

**Oliver Stewart**  
**Senior Executive, RAIB Relationship and**  
**Recommendation Handling**

8 February 2019



Mr Andrew Hall  
Deputy Chief Inspector of Rail Accidents  
Cullen House  
Berkshire Copse Rd  
Aldershot  
Hampshire GU11 2HP

Dear Andrew,

**Runaway and collision at Bryn station, Wigan, 27 November 2014**

I write to provide an update<sup>1</sup> on the action taken in respect of recommendations 3 & 4 addressed to ORR in the above report, published on 9 May 2016.

The annex to this letter provides details of the action taken regarding the recommendations. The status of recommendations 3 and 4 is '**Implemented**'. We do not propose to take any further action in respect of recommendations 3 and 4, unless we become aware that any of the information provided becomes inaccurate, in which case I will write to you again.

We will publish this response on the ORR website on 11 February 2019.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Oliver Stewart', written over a light blue horizontal line.

Oliver Stewart

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<sup>1</sup> In accordance with Regulation 12(2)(b) of the Railways (Accident Investigation and Reporting) Regulations 2005

### Recommendation 3

*The intent of this recommendation is for RSSB to review and clarify the guidance it provides to the rail industry on management of changes relating to operation of vehicles and plant within engineering possessions.*

RSSB should, in accordance with due industry process, and in consultation with the Plant Standards Committee, review and enhance its guidance relating to the approval and management of change of railborne plant with the objective of emphasising the need to follow a sound and systematic risk management process (such as that in the common safety method for risk evaluation and assessment) when proposing a change to the design, operation or maintenance of vehicles and plant operating in an engineering possession

### ORR decision

1. RSSB has worked with industry, through the Plant Standards Committee, and in consultation with the Rolling Stock Standards Committee, to review and enhance design assessment guidance for on-track machines RIS-1702-PLT and GMRT2400 to better align with RIS-1530-PLT.
2. GMRT2400 specifically emphasises that changes to machines in travelling and / or working modes, and / or their associated documentation, need to be carried out in accordance with the modification requirements set out in RIS-1710-PLT, with the risk assessment using the principles described in the CSM RA and RIS-2700-RST.
3. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, RSSB has:
  - has taken the recommendation into consideration; and
  - has taken action to implement it.

**Status: Implemented.**

### Previously reported to RAIB

4. On 13 April 2017 ORR reported the following:

*RSSB is working with the Plant Standards Committee (PLT SC) to review design assessment guidance for on-track machines (RIS-1702-PLT) and to more closely align it with guidance for on-track plant (RIS-1530-PLT). RSSB are also revising their guidance on using the CSM Risk Assessment process to show that they consider it is an appropriate process to apply to changes that are outside the scope of regulation 402/2013. Finally, an amendment is being made to the guidance for Engineering Certification of railborne plant (RIS-1710-PLT).*

## Update

5. On 22 October 2018 RSSB provided the following update:

*RSSB accepted the recommendation on behalf of the industry, which was discussed by the Plant Standards Committee (PLT SC) at its 11 August 2016 meeting. It was considered that sufficient guidance was already incorporated in RIS-1530-PLT Issue 6 (Rail Industry Standard for Engineering Acceptance of On-Track Plant and Associated Equipment, published December 2015), in the guidance to 5.1 ('Design assessment'). However, this document covers OTP, so would not have been applicable for the OTM involved at Bryn.*

*There was a general agreement that the OTM document RIS-1702-PLT (Rail Industry Standard for the Design of On-Track Machines in Travelling and Working Modes) would benefit from similar guidance to that included in RIS-1530-PLT.*

*Though held up by illness, drafting duly commenced and – after consultation with both the PLT SC and the Rolling Stock Standards Committee (RST SC) – comments received were incorporated into RIS-1702-PLT Issue 2, and also GMRT2400 Issue 6 (Engineering Design of On-Track Machines in Running Mode).*

*Drafting of both documents had been completed by 5 December 2017. The comments from the subsequent industry consultation were incorporated, both documents being published on 1 September 2018.*

*[GMRT2400 Issue 6](#) and [RIS-1702-PLT Issue 2](#) note specifically that '[changes need to be assessed holistically, as required by RAIB report 09/2016 into the runaway and collision at Bryn, recommendation 3'. (See G 4.1.3.)*

*Part 4 of GMRT2400 Issue 6 also clarifies that '[r]isks from changes to machines in running mode, and / or their associated documentation, will need to be assessed in accordance with the principles described in the Common Safety Method on Risk Evaluation and Assessment (CSM RA) and RIS-2700-RST, as required by the Railways and Other Guided Transport Systems (Safety) Regulations: 2006. Guidance on compliance with the CSM RA is given in GEGN8646'. (G 4.1.4)*

