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

Dear Andrew,

Freight train derailment at East Somerset Junction, 20 March 2017

I write to report¹ on the consideration given and action taken in respect of the four recommendations addressed to ORR in the above report, published on 13 December 2017.

The annex to this letter provides details in respect of each recommendation. The status of recommendation 1, 2 and 3 is '**implementation on going**'; and the status of recommendation 4 is '**implemented**'.

We will publish this response on the ORR website on 17 December 2018.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Oliver Stewart', written in a cursive style.

Oliver Stewart

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

Initial consideration by ORR

1. All 4 recommendations were addressed to ORR when the report was published on 13 December 2017.
2. ORR passed all four of the 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 purpose of this recommendation is to reduce the risk from sub-optimal track configurations resulting from plain-lining of S&C.

Network Rail should enhance its procedures covering the emergency and/or temporary replacement of switches and crossings with plain line. Appropriate measures should be included to manage the risk where the newly-installed plain line is curved. Consideration should be given to limiting the duration of such installations without an independent inspection, permanent design and/or track renewal taking place.

ORR decision

4. We support the methodology outlined by Network Rail. Network Rail's initial response did not define the risk the standard is aiming to control and analysis of gaps in the current standards. We also asked Network Rail to confirm that any noncompliance and associated exposure to residual risk identified by the proposed process will be managed to be ALARP through their noncompliance processes. These three issues have been addressed in the updated response.
5. ORR issued an Improvement Notice to Network Rail on 25 May 2017 as there wasn't a process in place to cover a change in layout or asset configuration initiated by track maintenance teams, including the plain lining of points.
6. The notice was complied with on 17 October 2017 by Network Rail taking the following action:
 - 1) Western addendum to NR/L2/TRK/2500 covering changes in asset configuration or layout carried out by maintenance teams.
 - 2a) Other sites in the Western Route that may have been subject to similar changes were identified.
 - 2b) Mitigation identified and implemented for the sites identified in 2b.
7. We will consider this RAIB recommendation to be implemented when the revised standard has been published and briefed out (December 2019).

8. 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 by December 2019.

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

Information in support of ORR decision

9. On 26 October 2018 Network Rail provided the following initial response:

The proposed analysis and outputs as listed below in the action plan items are predicated on the assumption that the proposed revised Standards and procedures will reduce the inherent risk to an acceptable level; however, any non-compliance to the proposed process will leave some exposure to residual risk. The technical elements of the analysis will examine through sensitivity testing that the emergent changes to Standards address the identified risk scenarios adequately. The action plan core activities shown below will be included into a detailed project plan with individual tasks ensuring that the emerging solutions are reviewed and validated. The actions will be monitored by the Professional Head of Track via the direct line management reporting chain. The effectiveness of the revised Standard will be subjected to a post implementation review. It is proposed that two reviews would be applied at the 6 and 12-month periods. Any resulting changes required shall be implemented through the normal Standards Change processes.

Action Plan

1. Investigate existence of NR processes / Standards for conducting urgent and /or temporary track interventions associated with “plain lining” of any element of an S&C unit. (end Oct 18)

2. Produce Standards Change remit specification for design integrity check of activity defined in item 1 above divided into the application of the Standards Change on:-

- a) straight track,
- b) curved track (by Jan 19)

3. Contact Standards owners and confirm through stakeholder review agreement of standards change remit specification. (end March 19)

4. Produce draft revised Standards documents in accordance with remit (July 19)

Publish and brief out revised Standards in accordance with NR procedures. Target formal issue date is to be the quarterly Standards Briefing session scheduled for the end of 2019 (by Dec 19)

5. A post implementation review shall be completed at the 6 months and 12-month period. This based on the current planning is scheduled for June and December 2020. The review will be conducted by previous members of the original drafting panel and independent subject matter experts drawn from within NetworkRail's STE department. The review will be formal and comprising the following scope: -

- a) Collation of National event activity within the scope of item 1.
- b) Audit of compliance against processes defined in previously revised Standards.
- c) Based on findings make recommendations for additional amendments to Standards.

