

**Oliver Stewart**  
**RAIB Recommendation Handling Manager**



25 September 2023

Mr Andy Lewis  
Deputy Chief Inspector of Rail Accidents

Dear Andy,

**RAIB Report: Wrong side signalling failure and derailment at Dalwhinnie, Badenoch and Strathspey on 10 April 2021**

I write to provide an update<sup>1</sup> on the action taken in respect of recommendations addressed to ORR in the above report, published on 26 September 2022.

The annex to this letter provides details of actions taken in response to the recommendations and the status decided by ORR. The status of all 5 recommendations is **'Open'**.

ORR will advise RAIB when further information is available regarding actions being taken to address these recommendations.

We will publish this response on the ORR website on 26 September 2023.

Yours sincerely,

**Initial consideration by ORR**

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

## Initial consideration by ORR

1. All 5 recommendations were addressed to ORR when the report was published on 26 September 2022.
2. After considering the recommendations ORR passed all 5 recommendations to Network Rail asking them to consider and where appropriate act upon them and advise ORR of its conclusions. The consideration given to each recommendation is included below.
3. This annex identifies the correspondence with end implementers on which ORR's decision has been based.

### Recommendation 1

*The intent of this recommendation is to ensure that signalling maintenance teams have a full and complete understanding of all the tasks required when carrying out pre-planned renewal work, and of each person's role and responsibility in undertaking such work. This recommendation should build on the findings of the review that Network Rail has scheduled as a result of its own investigation.*

Network Rail should review and update its processes for signalling equipment installation and signal maintenance testing so that all work undertaken by signalling maintenance teams, that is not the result of reactive fault finding activity, is suitably planned and that sufficiently detailed instructions are made available. This review should ensure that the resulting instructions include details of:

- the preliminary work required, such as establishing the relevant technical requirements and ensuring the suitability of the equipment to be installed
- designated roles for the work along with the respective tasks and responsibilities of each role
- the required competencies and licences required for each designated role
- the information each designated role needs to be provided with
- the process by which hand over between installation and testing and hand back between testing and railway operation will be arranged

### ORR decision

4. To address the recommendation, Network Rail is reviewing the Signalling Maintenance Testing Handbook (SMTH) and how training is delivered. We have asked Network Rail to confirm when the review of SMTH has been completed and the next steps.
5. We asked Network Rail to explain how the competence of contractors would be considered. Network Rail would like SMTH to apply to all users and are considering interim measures until more fundamental changes can be introduced.
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 close it

**Status: Open.**

### Information in support of ORR decision

7. On 29 November 2022 Network Rail provided the following initial response:

#### Action Plan

##### Please provide milestones with dates

NR will conclude a review of the requirements for pre-planning of signal maintenance testing, which may prompt revision to SMTH part 2-02 clause 9.4, good practice will be drawn from application of both SMTH and SWTH activities to prompt the minimum arrangements and information which is proportional to the task to be undertaken. This will include consideration of tools and templates to aid those planning work which requires SMTH.

##### Evidence required to support closure of recommendation

- Minutes of review meetings
- Where updated, published revised standards
- Where created, published tools and templates

8. On 1 April 2023 Network Rail provided the following update following a request from ORR for further information:

**ORR request** - Can you let us know when the review has been completed, the output/next steps and timescales. Also, does the review also cover competence management of contractors?

**Network Rail response** - *We will be happy to provide that update when the working group has reached a conclusion on this point and defined its next steps. The current timescale for completion of the action plan as a whole is 30/03/24.*

*The review will consider whether the competencies for the activities are suitably defined, but not extend to the competence management.*

### Recommendation 2

*The intent of this recommendation is to ensure that, before replacing an item of signalling equipment with an item that is apparently similar, signalling engineering staff are able to detect if there is the possibility of the replacement item inadvertently affecting the safe operation of signalling infrastructure, and therefore that additional precautions and checks are required.*

Network Rail should review all replaceable items of signalling equipment that it has accepted on the basis of historical (grandfather) rights, which could affect the safe running of trains over switches and crossings. It should identify any items that may need to be modified, configured or adjusted before installation and ensure that

information or warnings are provided to signalling engineering staff alerting them to this modification and the action that they need to take.

This recommendation may also be applicable to other types of signalling equipment that affect the safe running of trains

### ORR decision

9. Network Rail issued SIN 201 to identify items of signalling equipment that may need to be modified, configured or adjusted before installation. The SIN identified two deficiencies, both of which have now been corrected (see para 12). Network Rail is considering how widely the scope of 'grandfather rights' will be applied. Initially only signalling equipment under consideration.