*It also notes that '[a]ssessment of changes to machines which affect their travelling and / or working modes are set out in Part 6 of RIS-1702-PLT issue two'. (G 4.1.5)*

*Part 6 ('Modifications to Machines') of RIS-1702-PLT Issue 2 indeed clarifies the following:*

### **Part 6 Modifications to Machines**

#### **6.1 Modifications**

*6.1.1 Any proposed change to a machine shall be assessed for its implications to the safety of the machine, its operating performance and railway operations.*

*6.1.2 Any proposed change to a machine shall also be considered in the context of other or previous changes which, when combined, could increase risk.*

### **Rationale**

*G 6.1.3 Changes need to be assessed holistically, as required by RAIB report 09/2016 into the runaway and collision at Bryn, recommendation 3.*

### **Guidance**

*G 6.1.4 Changes to machines in travelling and / or working modes, and / or their associated documentation, need to be carried out in accordance with the modification requirements set out in RIS-1710-PLT, with the risk assessment using the principles described in the CSM RA and RIS-2700-RST. Guidance on compliance with the CSM RA is given in GEGN8646. Note that machines in travelling and / or working modes are out of scope of RIS-2700-RST and the CSM RA; however, the principles provide good practice.*

*G 6.1.5 Changes to machines usually also affect their running mode, for example, frame attachments, and hence should be assessed for compliance to GMRT2400.*

*G 6.1.6 The risk assessment carried out for the proposed change needs to consider the compliance with the Machinery Directive (see 5.1 of this document), and whether a new declaration of conformity to the Machinery Directive is required.*

*Taking the above into consideration, RSSB believes the intent of the recommendation has been met. We therefore consider it to be closed.*

## **Recommendation 4**

*The intent of this recommendation is for the risks associated with new or modified railborne plant to be properly managed before such plant is allowed to operate on the national network.*

Taking into account any changes that it has recently introduced, Network Rail should review its processes for product acceptance of new and modified plant, and how they are being implemented, and make any necessary enhancements so that they consistently confirm that:

- associated risks have been robustly assessed using a structured and systematic process, such as one that follows the risk management process of the common safety method on risk evaluation and assessment (or at least its essential elements);
- the safety requirements necessary to mitigate risks to an acceptable level have been determined, this includes those in adopted technical standards;
- there is evidence that all identified safety requirements have been complied with and that safety measures are in place; and
- that supporting conclusions and justifications have been suitably recorded.

## ORR decision

6. Network Rail have updated their plant manual to include the requirements of RIS-1710-PLT (Engineering Certification of Railborne Plant and the Assessment of Non Railborne Plant ) and RIS-1530-PLT (Technical Requirements for On-Track Plant and Their Associated Equipment and Trolleys) along with the elements of CSM REA. The updated guidance includes a generic checklist to review a product acceptance submission, covering the risk identification, mitigation and recording, in line with the requirement of the RAIB recommendation.

7. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail has:

- taken the recommendation into consideration; and
- taken action to implement it.

**Status: Implemented.**

## Previously reported to RAIB

8. On 13 April 2017 ORR reported that as a member of PLT SC, Network Rail has had input into the redrafting of guidance for engineering certification for on track machines (RIS-1710-PLT and RIS-1530-PLT). Network Rail; are embedding this in their product acceptance processes for new and modified plant. Network Rail are also developing generic checklists covering risk assessment, mitigation and recording as part of the product acceptance process. In the initial response document for this recommendation, Network Rail stated a completion date of 31 August 2017.

## Update

9. On 30 May 2018 Network Rail provided a closure statement which included the following summary:

*Network Rail has satisfied the intent and wording of this recommendation through the completion of the action set out in the accepted the delivery plan. The second issue of NR/GN/RMVP/27702 has been published and is being implemented to undertake product acceptance assessments.*

*Network Rail has undertaken a review of its product acceptance process, and consequently developed a 'generic checklist' which is strongly aligned to the common safety method on risk evaluation and assessment (CSM-RA) process. These generic checklists have been embedded in a Network Rail standard, 'Plant Product Acceptance Process' (NR/GN/RMVP/27702 Issue 1), which was published and mandated on the 4th June 2017. The specific closure action can be found within Section 6.2 of NR/GN/RMVP/27702, 'Review of product acceptance submission',*

which cites the application of 'generic checklist' and 'principal questions' (Appendix A) during product acceptance of plant. This consistently confirms that (paragraphs 201c.iii and 201d.ii):