Timescale: Feb 2021

10. In response to our feedback, Network Rail provided an updated action plan on 27 November 2018:

The proposed analysis is predicated on the assumption that the proposed revised Standards and procedures will reduce the inherent risk to an acceptable level; however, any non-compliance to the proposed process will leave some exposure to residual risk. The action plan core activities shown below will be included into a detailed project plan with individual tasks ensuring that the emerging solutions are reviewed and validated. The actions will be monitored by the Professional Head of Track via the direct line management reporting chain. The effectiveness of the revised Standard will be subjected to a post implementation review. It is proposed that two reviews would be applied at the 6 and 12 month periods. Any resulting changes required shall be implemented through the normal Standards Change processes.

Action Plan

1. Conduct analysis to identify/ define the risks associated with addressing the plain lining of S&C systems. (end Dec18)
2. Investigate existence of NR processes / Standards for conducting urgent and /or temporary track interventions associated with "plain lining" of any element of an S&C unit. With the explicit aim of identifying any gaps in Standards (Jan 18)
3. Produce Standards Change remit specification for design integrity check of activity defined in item 1 above divided into the application of the Standards Change on :-
 - a) straight track,
 - b) curved track

(by Feb 19)
4. Contact Standards owners and confirm through stakeholder review agreement of standards change remit specification. (end March 19)

5. *Produce draft revised Standards documents in accordance with remit (July 19)*
6. *Publish and brief out revised Standards in accordance with NR procedures. Target formal issue date is to be the quarterly Standards Briefing session scheduled for the end of 2019 (by Dec 19)*
7. *A post implementation review shall be completed at the 6 month and 12 month period. This based on the current planning is scheduled for June and December 2020. The review will be conducted by previous members of the original drafting panel and independent subject matter experts drawn from within Network Rail's STE department. The review will be formal and comprising the following scope :-*
 - a) *Collation of National event activity within the scope of item 6.*
 - b) *Audit of compliance against processes defined in previously revised Standards. Any noncompliance and associated exposure to residual risk following implementation of the Standard will be managed to "ALARP" through NR noncompliance processes.*
 - c) *Based on findings make recommendations for additional amendments to Standards.*

Recommendation 2

The purpose of this recommendation is to reduce the risk from sub-optimal track configurations that may exist as a result of plain-lining of S&C.

Network Rail should identify existing locations where switches and crossings have been replaced with curved plain line on an emergency and/or temporary basis. A time-bound plan should be drawn up to implement appropriate measures to mitigate the risk at such locations, taking account of the findings of this report.

ORR decision

11. We support the approach Network Rail are taking to address this recommendation, but have asked for confirmation that the timescale for completion (31 March 2019) is when the SIN and associated actions (e.g. creation of risk management plans) will be completed, rather than just the issuing of the SIN.

12. 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 by 31 March 2019.

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

Information in support of ORR decision

13. On 18 October 2018 Network Rail provided the following initial response:

Recommendation 2 will be addressed through the issue of a Special Inspection Notice (SIN) requiring routes to investigate and inspect all plain-lined S&C locations. The purpose of this exercise is to create a site register for these assets as well as to conduct a physical inspection of their design and condition. Following the inspection, Delivery Units will be required to create a risk management plan for all identified plain-lined sites that should, as an ultimate objective, provide time-bound details of when the site will either be returned to its original design of S&C, or permanently plain-lined according to our track construction standards.

The Routes themselves will be responsible for enacting the requirements of the SIN. The progress against these requirements will be monitored nationally by STE.

The SIN has been drafted and will now need to be peer reviewed and presented to the TLG (which includes all RAM[T]). It is intended to be issued within the next couple of months with a 6-9 month implementation period.

Timescale: 31 March 2019

Recommendation 3

The purpose of this recommendation is to reduce the probability that sections of track might inadvertently be missed from train-based track inspections.

Network Rail should improve its processes for specifying and controlling the configuration of the route definitions used by its track measurement trains. The improved arrangements should take account of the needs of all relevant stakeholders and clarify ownership of the data. Where temporary closures of sections of line are necessary, the steps to reactivate train-based measurement should be clearly defined.

ORR decision

14. We accept the proposed work to address the recommendation Network Rail have set out. We were concerned about the start date and long timescale for delivery and asked Network Rail to demonstrate to us the level of confidence they have in the current routing process for track measurement trains and how issues (black holes/ missed runs etc.) are communicated to TMEs. We also asked Network Rail what interim risk controls they are putting in place while the work to develop and deliver revised arrangements is carried out. Network Rail have addressed these issues in their subsequent update.

