

## 1. Introduction

The Railway Safety Act 2005 obliges railway undertakings to submit a 'Safety assessment of new works' or a 'Safety assessment of new rolling stock' to the Railway Safety Commission (RSC) before the bringing into use of same, (sections 42 and 43). These Guidelines, RSC-G-018, describe what should be contained in a New Rolling Stock Assessment (NRSA) where rolling stock is being procured as part of a PPP scheme, and outline the process for making submissions and gaining acceptance.

These Guidelines should be read in conjunction with the following additional RSC Guidelines, where relevant to an individual PPP scheme:

- RSC-G-015 ***Guidelines for the Safety Assessment of New Heavy Rail Rolling Stock;***
- RSC-G-016 ***Guidelines for the Safety Assessment of New Light Rail Rolling Stock;***
- RSC-G-017 ***Guidelines for the Safety Assessment of New Infrastructure for PPP Schemes;***
- RSC-G-019 ***Guidelines for the Safety Assessment of Safety Cases for Testing, Commissioning, Trial Running and Passenger Service Operations for PPP Schemes.***

## 2. What Should Be Contained in the NRSA?

Particulars that are expected to be included in the NRSA are as detailed in Table 1.

Item Ref.	Description
a	Type of rolling stock and purpose.
b	b.1 – Output specifications, including general details of functionality & applicable standards b.2 - Design specifications, including details of functionality & applicable standards.
c	Non-compliances with relevant standards and classifications under these standards.
d	Details of the safety management systems governing the design, operation, maintenance and disposal of such rolling stock, including a risk assessment.
e	Compatibility of the new rolling stock with new and existing assets and operations.
f	A declaration of the intended life cycle of the project and identification of safety requirements in order to achieve this (e.g. mid-life overhaul).
g	Compliance with any relevant principles and guidelines adopted by the RSC and relevant legislation, including a description of the compliance.
h	Test plan, including details of testing, commissioning and trial running activities and associated management processes and milestones.
i	The railway undertaking's safety case for: i.1 - testing, commissioning and trial running operations, and i.2 - passenger service operations.
j	Safety validation by competent third parties, where appropriate in the opinion of the RSC.

k	Any other matters that may arise which the RSC or the railway undertaking deems appropriate.
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Table 1: Elements of the NRSA

There are five stages of NRSA submission leading to rolling stock acceptance. Under the requirements of the Railway Safety Act 2005, the responsibility for making such submissions rests with the railway undertaking. Under a PPP scheme, this role is fulfilled by different parties as the process progresses through the defined stages. Early in the project, this responsibility rests with the entity or agency procuring/sponsoring the PPP scheme whilst, later in the process, the responsibility transfers to the PPP consortium. Table 2, below, confirms which party is responsible for performance of the duties of the railway undertaking at each stage, and also confirms the contents of the submission at each stage from the items in Table 1 above.

Stage of Project	Information to be Submitted	Railway Undertaking
Concept	Item a, b.1	Procurement body/Sponsoring entity
Preliminary Design	Tender document technical specification. Items b.2, c and j	PPP consortium
Detailed Design	Supplier's technical & function specifications. Items b, c, d, g and j	PPP consortium
Prior to Testing, Commissioning and Trial Running	Items e, h, i.1 and j	PPP consortium
Prior to Passenger Service Operations	Items e, f, i.2 and j	PPP consortium

Table 2: NRSA stages and contents

At each stage, the cycle of submission and review is the same, as outlined below:

- The responsible railway undertaking (as identified in Table 2) submits the required information to the RSC (as identified in Tables 1 & 2).
- The RSC reviews the submission and feeds comments back to the railway undertaking.
- The railway undertaking makes changes as necessary to address the comments and makes a resubmission.
- At such time as the RSC is satisfied with the submission, it issues a letter of acceptance for that stage of the project.

Only on conclusion of each stage of the process and receipt of the RSC's letter of acceptance should the railway undertaking proceed to the next stage.

Following issue of the RSC's letter of acceptance for the 'Prior to Testing, Commissioning and Trial Running' stage, the project enters the 'Prior to Passenger Service Operations' stage. Whilst the NRSA submission and review process, as detailed herein, addresses rolling stock acceptance, other aspects of the system also require RSC review and acceptance at these stages. Guidance on all aspects of the acceptance process of the system for testing, trial running and passenger service operations is given in the RSC's ***Guidelines for the Safety Assessment of Safety Cases for Testing, Commissioning, Trial Running and Passenger Service Operations for PPP Schemes***, RSC-G-019.

### 3. How to Make a Submission

The railway undertaking should ensure the timely submission of assessments. The time required for consideration of any proposal will depend on its complexity. Where novel

technology or systems are proposed, the scheme should be discussed at an early stage with the RSC.

Submissions should comprise 1 no. hard copy and 1 no. soft copy. File formats of soft copy documents should enable them to be readily opened, read and printed using standard proprietary software. Where other file formats are proposed, these should be agreed with the RSC in advance.

Drawings submitted should be of an appropriate size to enable all detail to be easily read. Whenever possible, such drawings should be limited to A3 size. Where drawings need to be larger than A3, additional hard copies may need to be submitted. This should be agreed with the RSC prior to submission.

### 3.1 Development of Submission

To prevent issues arising at an untimely point in the project, which could lead to increased cost and delays for the railway undertaking, submissions should be made at the earliest possible time.

It should be further noted that, as per section 43(11) of the Railway Safety Act 2005, it is the objective of the RSC to respond to a submission within 28 days. Project programmes should ensure that this review time has been allowed for within the submission and review cycle at each of the defined stages. Each cycle should include sufficient time for the development of robust submissions, for review by the RSC, and for any subsequent iterations of the submission through revisions and re-reviews prior to acceptance.

More detailed guidelines on the development of a submission are given in RSC documents ***Guidelines for the Safety Assessment of New Heavy Rail Rolling Stock***, RSC-G-015 and ***Guidelines for the Safety Assessment of New Light Rail Rolling Stock***, RSC-G-016.

## 4. **On Site Inspections by RSC**

Factory and testing inspections may be carried out as deemed necessary by the RSC. The RSC is to be kept informed of the progress of manufacture of rolling stock and is to be notified in advance of all testing to be carried out as an inspector may choose to carry out an inspection.

## 5. **Acceptance**

At each stage of the project the RSC will issue a letter of acceptance provided it is satisfied with the information provided. The letter of acceptance will be issued to allow the railway undertaking to proceed to the next stage of the project. The letter of acceptance may include conditions.

## 6. **Safety Validation by Competent Third Party/Independent Assessor**

In complex projects, the RSC may direct the railway undertaking to employ a competent Independent Assessor (IA). The role of the IA will be to undertake a review of all safety-related aspects of the project to a level that is consistent with the RSC's own review processes, thereby supplementing and supporting the role of the RSC in assessment of NRSA submissions. The evidence of system performance provided by the IA review will enable the RSC's own scope and depth of review to be reduced, normally to spot checks. The selected IA should be advised to the RSC at an early point in the project for agreement that the individual's competence is appropriate for scope of the project.

Where employed, the IA will issue reports at each staged NRSA submission. The reports should include all the results of assessments performed and conclusions reached, as well as all information needed to understand and interpret these results and conclusions. All this information should be reported correctly, accurately, and clearly. The report should also contain a clear statement of the IA's level of support for the NRSA submission.

## **7. Further Clarification**

Further clarification on these Guidelines can be sought from the RSC.