21-002 – Reporting High Risk Defects

[This page should be deleted at the publication stage of the project]

Version:	2.5		
Purpose:	Approval to publish		
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Lead industry committee:	Rolling Stock Standards Committee (RST SC)	**Date:**	09 March 2023
Supporting industry committee:	Plant Standards Committee (PLT SC)	**Date:**	02 March 2023
Supporting industry committee:	Traffic Operation and Management (TOM SC)	**Date:**	28 February 2023
Supporting industry committee:	Control Command & Signalling Standards Committee (CCS SC)	**Date:**	09 March 2023

Decision

Rolling Stock Standards Committee (RST SC) is asked to:

- **COMMENT** on the proposed responses to comments received during consultation.
- **APPROVE** with or without modification the proposed responses to comments received during consultation.
- **DECIDE** if the proposed new issue 2 of RIS-8250-RST and issue 4 of Form 8250 delivers its intentions.
- **APPROVE** the proposed new issue 2 of RIS-8250-RST and issue 4 of Form 8250 for authorisation to publish.

Supporting Standards Committees (PLT SC, TOM SC, CCS SC) are asked to:

- **SUPPORT** with or without modification the proposed responses to comments received during consultation.
- **SUPPORT** the proposed new issue 2 of RIS-8250-RST and issue 4 of Form 8250 for authorisation to publish.

21-002 – Reporting High Risk Defects

This business case for change has been developed to support standards committees in taking decisions related to changes to standards, it includes an assessment of the predicted impacts arising from the change.

Proposed documents

Number	Title	Issue
RIS-8250-RST	Management of Safety-Related Rail Vehicle Defects	2
Form 8250	Urgent High-Risk Defect Report Form	4

Superseded documents

Number	Title	Issue
RIS-8250-RST	Reporting High Risk Defects	1
Form 8250	High Risk Defect Reporting Form	3

Summary

Background and change

RIS-8250-RST issue one was published in December 2016, superseding Railway Group Standard (RGS) GERT8250 issue two. The RGS was simply republished in its entirety as a RIS, as it did not meet the criteria for National Technical Rules. A review was completed in September 2020; this identified that the technical content was unchanged since 2007 and recommended that the RIS required a substantial update on this basis.

The update to the standard is being coordinated with the existing workstreams to review and update National Incident Reports (NIR)-Online, ensuring that relevant changes to NIR-Online are suitably reflected in the RIS.

Industry impact due to changes

Impact areas	Scale of impact	Estimated value £
A. Legal compliance and assurance	Low	Not proportionate to quantify
B. Health, safety and security	Medium	£ 60,000 over 5 years
C. Reliability and operational performance	Medium	£ 180,000 over 5 years
D. Design and maintenance	Medium	Not proportionate to quantify
E. People, process and systems	Neutral	N/A
F. Environment and sustainability	Medium	Not proportionate to quantify
G. Customer experience and industry reputation	Low	Not proportionate to quantify
Total value of industry opportunity =		**£ 240,000 over five years**

The standards change contribution to the total value of industry opportunity				
☐ None or low	☐ Minor but useful	☑ Moderate	☐ Important / essential	☐ Urgent / critical

Detail

1. What were the objectives associated with this change?

Objective 1 – Align with current legislation and standards

1.1 The UK left the EU on 31st December 2020. A five-year review of RIS-8250-RST issue one identified that several standards referenced in the RIS have been superseded.

Objective 2 – Align with the changes to NIR-Online

1.2 RSSB had already initiated a project to review and update the NIR-Online system. A questionnaire was sent out to users of NIR-Online, and the results from this will be used to set the future direction and use of the system to meet industry's needs. There has to date been no change to NIR-Online that has affected the content of the RIS.

1.3 There are similarities between NIR-Online and the Rail Notices system, and there are therefore likely to be synergies between 21-002 and the parallel standards project to update RIS-3350-TOM – Communication of Urgent Operating Advice (20-024).

1.4 The following comments were received from industry and were considered during drafting of RIS-8250-RST issue two:

- Whether there is a need for timescale requirements or guidance concerning the raising of NIRs, their review and closure.
- Potentially adding content on competence for NIR initiators and investigators. This could be in the form of requirements or guidance on when or when not to raise an NIR. Ensuring that NIRs are reviewed by a technically competent person before submission and/or acceptance.
- Defining boundaries or overlaps between NIR-Online, the Safety Management Intelligence System (SMIS) and contractual issues.
- Closing old NIRs: A number of old NIRs remain open; many cannot be closed using the documented process because the initiating organisation no longer exists. The new mechanism could be an administrative procedure documented in the RIS.
- Clarify whether NIRs are raised only by railway undertakings (RUs) or entities in charge of maintenance (ECMs) – is there a need or possibility to allow delegation to suppliers?

1.5 Some of the above are more relevant to the NIR-Online project than to this standard change project.

1.6 In addition, the subject of cyber security is of great interest to the industry as a whole; it therefore seems pertinent to include relevant aspects of this in the RIS and / or the supporting documents.

