

Oliver Stewart
RAIB Recommendation Handling Manager

25 June 2026



Mr Andy Lewis
Deputy Chief Inspector of Rail Accidents

Dear Andy,

**RAIB Report: Two trains in the same signal section at South Wingfield,
Derbyshire on 26 October 2022**

I write to provide an update¹ on the action taken in respect of recommendation 4 addressed to ORR in the above report, published on 23 October 2023.

The annex to this letter provides details of actions taken in response to the recommendation and the status decided by ORR. The status of recommendation 4 is **'Closed'**.

We do not propose to take any further action in respect of the recommendation, unless we become aware that any of the information provided has become inaccurate, in which case I will write to you again.

We will publish this response on the ORR website.

Yours sincerely,

Oliver Stewart

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

Recommendation 4

The intent of this recommendation is to reduce the risk of signalling assets being placed into service in an unsafe condition after high output track renewals work.

Network Rail should implement measures to assure itself that signal maintenance testing carried out on its signalling assets, by the testers it contracts to do this work on its high output track renewals project, is being completed in accordance with the requirements of its signal maintenance testing handbook. These measures should encompass checks on the technical skills of the testers and the quality of their testing work, as well as criteria which will allow it to be established if testers are displaying the required attitudes and non-technical skills needed to deliver their work safely and effectively.

This recommendation may apply to other parts of Network Rail's organisation that carry out project-based renewals or maintenance activities which use the signal maintenance testing process to test any affected signalling assets as part of their work.

ORR decision

1. In response to the recommendation, Network Rail undertook a full review of NR/L3/SIG/11231 Signal Maintenance Testing Handbook (SMTH), in order to provide clearer guidance on testing requirements specific to renewals.
2. Additional steps have been included in the SMTH to emphasise final safety sign-off procedures before commissioning signalling assets. Monitoring, auditing and reviewing of SMTH activity is now standardised across contractors and internal staff. The SM(S) or equivalent is required to undertake a review of the test plans returned and complete a 100% check of all SMTH test slips returned.
3. These measures together have strengthened the assurance and verification around the commissioning of signalling assets and should reduce the risk of lead testers becoming overloaded.
4. 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
 - has taken action to close it.

Status: Closed.

Previously reported to RAIB

5. On 22 October 2024 ORR reported the following:

Network Rail has provided a summary of work done to date and further actions aimed at reducing the risk of signalling assets being placed into service in an unsafe condition after high output track renewals work.

Update

6. On 2 September 2025 Network Rail provided the following closure statement:



[N243-09] Wingfield
Rec 4.pdf

7. On 3 December 2025 ORR wrote to Network Rail as follows:

The response sets out in detail what has been done to address each part of rec, but does not explain why or the expected benefit, i.e. how will the work done achieve the intent of the rec not to overload lead testers?

8. Network Rail responded on 11 March 2026 as follows:

The workshops referred to in the closure statement concluded that workload is very task specific and impractical to impose thresholds for all situations beyond those already stated. The intent of rec 3 is therefore primarily addressed through updates to the requirements for the pre-planning of work, and for the pre-planning to consider the workload (and the factors drawn out in this recommendation) of staff who have the overall responsibility for the testing. Pre-planning has been mandated (unless the activity is reactive corrective maintenance).

Where there are stated thresholds / limitations then significantly more guidance is provided for the Route Engineer or equivalent role to assess the risk when considering giving permission to use SMTH.

So the expected benefit is more robust pre-planning which considers the nature of the task, resources required and their workload.

9. On 17 April 2026 Network Rail provided the following update:

Question from ORR in relation to Wingfield recommendation 4: The closure statement sets out how Network Rail has mandated that all contractors do NR SMTH training. What is being done to monitor, audit and review that work done by contractors is to the required standard?

While SMTH training is mandated for all staff, Network Rail assures the quality of SMTH work through direct monitoring of activity on site, mandatory post-work review of 100% of testing records, and independent audit of both delivery and assurance processes. These arrangements apply equally to contractor and directly employed staff.

