power & Comms ☐</p> <p>WCRM ☐</p> <p>Construction ☐</p> <p>FTN/GSM-R ☐</p> <p>Thameslink ☐</p> <p>Enhancements ☐</p>				
<p>Affected documents:</p> <table border="0"> <thead> <tr> <th>Reference</th> <th>Impact</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	Reference	Impact			<p>Infrastructure Maintenance</p> <p>Maintenance Areas ☒</p> <p>Operational Property ☐</p> <p>Overhead Condition ☐</p> <p>Renewals ☐</p>
Reference	Impact				
<p>Implementation requirements:</p> <p><i>The following posts have specific responsibilities within this standard and shall receive technical briefing as part of the Implementation Programme:</i></p> <p>Principal Maintenance Support Engineer [Track]</p> <p>Positioning Systems and Traffic Specialist</p> <p>Territory Civil Engineer</p>	<p>Legal Services ☐</p> <p>National Delivery Service ☐</p> <p>Network Development ☐</p> <p>Operations & Customer Services ☐</p> <p>Planning & Regulation ☐</p> <p>Safety and Compliance ☐</p> <p>Westwood ☐</p>				
<p>For further information contact:</p> <p>Name: Stephen Rivers</p> <p>Contact number: 085 53323</p> <p>Email: Stephen.rivers@networkrail.co.uk</p>	<p>Documents</p> <p>Document Sharing H</p>				

Letter of Instruction: NR/BS/LI/305

Issue date: 23rd September 2013

Compliance date: 1st October 2013

Expiry date: 31st December 2013

Contact details: Andy Jones, Professional Head [Track] (07967 668874)

Standards affected:

- NR/L2/TRK/001, Issue 6 - Inspection and Maintenance of Permanent Way
- NR/L2/TRK/2102, Issue 6 - Design and Construction of Track
- NR/L2/TRK/3038, Issue 5 - Longitudinal Timbers: Design- Installation and Maintenance
- NR/L2/TRK/0032, Issue 5 - Joining Of Rails By Aluminothermic Welding
- NR/L2/AIF/02106, Issue 4 - The Provision of Track Category and Traffic Data
- NR/L2/TRK/0132, Issue 6 - Maintenance Arc Welding of Rails, Switches and Crossings
- NR/L3/CIV/005/3A, Issue 1 – Railway Drainage Systems Manual, part 3A: Inspection
- NR/L3/CIV/005/3B, Issue 1 - Railway Drainage Systems Manual, part 3B: Maintenance
- NR/L3/TRK/3230, Issue 2 – Control of On Track Machines

1 Reason for issue

To introduce the Business Critical Rules applicable to the Business Critical Rules Programme National Trial for plain line track, Bow-Ties, Means of Control and role-based manual into the current track standards framework (given in NR/L2/EBM/STP001, Issue 5 and NR/BS/LI/304, Issue 1) for a trial period of three months.

The role-based manuals to be used during the trial period contain Business Critical Rules, Bow-Ties and Means of Control which have been based on the existing technical requirements for managing plain line track as found in NR/L2/TRK/001, Issue 6 and the other technical standards listed above.

The purpose of the National Trial is to test the new approach to the provision of requirements and guidance information needed to operate and maintain a safe and efficient plain line track system.

2 Scope

The trial covers role-based manuals for the roles listed:

- Route Asset Manager [Track]
- Track Maintenance Engineer
- Rail Management Engineer
- Section Manager [Track]

The scope of the National Trial for plain line track includes:

Applicable assets

1. Plain line track
 - a. Running lines and sidings

Assets excluded:

- a. Closed lines
- b. Off-track assets (e.g. fencing, vegetation, access points, safe cress and walkways)
- c. Level crossing surface system
- d. Buffer stops
- e. Conductor rail equipment (except arc damage risk to Plain Line Track asset)

Risks covered include:

1. Broken rail
2. Track geometry faults
3. Track buckles

Risks excluded are:

1. Derailment due to flange climb
2. Derailment caused by:
 - a. structural clearances
 - b. passing clearances
3. Derailment caused by obstruction of the track (e.g. cutting slope failure, vandalism, cow on line, tree on line)
4. Risks to people who are not travelling on trains
5. Guard rails on structures

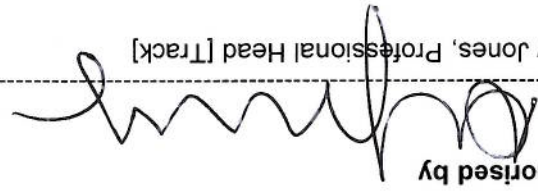
3 Changes

All clauses from standards relevant to the National Trial are listed in the disposition information in Appendix 2.

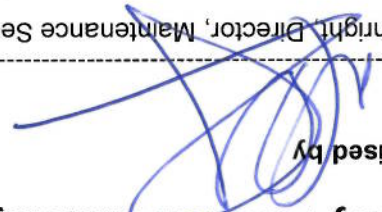
The disposition information indicates the clauses that are considered relevant for the purposes of this trial. These clauses are contained in the *Plain Line Track Reference Module*.

Use of the role-based manuals during the trial will provide an alternative approach to the current standards.

Authorisation of Standard Owner

Authorised by 
Andy Jones, Professional Head [Track]

**Authorisation of appropriate
Delivery Function authority**

Authorised by 
Mark Enright, Director, Maintenance Services

4 Recipients

Name	Post
David Webb	RAM[T] RLNW
Keith Vernon	RAM[T] RLNW
Michele Mullen	RAM[T] RSCO
Nigel Wilson	RAM[T] REAN
Colum Cavanagh	RAM[T] RSUS
Philip Jeyes	RAM[T] RKNT
Andrew Franklin	RAM[T] RWAL
Stephen Pearson	RAM[T] RWES
Peter Cushing	RAM[T] RLNE
Roger Griffiths	RAM[T] RLNE
Maria Seco	RAM[T] AWEX

5 Details of briefing or cascade communication process

The Route Asset Manager [Track] shall brief Track Maintenance Engineers, Rail Management Engineers and Section Managers [Track] in their Route.

The Director, Route Asset Management shall arrange a brief for Infrastructure Maintenance Delivery Managers and Infrastructure Maintenance Engineers in their Route.