Objective 3 – Editorial

1.7 Bring the document into line with current RSSB formatting for RISs, ensuring that each requirement is supported with appropriate rationale and guidance.

1.8 Incorporate the change previously made by issuing AM001.

2. How has the content in the standard changed to achieve the objectives?

Objective 1 – Align with current legislation and standards

2.1 The content of the standard has been amended to ensure it is relevant and useful. Some existing content was discarded, and new requirements added to fulfil the scope.

2.2 References to legislation have been updated: Post-Brexit UK Legal requirements (SI 1471:2013 - RIDDOR), SI 837:2019 amending 1078/2012 on the Common Safety Method (CSM) for monitoring.

2.3 References updated: 'rgsonline' is now the Standards Catalogue; GMRT2459 is now RIS-2453-RST; GORT3350 is now RIS-3350-TOM.

Objective 2 – Align with the changes to NIR-Online

2.4 The new RIS captures the relevant processes. The standards project has co-ordinated with the NIR-Online update project to ensure this is the case.

2.5 The content of the standard reflects the current requirements of industry.

2.6 In the introduction to the standard, the scene is set and the relationship between NIR and other safety-related tools has been determined. The new RIS is supported with a supplementary flowchart to assist users in identifying the most appropriate reporting method.

2.7 Guidance has been added regarding timescales (G 2.3.1.11 and G 2.3.3.6) and competence (G A.1.6).

Objective 3 – Editorial

2.8 All requirements now have supporting rationale and guidance.

2.9 Relevant amendments (e.g. 8250 Issue 2 AM001), enquiries and requests for help (one of which led to AM002) have been reviewed and the standard changed in response.

3. How urgently did the change need to happen to achieve the objectives?

3.1 The content of RIS-8250-RST issue one dates from 2007, and there is ongoing work to review and update NIR-Online. The timing for publication is being co-ordinated with the proposed changes to NIR-Online to ensure that the new standard reflects any changes in the procedures and processes in NIR-Online.

3.2 Owing to the dependency and relationship between the standards change projects relating to NIR-Online and Rail Notices (project 20-024), a publication date of June 2023 for RIS-8250-RST issue two is appropriate.

4. What are the positive and negative impacts of implementing the change?

Justification of impact, scale and quantification for the seven impact areas

Note: The following figures were compiled in discussion with Industry Stakeholders representing RST and PLT SCs.

A. Legal compliance and assurance

4.1 RUs and ECMs are required to comply with Reporting of Injuries Diseases and Dangerous Occurrences Regulations (RIDDOR) and CSM monitoring / reporting (SI 837:2019 amending 1078/2012); these obligations are also linked to the Health and Safety at Work etc Act 1974 (HASAWA).

4.2 Network Rail, through the Plant Manual NR/L2/RMVP/0200, Module P100 places a requirement on Principal Contractors to raise NIRs relating to Plant and attachments.

4.3 Users of this updated standard will benefit from clearer guidance as to the use of NIR-Online.

4.4 The costs of not complying with these legislative requirements are potentially very high. Although no fines or prosecutions arising from non-compliance have been identified, fines under non-compliance with Health and Safety legislation can be up to £20,000 but are unlimited where life is endangered.

4.5 It is judged that there is a small risk of inadvertent non-compliance arising from misinterpretation of the outdated RIS. On the basis that the changes to the RIS could reduce the likelihood of non-compliance then a potential benefit could be realised. However, it is not considered proportionate to attempt to determine a value of this benefit owing to the uncertainties involved.

B. Health, safety and security

4.6 The requirement for reporting of high-risk defects also underpins HASAWA and RIDDOR – aiming to share knowledge, thereby helping to prevent, or reduce the consequences of, similar occurrences.

4.7 Similarly to 4.4 above, the potential costs of non-compliance are very high.

4.8 However, death of a construction worker has previously resulted in a fine of £200,000[1], and Amey were fined £600,000 when a road-rail excavator overturned (with no fatalities)[2]. If it is considered that the changes to the RIS could contribute to the avoidance of an incident occurring over a five-year period, then based on a fine of £60,000 per incident then the benefit would be £60,000 over five years. It should be noted that this figure does not include the costs directly associated with any accident or incident.

[1] See https://www.safetybank.co.uk/blog/consequences-of-non-compliance-in-health-safety-regulations

[2] See https://www.orr.gov.uk/search-news/amey-rail-fined-ps600000-health-and-safety-failings-during-reconstruction-market

C. Reliability and operation performance

4.9 Reporting high-risk defects can help to improve overall reliability. For example, a train operating company (TOC) could raise an NIR which prompts another TOC to check vehicles, thereby preventing another defective vehicle from entering service.

4.10 Operational delay data (PERFORM) for 2020/21 includes over 700,000 delay minutes for trainborne faults; however, the data does not indicate whether the faults are reportable. If an improved standard results in better reporting, and can thereby reduce 0.1% of these delays, at a cost of £50 per delay minute, that represents a benefit of £36,000 per year, which is equivalent to £180,000 over 5 years.