The specific query reflects on whether assurance of contractors is different and or not comparable to that for internally delivered work. It is not, the person who commissions the work is the section manager (or equivalent) role and all assurance starts with level 1. This applies to teams like that involved in the original investigation.

SMTH competencies are now in Sentinel and standard across all staff who undertake SMTH activity on NR managed infrastructure. This ensures staff have the appropriate technical knowledge and behaviours and ensure staff can perform SMTH activities to the required standard. The way SMTH activity is monitored, audited and reviewed is standardised across Contractors and internal staff as the systems are based on the specific competence. They are all trained and assessed to a common industry framework and authority to work is recorded and assured through the use of Sentinel.

The assurance framework for SMTH is multilayer with independent checks and reviews by those who have commissioned and planned the work. Level 1 assurance is achieved through processes at each stage of the SMTH work:

- *Pre-planning of SMTH activity,*
- *undertaking SMTH testing*
- *post SMTH work activity*

This is captured through the site work completion of SMTH slips and work completion packs, which are subject to post-work review.

Network Rail's standards use Network Rail job titles, contractors may use their own, but the associated competences are defined by Network Rail. It is a requirement of the Signal Maintenance Testing standard, along with NR/L2/RSE/02009 to map these job roles and responsibilities into their own organisations.

Additional assurance is done through line manager surveillance of activity and staff; each manager will have a plan to do site visits and assure that the work being delivered on their behalf is to the required standard and that the competence is being practised appropriately.

Below is a more detailed description of the assurance activities associated with SMTH.

Level 1 assurance activities that support the monitor, audit and review of SMTH activity

Additional level 1 assurance activities that support are:

- *Site surveillance requirements of Signal Engineering Activity in accordance with NR/L2/SIG/10027*
- *Supervisory site inspections are required in accordance with NR/L2/SIG/10028*

Level 2 Assurance activities

These processes are then monitored, audited and assured through Level 2 Assurance processes to monitor and check the effectiveness of the level 1 activity:

- *Functional Audit*
- *Engineering Verification (EV)*

These assurance activities are completed by both TA and regional engineers as part of the published assurance plan for the year.

Preplanning of SMTH activity

A change was made to NR/L3/SIG/11231/Module/08 pre-planned work and non-corrective maintenance testing (Issue 3, March 2025) to make the pre-planning requirements for SMTH activity more robust (clause 2.1, see Figure 1 below).

2. Pre-planning
 - 2.1 All work shall be pre-planned unless it is reactive corrective maintenance activity.

NOTE 1: Typically reactive corrective maintenance activities would be expected to be completed within 72 hours of the original failure.

NOTE 2: Track access should still be planned using the Infrastructure Maintenance Planning Handbook (NR/L3/MTC/PL0175).
3. Planning the Work
 - 3.1 The SM(S) or equivalent shall be responsible for:
 - a) Planning the work and appointing competent staff.
 - b) Briefing all staff who are going to be involved in the work.
 - c) Producing the test plan.
 - d) Assurance of the completed work.

NOTE: A test plan comprises of any document or suite of documents that determines and defines the processes, resources and specifications required for the testing and commissioning of a product at a specific location.
 - 3.2 The Maintenance Tester / Lead Tester shall be responsible for:
 - a) Reviewing and agreeing the test plan.
 - b) Completion and testing of the work.
 - c) Escalation where work cannot be completed or varies from the plan.
 - d) Completing all testing records.
 - e) Returning equipment to service.
 - f) Return all testing records.

Figure 1 extract of NR/L3/SIG/11231/Module/08

This process requires the SM(S) or equivalent to plan the testing activity and gives guidance on what to consider in creation of the plan and the requirement for briefing of staff that are going to be involved in the work. The SMTH tester is required to review, check and agree the plan.

Undertaking the SMTH activity

The SMTH tester is responsible for ensuring the work on site is undertaken as per the plan. Module 08 contains a clear escalation process for the tester to follow if there are any changes to the plan. The SMTH tester is required to complete all of the required site testing documentation and return them back to the SM(S) (see Figure 2 below).