10. 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 close it

**Status: Open.**

### Information in support of ORR decision

11. On 29 November 2022 Network Rail provided the following initial response:

#### Action Plan

##### Please provide milestones with dates

Network Rail will review signalling equipment used in switches and crossings that require configuration, adjustment or modification to be safely applied which have historical (grandfather) product approval and the controls in place to instruct and inform those undertaking configuration, adjustment or modification to meet the requirements for safe and reliable operation.

*Note, this action is expected to be limited to POE that is configurable for single/multi end operation/detection.*

##### Evidence required to support closure of recommendation

- Product list of items with grandfather product approval requiring configuration.
- Minutes of review meetings
- Where updated, published revised standards and guidance

12. On 1 April 2023 Network Rail provided the following update following a request from ORR for further information:

**ORR request** - Can you provide a report on progress with SIN 201. What else apart from point motors will have grandfather rights? As the recommendation is applicable to other signalling components, what is the expected impact in different regions?

**Network Rail response** - SIN 201 was completed 01/08/22 with two ends of points identified as requiring remedial work.

*As part of the action plan we will review signalling equipment used in switches and crossings that require configuration, adjustment or modification to be safely applied and which have historical (grandfather) product approval, so the working group will be considering what else apart from point motors this will apply to and the impact.*

<b>Region</b>	<b>Was SIN 201 successfully carried out within the deadline of 31st October 2021?</b>  <b>What were the findings of this?</b>
<p>NW&amp;C</p> <p><i>Information provided by Camilla Rock (NR) via email</i></p>	<p>SIN 201 was <b>completed</b>, and <b>no irregularities</b> were found. The regional Principal Technical Engineer (Signalling) completed an un-announced assurance visit on the night of SIN 201 testing to confirm the activity was completed correctly. This was completed on the NW route as they had the higher asset volumes. This highlighted access difficulties with operations which led to the Principal Technical Engineer for signalling having to unblock access issues with the operations team. The C&amp;C team released videos on how to undertake the activity correctly to support the staff testing.</p>
<p>Eastern</p> <p><i>Information provided by Adrian Moss (NR) via email</i></p>	<p>SIN 201 has been <b>completed</b> as planned, we had across our 4 routes only <b>one issue</b> on the northeast route which is detailed in the enclosed PDF (Shildon 35 points) which has since been rectified.</p>
<p>Southern</p> <p><i>Information provided by Tony Meen (NR)</i></p> <p><i>Taken from video transcript</i></p>	<p>Video Transcript</p> <p>SIN was <b>completed</b> before the date. <b>One issue</b> was found – a wire was identified that wasn't in the circuitry. It was only identified when you put the handle in the point machine as this changed the circuitry – Tony has a slide on this if any further information is required.</p>
<p>W&amp;W</p> <p><i>Information provided by Matthew Redstone (NR) via email</i></p>	<p>SIN201 was <b>signed off</b> for W&amp;W on 10/05/2022. All POE in scope was checked and <b>no errors</b> / deficiencies found.</p>

<p>Scotland</p> <p>Information provided by Lyndsey Hunter (NR) via email</p>	<p>SIN201 was <b>concluded</b> in Scotland in the following timescales. Edinburgh DU 19/4/2021; Glasgow Inner/Outer No applicable points; Motherwell No applicable points; Perth 07/05/2021. <b>No significant findings were noted.</b> Our Senior Asset Engineers regularly audit and undertake engineering verifications on the DUs to ensure compliance.</p>
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### Recommendation 3

*The intent of this recommendation is to ensure that, when signalling maintenance teams replace signalling equipment, specified pre-installation checks are effective in confirming that the item being installed is operationally equivalent to the item being replaced.*

Network Rail should review its signal maintenance testing handbook and update the guidance for the defined check for correct equipment type to describe, in sufficient detail, the steps needed to determine like-for-like equipment equivalence. It should make enhancements so that the importance of following this guidance is clear to those installing and testing signalling equipment and, according to their appointed role, the work elements they are permitted to undertake.

This recommendation may be relevant to other defined checks that are described in Network Rail's signal maintenance test handbook

### ORR decision

13. We have asked Network Rail to provide notification of when the review of the relevant sections of SMTH regarding the suitability of replacement equipment has been completed and any changes that are proposed.

14. 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 close it

**Status: Open.**

### Information in support of ORR decision

15. On 29 November 2022 Network Rail provided the following initial response:

#### Action Plan

Please provide milestones with dates

Network Rail will review the standards requirements for defined checks in SMTH for the suitability of replacement equipment. This review will consider who is required to undertake the defined check and under what process and how this is linked to technical authority to undertake the task.

