

## 20-027 – Guidance on the Storage and Recommissioning of Traction and Rolling Stock

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

<b>Version:</b>	2.1		
<b>Purpose:</b>	Approval to proceed to consultation		
<b>Authors:</b>	Neil Dinmore – Principal Engineer, Structures and Material		
<b>Sponsor:</b>	Mark Oakley – Professional Head of Rolling Stock		
<b>Lead industry committee:</b>	Rolling Stock Standards Committee (RST SC)	<b>Date:</b>	07 October 2021
<b>Supporting industry committee:</b>	Not applicable	<b>Date:</b>	

### Decision

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

**DECIDE** if the proposed new issue of GMGN2571 delivers the intentions of the proposal for change.

**DECIDE** if the proposed new issue of GMGN2571 is in a suitable state for consultation.

**APPROVE / SUPPORT** that the proposed new issue of GMGN2571 is consulted on.

**IDENTIFY** any specific organisations or individuals to be included in the consultation.

## 20-027 – Guidance on the Storage and Recommissioning of Traction and Rolling Stock

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
GMGN2571	Storage and Recommissioning of Rail Vehicles	2

### Superseded documents

Number	Title	Issue
GMGN2751	Guidance on the Storage and Recommissioning of Traction and Rolling Stock	1

## Summary

An initial review of GMGN2571 presented to Rolling Stock Standards Committee in February 2020 concluded that the document was no longer fit for purpose in its current form. It recommended consulting industry on the future of the document, specifically on whether it should be withdrawn or revised. Following agreement from the committee, industry consultation was launched in April 2020 and closed on 12 May 2020. Comments were received from nine respondents, nearly all of whom supported a revision to the document (only one suggested withdrawing it altogether).

The consultation comments have been taken into account in preparing the draft issue two of the Guidance Note.

## Industry impact due to changes

Impact areas	Scale of impact	Estimated value £
A. Legal compliance and assurance	Medium	£840,000*
B. Health, safety and security	Low	£10,000
C. Reliability and operational performance	Medium	£1,500,000
D. Design and maintenance	Medium	Difficult to quantify
E. People, process and systems	Low	Difficult to quantify
F. Environment and sustainability	N/A	N/A
G. Customer experience and industry reputation	N/A	N/A
<b>Total value of industry opportunity =</b>		<b>£2,350,000</b>
<b>The standards change contribution to the total value of industry opportunity</b>		
<input type="checkbox"/> None or low	<input checked="" type="checkbox"/> Minor but useful	<input type="checkbox"/> Moderate
		<input type="checkbox"/> Important / essential
		<input type="checkbox"/> Urgent / critical

\*This table has been updated, noting the comments from Committee. The impact of Legal compliance and assurance has been reduced to 20% of its previous value.

## Detail

### 1. What were the objectives associated with this change?

**Objective 1 – Provide guidance that is useful to industry by bringing GMGN2571 up to date with the current standards and legislative framework and any lessons learned**

- 1.1 Since GMGN2571 was published, the industry and its responsibilities within the legislative framework have developed significantly. Many of the reference documents, obligations or industry organisations mentioned in GMGN2571 are no longer applicable or have been superseded by requirements in other standards or legislation.
- 1.2 The guidance has been updated so that it is current, relevant and takes account of lessons learned.

### 2. How did the content in the standard need to change to achieve the objectives?

**Objective 1**

- 2.1 References to organisations such as Railtrack and Railway Safety have been updated to reflect the current industry structure.
- 2.2 References to the Vehicle Acceptance Body (VAB) process have been changed to reflect the current terminology for vehicle registration and approval.
- 2.3 The reference to whom the guidance applies stated in issue one that “it applies to duty holders of the train operator category of Railway Safety Case”. This has been updated as the Railways (Safety Case) Regulations 2000 were revoked and replaced by the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (ROGS).
- 2.4 The references to Railway Group Standards have been updated where they have either been withdrawn or converted to Rail Industry Standards.
- 2.5 The guidance has been amended to take the consultation responses into account, to ensure that it is relevant, useful and factually correct.
- 2.6 The guidance has also taken account of lessons learned, for example from National Incident Reports (NIR).

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

- 3.1 In the light of the Covid-19 pandemic, and the resulting increase in the use of temporary storage of rolling stock, the experiences of train operators and RoSCos through this period were considered likely to be useful as an input. To ensure this experience is captured, a target publication of June 2022 was proposed.