Post SMTH Testing Activity

The SM(S) or equivalent is required to undertake a review of the test plans returned and complete a 100% check of all SMTH test slips returned and escalate any deficiencies identified in the documentation for review and appropriate action to be taken. Clause 6.4 of NR/L3/SIG/11231/Module/14 (see Figure 3 below) requires a review that the correct level of testing has been undertaken and assures the correct output of the SMTH process.

8. Completion of Work			
8.1	On completion of the work, the Maintenance Tester shall review all the details of the actual maintenance testing undertaken and log any variances from the original plan.		
8.2	The Maintenance Tester shall return the completed maintenance testing details to the SM(S) or equivalent as required.		
8.3	The SM(S) or equivalent shall check the returned testing documentation.		
	NOTE: This could include the review of intelligent Infrastructure traces of the equipment being tested.		
8.4	If any deficiencies are identified or the scope of testing changed, the SM(S) or equivalent shall immediately raise with the S&TME or equivalent.		

NR/L3/SIG/11231 Signal Maintenance Testing Handbook			
NR/SMTH/Part01/Module/08			
Pre-Planned Work and Non-Corrective Maintenance Testing			
Issue No:	03	Issue Date:	01/03/2025
Compliance Date:	01/03/2025		

8.5	The S&TME or equivalent shall determine the course of action depending on risk, this could include:		
	a)	Signing equipment out of use.	
	b)	Arranging for retesting.	
	c)	Independent retesting.	

Figure 2 extract of NR/L3/SIG/11231/Module/08

6. Test Records	
6.1	At the earliest opportunity the SM(S), Works Delivery Manager, or nominated deputy shall carry out a 100% check of completed SMTH Log Sheets to verify accuracy and completeness.
6.2	Once this check has been completed, the SMTH Log Sheet shall be authorised. If using paper SMTH Log Sheets the checker shall initial and date the SMTH Log Sheet.
6.3	Faulting and Maintenance SM(S)'s or their nominated deputies shall complete a daily check of the fault management system to confirm they have received 100% of SMTH Log Sheets for their area of responsibility.
6.4	These checks shall determine that the correct maintenance test plans have been used and that enough detail has been recorded. Deficiencies shall be followed up by the corrective action such as monitoring or retraining.

Figure 3 extract of NR/L3/SIG/11231/Module/14

Previously reported to RAIB

Recommendation 4

The intent of this recommendation is to reduce the risk of signalling assets being placed into service in an unsafe condition after high output track renewals work.

Network Rail should implement measures to assure itself that signal maintenance testing carried out on its signalling assets, by the testers it contracts to do this work on its high output track renewals project, is being completed in accordance with the requirements of its signal maintenance testing handbook. These measures should encompass checks on the technical skills of the testers and the quality of their testing work, as well as criteria which will allow it to be established if testers are displaying the required attitudes and non-technical skills needed to deliver their work safely and effectively.

This recommendation may apply to other parts of Network Rail's organisation that carry out project-based renewals or maintenance activities which use the signal maintenance testing process to test any affected signalling assets as part of their work.

ORR decision

1. Network Rail has provided a summary of work done to date and further actions aimed at reducing the risk of signalling assets being placed into service in an unsafe condition after high output track renewals work.
2. 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 close it by December 2024

Status: Open.

Information in support of ORR decision

3. On 20 December 2023 Network Rail provided the following initial response:

Action Plan

Please provide milestones with dates

- On going review of competence requirements for non-technical skills for signal engineering staff, and the creation or improvement of performance criteria and training to change behaviours. All staff who are to work on High Output sites shall be fully inducted before work. These inductions to include the Work Safe Procedure and the staff's right to invoke the procedure, without retribution. These inductions shall emphasise that any person working on High Output sites shall be empowered to raise any issues that they feel appropriate.

High Output supervisory staff shall coach site staff on the non-technical skills desired from our workforce. Skills such as Situational Awareness and Working Under Pressure to be discussed and personal experiences shared. The coach shall offer the capability to provide feedback to staff to encourage and develop good behaviours.