D. Design and maintenance

4.11 Sharing high-risk defects can help train operators, ECMs and suppliers such as Original Equipment Manufacturers (OEMs) to learn from industry experience. However, in the absence of available detail it is not considered proportionate to quantify a benefit.

E. People, process and systems

4.12 Users of the revised standard will benefit from improved guidance and the updated legal context of the process. This will assist with maintaining tacit knowledge.

4.13 Conversely, there is a risk that changing the standard could import risk by requiring users to act differently; however, the intention is to align the standard with both the legal requirements and industry good practice, without changing the process itself – except where the process is changed as a result of industry input to the NIR-Online project.

4.14 Zero net benefit is therefore claimed.

F. Environment and sustainability

4.15 The improved sharing of defect information by efficient implementation of the improved RIS could potentially help to prevent similar incidents to that at Llangennech[3] in August 2020. On this occasion a dragging brake led to derailment of tanker wagons, with spillage of over 330,000 litres of fuel and a significant fire.

4.16 Consistent sharing of information could also assist train operators to manage their assets more efficiently, again, preventing defective trains from entering service which could cause accelerated deterioration to both train and infrastructure.

4.17 However, in the absence of available detail it is not considered proportionate to quantify a benefit.

[3] See https://www.gov.uk/government/news/derailment-and-fire-involving-a-tanker-train-at-llangennech-updated-21092020

G. Customer experience and industry reputation

4.18 Indirectly, it is anticipated there may be some benefit of consistent knowledge sharing improving the overall reliability of the GB mainline railway, and therefore improving customer perception.

4.19 There is little data in relation to the number of incidents and delays that NIR online could prevent; therefore, it is not considered appropriate to apportion a value for this benefit.

5. What is the contribution of this standards change in realising the value to industry opportunity?

5.1 The proposed updated RIS, together with the supporting flowchart, will assist industry in identifying and applying the most appropriate methods of reporting defects.

5.2 Based on the assessment in section 4 above, a net benefit to industry of £240,000 over five years is estimated, and the standards change contribution to the total value of the industry opportunity is categorised as moderate.

6. What was the effort required by RSSB to make the change?

6.1 The project has a project manager, the technical lead is a rolling stock specialist, and support has been given from the Operations and CCS teams.

6.2 The project required input from relevant stakeholders including Network Rail and RUs. RSSB therefore brought together a working group with cross-industry representation, to ensure all requirements and best practices were captured.

7. Did RSSB deliver against industry's expected timescales?

7.1 Resources are currently available to meet a target publication of June 2023.

8. How will the industry implement the change?

8.1 RSSB will brief material changes to the standard at a webinar and will update the process flowcharts in NIR online as necessary.

8.2 The overall principles of the NIR process are unlikely to change significantly as a direct result of this standards project. Industry will therefore continue to raise NIRs in the same way as at present.

9. How will RSSB assess whether the change is achieving the objectives?

9.1 Stakeholders are already represented in the working group that has been established to help draft the revised standard. As with all RSSB standards publications, RIS-8250-RST Issue two will be reviewed 12 and 60 months after publication, including input from the working group to take into account industry experiences in applying the standard.

Appendix A Disposition Table

Table A1: RIS-8250-RST issue One to RIS-8250-RST issue Two

From RIS-8250-RST Issue 1	To RIS-8250-RST Issue 2	Way forward	Comments	Objective
1.1 Purpose of this document	1.1 Purpose	Redrafted		1, 3
1.2 Application of this document	1.2 Application of this document	Redrafted	To current template	1, 3
1.3 Health and Safety Responsibilities	1.3 Health and Safety Responsibilities	No change	Template text is unchanged.	N/A
1.4 Approval and authorisation of this document	1.5 Approval and authorisation of this document	No change	Template text is unchanged.	N/A
A 1.1 Purpose	1.1 Purpose	Redrafted	To current template	1, 3
A 1.2 Introduction	1.1 Purpose	Redrafted	To current template	1, 3
A 1.2.1.3	1.4 Structure of this document	Redrafted	To current template	1, 3
A 1.2.2 Supporting Documents	1.1 Purpose	Redrafted	To current template	1, 3
A 2 Requirements for reporting urgent high-risk defects	2 Defect reporting	Redrafted	To current template: requirements, rationale and guidance.	1, 2, 3
A 3 Administration of NIR-Online	3 NIR-Online	Redrafted	To current template: requirements, rationale and guidance.	3
A 4 Application of this document	1.2 Application of this document	Redrafted	To current template text	3

From RIS-8250-RST Issue 1	To RIS-8250-RST Issue 2	Way forward	Comments	Objective
Appendix A Application of NIR-Online to other rail vehicles, equipment, and plant & machinery	N/A	Withdrawn	Associated requirements and guidance added to the main body of the document.	3
Appendix B Flow Chart	N/A	Withdrawn	Revised; to be added as a separate supporting document in the Standards Catalogue	2, 3
Appendix C Safety-related defect monitoring	Appendix A Safety-related defect monitoring	Redrafted	To current template. Includes guidance on the content of an NIR	2, 3