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

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

#### A. Legal compliance and assurance

- 4.1 Train operators and Rolling Stock Owning Companies (RoSCos) will benefit from guidance on meeting the requirements for vehicle reregistration following storage that reflects the current legal and standards framework. This will reduce the time and effort that may be needed if the train operator must cross-refer to other documents in order to correctly interpret the guidance.
- 4.2 From the consultation comments, it is noted that a Freight Operating Company (FOC) was recently prosecuted for issues surrounding trespass and vandalism in a facility used for storage. The prosecution was in 2019 but related to an incident in 2014. Improved guidance in this area would help avoid similar prosecutions in future, potentially saving lives as well as costs.
- 4.3 Referring to RSSB's Safety Risk Model, relevant incidents relating to trespass (including slips, trips and falls, electrocution) give a total of 0.418 Fatalities and Weighted Injuries per year. On the assumption that better guidance could reduce this by 20% and based on the value of preventing a fatality (VPF) for 2019 (estimated by RSSB to be £2,017,000), a benefit of up to £840K could be achieved over five years.

#### B. Health, safety and security

- 4.4 Train operators and RoSCos will benefit from up-to-date guidance on ensuring the safety of staff and passengers when the vehicles are returned to service. A National Incident Report (NIR 3723) was issued recently due to a member of staff receiving minor injuries when a footstep failed due to corrosion; the affected vehicle had been in storage. Although this appears to be an isolated incident in terms of NIR reporting, it is not unreasonable to suggest that similar occurrences in future, with potentially more serious consequences, could be avoided if the lessons learned from incidents can be incorporated into the guidance.
- 4.5 If one minor injury (equating to 0.005 (Class 1) Fatalities and Weighted Injuries) is avoided over the course of 5 years and based on VPF 2019, a safety benefit of £10,085 can be achieved.

#### C. Reliability and operation performance

- 4.6 Train operators and ROSCOs will benefit from guidance on ensuring the reliability of vehicles when they are returned to service.
- 4.7 Specific areas of potential benefit include:
- Addressing the risk of bearings 'brinelling' which can lead to premature failure.
  - Mitigations against moisture-related deterioration of electronic components and interior furnishing (for example, use of desiccants).

4.8 Potential savings in this area therefore include:

- Bearing failures: Project 16-027 (Hot Axlebox Detection) includes a Reliability and Operation Performance Benefit of £500K over five years.
- Full refresh of interior soft furnishings: estimate £500K over five years.
- Renewal of electronic components: estimate £500K over five years. Equipment is often specialist to the rail industry and there is a risk of obsolescence.

#### **D. Design and maintenance**

4.9 Train Operators and RoSCos will benefit from guidance on the level of maintenance required to vehicles in storage. However, this is difficult to quantify.

#### **E. People, process and systems**

4.10 Train Operators and RoSCos will benefit from guidance on developing procedures and processes for storage and recommissioning of rail vehicles. However, this is difficult to quantify.

#### **F. Environment and sustainability**

4.11 There is a potential benefit in avoiding unnecessary disposal of electronic and other components (see 4 above); however, no additional benefit is claimed in Industry Impact.

#### **G. Customer experience and industry reputation**

4.12 The comments under point A above are relevant to industry reputation; however, no additional benefit is claimed in the Industry Impact.

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

5.1 Updating the guidance will help train operators and RoSCos to fulfil their legal obligations and maintain the safety and reliability of vehicles when they are stored and returned to service. It is considered to have a minor, but useful, contribution in realising the value to industry opportunity.

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

6.1 A clause-by-clause review of the existing Guidance Note was completed, followed by drafting a revised document.

6.2 As recommended by the review, consultation with industry representatives has taken place as part of the drafting process; this has included reference to good practice as documented in company procedures.

### **7. Can RSSB deliver against industry's expected timescales?**

7.1 A publication of March 2022 is proposed to allow for internal resource availability and adequate time for stakeholder input.

### **8. How will the industry implement the change?**

8.1 As the existing Guidance Note is out of date, some parts of industry have developed their own procedures, processes, and guidance. The drafting and consultation process is being

used to ensure consistency and therefore industry will be kept informed as to the emerging standard.

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

- 9.1 See 8.1. The Guidance Note will be reviewed within 12 months after publication to assess whether it is achieving its objectives.

## Appendix A Disposition Table

A.1.1 A disposition table maps changes between old and new documents.