- associated risks have been robustly assessed using a structured and systematic process, such as one that follows the risk management process of the common safety method on risk evaluation and assessment (or at least its essential elements);
- the safety requirements necessary to mitigate risks to an acceptable level have been determined, this includes those in adopted technical standards;
- there is evidence that all identified safety requirements have been complied with and that safety measures are in place; and
- that supporting conclusions and justifications have been suitably recorded

The Network Rail Plant Product Acceptance Process standard (NR/GN/RMVP/27702 Issue 1) employs CSM-RA principles such as, preliminary system definition and significance test to determine the level of assessment required. The specific closure action can be found within Section 6.2 of NR/GN/RMVP/27702, 'Review of product acceptance submission', requires a lead reviewing engineer to determine the level of assessment by employing internal procedures and tools such as the 'front end assessment form. This is strongly aligned to the Network Rail standard, 'Application of the Common Safety Method for Risk Evaluation and Assessment' (NR/L2/RSE/100/02 Issue 3).

The generic checklist and front end assessment forms are undergoing continuous improvement as part of the yearlong Plant Team Product Acceptance (PA) Plant Assessment Body (PAB) Pilot which commenced on the 17th July 2017. Changes made the pilot have been incorporated in NR/GN/RMVP/27702 Issue 2 which was published on 3<sup>rd</sup> March 2018. This has been briefed and mandated within the Plant Engineering function and the PAB consultancies to be followed during PA assessment of Plant in working and travelling modes. In particular, Section 6.2 introduces a front end assessment process which is akin to the preliminary system definition and significance testing procedures in CSM-RA to determine the assessment rigour required for an application. The front end assessment process also flags ongoing incidents applicable to an item of plant under consideration, thereby ensuring that safety requirements to mitigate risks to an acceptable level are in place.

## Previously reported to RAIB

### Recommendation 3

*The intent of this recommendation is for RSSB to review and clarify the guidance it provides to the rail industry on management of changes relating to operation of vehicles and plant within engineering possessions.*

RSSB should, in accordance with due industry process, and in consultation with the Plant Standards Committee, review and enhance its guidance relating to the approval and management of change of railborne plant with the objective of emphasising the need to follow a sound and systematic risk management process (such as that in the common safety method for risk evaluation and assessment) when proposing a change to the design, operation or maintenance of vehicles and plant operating in an engineering possession

### ORR decision

1. RSSB is working with the Plant Standards Committee (PLT SC) to review design assessment guidance for on-track machines (RIS-1702-PLT) and to more closely align it with guidance for on-track plant (RIS-1530-PLT). RSSB are also revising their guidance on using the CSM Risk Assessment process to show that they consider it is an appropriate process to apply to changes that are outside the scope of regulation 402/2013. Finally, an amendment is being made to the guidance for Engineering Certification of railborne plant (RIS-1710-PLT).

2. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, RSSB has:

- taken the recommendation into consideration; and
- is taking action to implement it, but ORR has yet to be provided with a time-bound plan.

**Status: Progressing. ORR will advise RAIB when further information is available regarding actions being taken to address this recommendation.**

### Information in support of ORR decision

3. On 15 August 2016 RSSB provided the following initial response:

*At its 11 August 2016 meeting, the Plant Standards Committee (PLT SC) discussed the above recommendation. It was considered that sufficient guidance is already incorporated in RIS-1530-PLT Issue 6 (published Dec 2015) in the guidance to 5.1 'Design assessment'. This document covers OTP so would not have been applicable for the OTM involved at Bryn.*

*There was a general agreement that the OTM document RIS-1702-PLT would benefit from similar guidance to that included in RIS-1530-PLT. A proposal to request a revision of RIS-1702-PLT is already being prepared for submission*

to the PLT SC, and it was considered that this would provide the opportunity to add the extra guidance.

To provide a quicker means to address Bryn recommendation 3, it was agreed that an amendment should be published to RIS-1710-PLT issue 1 (Dec 2015). After a lengthy discussion, it was also agreed that the situation at Bryn had arisen as a result of a modification of an existing machine and that there was a need to target the instigator of the change. Thus the amendment would provide additional guidance under 3.8 Modifications. The actual wording of the amendment is still to be finalised, but would be derived from that in RIS-1530-PLT. It is intended that a draft amendment to RIS-1710-PLT will be presented to the PLT SC at its 13 October meeting.

Furthermore, regarding the GEGN864x series (guidance notes on application of CSM RA), RSSB is looking to revise the wording to make more explicit that the CSM RA process is a sound one that could be applied to changes that are not within scope of the regulation. The first meeting of the Multifunctional Standards Committee will take place in autumn and the updated GNs will be published in 2017.