(Started – review completion June 2024)

- Review of the IRSE licence application requirements, particularly whether the complaints process is being used effectively, the management of staff under mentorship and the appropriate level of mentorship for safety tasks and review of mentorship capability. ***(Started – review completion December 2024)***
- Construction Services will continue to review the practices for recording progress and completion of test activities defined in SMTH, the tools and media required to make those records. This 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 task ***(Started – review completion June 2024)***
- Progressively review site surveillance, aimed to further enhance assurance of safe delivery of signalling engineering tasks. ***(Started – review completion June 2024)***
- Implement a Framework Contract that allows High Output depots to have consistent staff who hold relevant competencies, skills and IRSE licences needed to deliver their work safely and effectively. ***(Started – review completion December 2024)***
- Construction Service has embedded a programme of onsite assurances for each High Output delivery unit. These assurances include, but are not limited to, SMTH testing specific Engineering Verification protocols. This information is uploaded to Route Services IRIS (Incident Reporting & Investigation Software) system for peer review and trend analysis.
High Output shall consult with suppliers to second competent, IRSE licensed signalling staff, to provide a workforce with the requisite skills, knowledge, and competence. ***(Started - Review completion December 2024)***
- Construction Services will continually review how it can best achieve and monitor in small teams 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. ***(Started – review completion March 2024)***

Actions completed to date.

Prior to the RAIB Wingfield being published in October 2023 several initiatives were started:

- A review into maintenance testing activities focussing on why the errors occurred. *(Lessons Learnt)*
- A Safety stand-down aimed at project, contractors, and engineers to re-enforce the importance of project and requirement stability in preventing testing errors.
- The issue of Engineering Instructions raising awareness of technical/behavioural issues and lessons learned.
- Since Clapham disaster, emphasizing the importance of engineering processes developed since that time and the need to follow those processes to maintain safety.

- The education of existing staff and their managers, and future recruits, to promote a better understanding of industry processes, and an improved understanding of how the lessons learnt from previous accidents have shaped today's good practice.
- Construction Services (High Output) has produced a broader programme of Engineering Verification, which commenced in period one of 23/24 delivery year. This is intended to be an on-going, rolling programme scaled to the volume of work delivered by Construction Services. Within the broader programme are a set of Signal Maintenance Testing specific Engineering Verification protocols. These include signal aspect testing and wire count testing and are specifically mentioned in the investigations as failures.
- Increased the presence of site supervision and audit of testing activities by Tester in Charge prior to hand-back / Entry into Service
- Independent reviews conducted by Principal Route Engineering Team (S&T) on Western / NW&C of T&C resource, competencies, and plans.
- Interactive workshops & focus groups set up to re-brief on planning, safety, and sustainability assurance. (S&T orientation pack)

Improvements on-going:

- NR- Construction Services are investing to develop training capabilities including rail safety critical and IRSE technical training, mentorship, and assessment in-house to ensure a consistent high-level quality for its staff. ***(Started – review completion December 2024)***
- Network Rail's E-learning "non-technical skills for signal engineering" was made available to the supply chain in May 2023. Upon request, several suppliers have provided evidence of their implementation and there is an on-going action to ensure the remainder of the Construction Services supply chain comply with this requirement. ***(Started – review completion June 2024)***
- Quarterly staff business briefing days to share with all employees the business aspirations, performance, and areas of concerns to drive an ethos of continuous improvement. These days are supported by other significant improvements with regards to internal communications with all industry alerts and updates cascades. ***(Started & On-going)***
- Cascading a tailored interactive briefing to leaders of HO track / signalling teams and staff, which includes leadership interventions and their impact, appropriate escalation practices, levels of self-awareness, levels of personal responsibility and a reminder of established good practice. ***(Started – review completion March 2024)***

Evidence required to support closure of recommendation

- Minutes of review meetings
- Where updated, published revised processes and guidance.
- Where updated, training course records
- Briefing records
- Where created, published tools and templates.
- Copies of presentations given
- EV Assurance Period Report