A.1.2 Description of text used in the ‘Way forward’ column of the disposition table:

- No change
- Redrafted – No material change, content reworded to improve clarity (editorial change)
- Revised – Material change to content
- Withdrawn
- Converted to guidance
- Converted to requirement
- New

**Table A1: GMGN2571 issue One to GMGN2571 issue Two**

From GMGN2571 issue 1	To GMGN2571 issue 2	Way forward	Comments	Objective
Title	Title	Redrafted	Changed to “Storage and Recommissioning of Rail Vehicles”: <ul style="list-style-type: none"> <li>- Already a “Guidance” document.</li> <li>- “Rail Vehicles” considered more inclusive than Traction and Rolling Stock (e.g., plant)</li> </ul>	1
Synopsis	Synopsis	Redrafted	“This document sets out guidance on the storage and recommissioning of rail vehicles that not to be operated on the GB mainline railway for an extended period.” <ul style="list-style-type: none"> <li>- Reference to “Railtrack Controlled infrastructure” no longer relevant.</li> </ul>	1
A1 Issue Record	Issue Record	Redrafted	Moved to before Table of Contents in line with current RSSB publication template	1
A2 Implementation of this document	Superseded Documents	Redrafted	Moved to before Table of Contents in line with current RSSB publication template	1

From GMGN2571 issue 1	To GMGN2571 issue 2	Way forward	Comments	Objective
A3 Responsibilities	NA	Withdrawn	In line with current RSSB publication template for Guidance Notes	1
A4 Health and safety responsibilities	G1.3 Health and safety responsibilities	Redrafted	In line with current RSSB publication template for Guidance Notes	1
A5 Technical content	G1.5 Approval and authorisation of this document	Redrafted	In line with current RSSB publication template for Guidance Notes	1
A6 Supply	Supply	Redrafted	In line with current RSSB publication template	1
B1 Purpose	G1.1 Purpose	Redrafted	Reference to “Railtrack Controlled infrastructure” no longer relevant; changed to “GB mainline railway”. Added description of NTSNs	1
B2 Application of this document	N/A	Withdrawn	In line with current RSSB publication template	1
B3 Definitions	Definitions	Redrafted	Moved to end of document in line with current RSSB publication template. Added definition of “good practice”	1
B4 Storage of Traction and Rolling Stock	Part 2 Storage	Redrafted	In line with current RSSB publication guidelines	1
B4.1 Purpose of Storage	G1.2 Background	Redrafted	In line with current RSSB publication guidelines	1
B4.2 Location for storage	G2.1 Location	Redrafted	In line with current RSSB publication guidelines Added heritage railways to the list in G2.1.1	1
B4.3 Preparation of traction and rolling stock vehicles for storage	G2.2 Preparation	Redrafted	In line with current RSSB publication guidelines: <ul style="list-style-type: none"> <li>- Set context of RIS-2004-RST and the LOC&amp;PAS / WAG NTSNs</li> <li>- Detail considerations moved to Appendix A and Appendix B</li> </ul>	1

From GMGN2571 issue 1	To GMGN2571 issue 2	Way forward	Comments	Objective
B4.4 Responsibilities for storage of traction and rolling stock	G2.3 Responsibilities	Redrafted	In line with current RSSB publication guidelines	1
B5 Recommissioning of stored traction and rolling stock	Part 3: Recommissioning	Redrafted	In line with current RSSB publication guidelines	1
B5.1 Responsibilities for recommissioning	G3.1 Responsibilities	Redrafted	In line with current RSSB publication guidelines	1
B5.2 Recommissioning process	G3.2 Recommissioning process	Redrafted	In line with current RSSB publication guidelines Included comments from consultation as part of recommissioning: <ul style="list-style-type: none"> <li>- Test transformer oil before powering up</li> <li>- Check that nothing has been "robbed" for use on other vehicles</li> </ul>	1
B5.3 Engineering Acceptance and registration	G3.3 Registration	Revised	Updated to reference current vehicle registration requirements and processes as set out in RIS-2453-RST, RIS-2706-RST and RIS-8270-RST RIS-2700-RST also included for reference	1
B4.3	Appendix A Actions prior to and during storage	Revised	Detail to support clause G2.2 and G2.3 Including comments from consultation: <ul style="list-style-type: none"> <li>- Prevention of false brinelling of journal bearings caused by vibration from adjacent running lines open to traffic.</li> <li>- Preventing deterioration of electrolytic capacitors.</li> <li>- Emptying and flushing of CET tanks.</li> <li>- Consideration of damp in equipment cases (add hygroscopic materials?)</li> </ul>	1
N/A	Appendix B: Examples of good practice	New	Include examples derived from company procedures.	1