4. RSSB provided further updates for Period 10 (on 23 January 2017) and Period 11 (on 21 February 2017):

*Period 10 update:*

The PLT SC discussed the future revision of their RIS documents at their 8 December 2016 meeting. This included project 16-037 to update RIS-1702-PLT to reflect the changes to referenced ENs and to address issues relating to the general content. It was agreed by the PLT SC that this revision would be used to incorporate changes to address the RAIB recommendation on Bryn.

A project manager has been assigned to 16-037 but the kick-off meeting and project programme have still to be scheduled.

*Period 11 update:*

16-037 is a proposal to review RIS-1702-PLT - PLT SC is Lead. 17-002 is a proposal to review GMRT2400 - RST SC is Lead. Both changes relate to the same technical content. Therefore it is proposed to review both documents simultaneously and have one project, 16-037. PLT SC has approved this and RST SC is scheduled to approve it during February 2017. The start-up meeting will be scheduled following this.

#### **Recommendation 4**

*The intent of this recommendation is for the risks associated with new or modified railborne plant to be properly managed before such plant is allowed to operate on the national network.*



Taking into account any changes that it has recently introduced, Network Rail should review its processes for product acceptance of new and modified plant, and how they are being implemented, and make any necessary enhancements so that they consistently confirm that:

- associated risks have been robustly assessed using a structured and systematic process, such as one that follows the risk management process of the common safety method on risk evaluation and assessment (or at least its essential elements);
- the safety requirements necessary to mitigate risks to an acceptable level have been determined, this includes those in adopted technical standards;
- there is evidence that all identified safety requirements have been complied with and that safety measures are in place; and
- that supporting conclusions and justifications have been suitably recorded.

### ORR decision

5. As a member of PLT SC, Network Rail has had input into the redrafting of guidance for engineering certification for on track machines (RIS-1710-PLT and RIS-1530-PLT). Network Rail; are embedding this in their product acceptance processes for new and modified plant. Network Rail are also developing generic checklists covering risk assessment, mitigation and recording as part of the product acceptance process. In the initial response document for this recommendation, Network Rail stated a completion date of 31 August 2017.

6. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail has:

- taken the recommendation into consideration; and
- is taking action to implement it

**Status: *Implementation ongoing.* ORR will advise RAIB when actions to address this recommendation have been completed.**

### Information in support of ORR decision

7. On 23 September 2016 Network Rail provided the following initial response:  
*Network Rail attended and provided technical input during review meetings hosted by the RSSB. In addition, Network Rail made direct contributions to the content of RIS-1530-PLT issue 6 and RIS-1710-PLT Issue 1 feeding back lessons learnt from plant incident investigations and the role of product acceptance.*

*RIS-1530-PLT Rail Industry Standard for Technical Requirements for On-Track Plant and Their Associated Equipment and Trolleys Issue Six: December 2015*

*RIS-1710-PLT Rail Industry Standard for Engineering Certification of Railborne Plant Issue One: December 2015*

*These standards now strongly emphasise the structured and systematic risk assessment processes such as the common safety method on risk evaluation and assessment (CSM-RA). RIS-1530-PLT Issue 6 now also shows the plant acceptance processes and provides early visibility of the requirement for product acceptance. The RSSB are planning to review RIS-1700-PLT and RIS-1701-PLT. Network Rail aims to support these reviews in the same manner as done for RIS-1530-PLT Issue 6 and RIS-1710-PLT Issue 1.*

*RIS-1700-PLT Rail Industry Standard for Safe Use of Plant for Infrastructure Work. Issue 3: March 2011.*

*RIS-1701-PLT Rail Industry Standard for Portable and Transportable Plant Used for Infrastructure Work Issue Three: December 2013.*

*Network Rail is reviewing its product acceptance processes and will additionally develop “generic checklist” to capture the points listed in the recommendation:-*

*Network Rail should review its processes for product acceptance of new and modified plant, and how they are being implemented, and make any necessary enhancements so that they consistently confirm that (paragraphs 201c.iii and 201d.ii):*

- associated risks have been robustly assessed using a structured and systematic process, such as one that follows the risk management process of the common safety method on risk evaluation and assessment (or at least its essential elements);*
- the safety requirements necessary to mitigate risks to an acceptable level have been determined, this includes those in adopted technical standards;*
- there is evidence that all identified safety requirements have been complied with and that safety measures are in place; and*
- that supporting conclusions and justifications have been suitably recorded*

*The “generic checklist” would be embedded into an appropriate standard and mandated internally to be used in a robust and repeatable way. Processes supporting governance of the product acceptance processes will also be reviewed and updated to support this as required. The format and layout of the “generic checklist” and supporting processes is to be developed and will be based on existing processes for CSM-RA.*

*This will ensure robustness in risk assessment required across the portfolio of plant and will vary depending on the type of Plant. Processes similar to preliminary system definition and significance test would be written into the process to determine the level of assessment required.*