*Note, this is expected to be a minor revision to defined check wording, but will include translation to installation tasks and individuals specific duties for both installation and testing.*

#### Evidence required to support closure of recommendation

- Minutes of review meetings
- Where updated, published revised standards
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16. On 1 April 2023 Network Rail provided the following update following a request from ORR for further information:

**ORR request** - Can you provide an update on the review – what was covered, findings, next steps, actions and impact.

**Network Rail response** - *We will be happy to provide that update when the working group has reached a conclusion on this point and defined its next steps.*

#### Recommendation 4

*The intent of this recommendation is to ensure that, when signalling maintenance teams make engineering changes to the signalling infrastructure, the requirement for the maintenance tester to be independent of the installers is effective in assuring the integrity of the signalling system.*

Network Rail should review how it can best achieve the required level of independence between the installation and testing roles when pre-planned renewal work is carried out under the processes described in its signal maintenance testing handbook. This should take into account how people undertaking these roles work currently. It should make enhancements so that practical working arrangements are defined.

This recommendation may be relevant to other types of signalling work undertaken under arrangements described in Network Rail's signal maintenance test handbook

#### ORR decision

17. We have asked Network Rail to provide notification of when the review of the relevant sections of SMTH regarding the level of independence between installation and testing roles has been completed and any changes that are proposed. Network Rail is considering the issue of specifically configured items and challenges around different software versions.

18. 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 close it

**Status: Open.**

### Information in support of ORR decision

19. On 29 November 2022 Network Rail provided the following initial response:

Action Plan
<p><b>Please provide milestones with dates</b></p> <p>Network Rail will review the standards requirements, instructions and training that describe how to maintain independence between installation and testing activities, and will specifically review the processes and practices linked to SMTH items categorised as “independence exempt”.</p> <p><i>Note, this is expected to be a re-brief of the importance of independence and will be linked to Clapham incident recommendations. The standards revision is expected to be addition of guidance of how to maintain independence and will consider how that is achieved and monitored in small teams.</i></p>
<p><b>Evidence required to support closure of recommendation</b></p> <ul style="list-style-type: none"> <li>• Minutes of review meetings</li> <li>• Where updated, published revised standards</li> <li>• Where updated, training course syllabus</li> </ul>

20. On 1 April 2023 Network Rail provided the following update following a request from ORR for further information:

**ORR request** - Can you provide an update on the review – what was covered, findings, next steps, actions and impact.

**Network Rail response** - *We will be happy to provide that update when the working group has reached a conclusion on this point and defined its next steps.*

### Recommendation 5

*The intent of this recommendation is to reduce the likelihood of essential signal maintenance testing tasks being overlooked and not completed.*

Network Rail should review its arrangements for recording progress when carrying out testing defined in its signal maintenance testing handbook. This should take into



account environmental and other challenges relevant to the workplace and make enhancements that ensure practical contemporaneous recording of:

- the completion of each test step
- relevant test results, measurements, and findings.

### ORR decision

21. Following a successful pilot, Network Rail is planning to introduce the ESMTM application, which should improve the recording of progress with testing of signalling equipment and who did what, when. The app should also improve traceability.

22. 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 close it

**Status: Open.**

### Information in support of ORR decision

23. On 29 November 2022 Network Rail provided the following initial response:

#### Action Plan

##### Please provide milestones with dates

Network Rail will review the practices for recording progress and completion of test activities defined in SMTH, the tools and media required to make those records. This review will consider the opportunities to record improved levels of data quality, attributable to the individual, time and place and if that is reasonable to gather for all or some tasks.

*Note, this will be a review of whether the SWTH recording practices translate to SMTH, and how to promote completion as the testing progresses.*

##### Evidence required to support closure of recommendation

- Minutes of review meetings
- Where updated, published revised standards
- Where created, published tools and templates

24. On 1 April 2023 Network Rail provided the following update following a request from ORR for further information:

**ORR request** - Can you provide an update on progress with the pilot app and the timeline for completion. How will you demonstrate that the app is beneficial? We understand the app helps with handover from one team to the next at the end of a shift. How does it indicate where you have got to in the process?

**Network Rail response** - *We completed the Pilot in late 2021 in 5 DUs. We informed at NMC on 29/03/23 and are now agreeing on national rollout timelines with Routes (in line with their IR processes).*

*There are benefits teams in both the II programme and the Routes – between them they have completed a benefits profile and are tracking this during Rollout. In terms of soft benefits, we are going to create case studies to showcase how the workforce are using the tool/ how their work has changed.*

*Please see the following illustration of how a handover works:*



illustration of how a  
handover works.docx