15. 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 by February 2022.

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

Information in support of ORR decision

16. On 26 October 2018 Network Rail provided the following initial response:

Network Rail has secured funding in CP6 to complete a review of the process for specifying and controlling the configuration of the route definitions used by the track measurement trains. As finances cannot be released until CP6, to do thorough scoping work, all of the below dates are indicative and subject to change until the specification has been agreed and there is some indication that the market can deliver within budget and timescales.

As well as improving the processes for specifying and controlling the configuration of the route definitions used by its track measurement trains, Network Rail will also address the following issues:

- *Understanding what sections of track are not covered by a measurement, manual or train-borne, is not easy for the Routes to do. It is highly manual and therefore prone to error.*
- *The current tactical method of assisting the Routes in this task and referenced in the report as “black hole reporting” also has limitations not least the fact it would not necessarily identify small sections of tracks that are being missed.*

Asset Information Strategy (AIS) will lead on delivery of the recommendation, working with the Routes who have the accountability for ensuring track has the required measurements. The proposed schedule is shown below. This takes into account feedback from Route Services IT (RSIT) and has added some additional months to the end date to allow for closure of the recommendation.

1.	<i>Project Initiation</i>	<i>June 2019</i>
2.	<i>Requirements gathering (3 months duration)</i>	<i>June 2019 – Sept 2019</i>
3.	<i>Agree Specification (3 months duration)</i>	<i>Sept 2019 – Dec 2019</i>
4.	<i>Tender (allowing for OJEU) (9 months duration)</i>	<i>Jan 2020 – Sept 2020</i>
5.	<i>Development (9 months duration)</i>	<i>Oct 2020 – July 2021</i>
6.	<i>Testing (3 months duration)</i>	<i>Aug 2021 – Oct 2021</i>
7.	<i>Deployment/ELS/Training/Embed (3 months duration)</i>	<i>Nov 2021 – Feb 2022</i>

Stages 1-3 would involve the Routes, AIS and STE who, to differing degrees would be involved throughout the rest of the stages. This cannot necessarily be role specific as particularly with the Routes, those involved may differ per Route. Stage 4 would add Contracts & Procurement to that group for just that stage. Stage 5 would add the selected supplier(s) through to the end.

Timescale: Feb 2022

17. On 30 November 2018, Network Rail provided the following update:

- *The “black hole” reports that were quoted in the report and that identified the gap in recording at East Somerset Junction are still undertaken as a service by Asset Information Service for all Routes.*
- *We have weekly calls that all Routes can dial into to question the status of measurement train operations, including what track is covered. We tend to use these meetings to discuss the result of our measurement operations not going to plan rather than as a prompt to ask if there is changes in the overall set of track that we cover, but they can be used to do that.*
- *We are currently working to product maps of the railway that will show will illustrate where the infrastructure measurement trains record and where they don’t. This will include detail down to a level of the S&C that is traversed to move from one running line to another. This is a work in progress and will start with a trial on one data stream, but hopefully it demonstrates that AIS is trying to provide another way of demonstrating where the measurement trains operate.*
- *I would be happy to work with the Head of Track to re-iterate the need for our Routes to pay particular attention to sections of track that were once covered by the measurement fleet, but where this coverage has been removed. AIS cannot alarm when track comes back into use, as we won’t normally be advised. The current method of working relies on the Route to inform us when things in the real world change.*

Recommendation 4

The purpose of this recommendation is to ensure that there are adequate resources to maintain the track in the Westbury area.

Network Rail Western Route should identify key track maintenance activities at Westbury and evaluate the extent to which these can be reliably delivered by the existing workforce. A time-bound plan should be drawn up to implement any resulting changes in responsibilities or resourcing

ORR decision

18. Western Route have introduced Western Maintenance Capability Assessments (WMCA) process to assess resource needs at depots, including Westbury. WMCA has been implemented as Business as Usual in 6 monthly cycles or when there has been a significant change. The process has been expanded beyond Westbury DU and is not limited to track maintenance roles.

19. 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 implement it

Status: Implemented

Information in support of ORR decision

20. On 18 October 2018 Network Rail provided the following initial response:

The Western Route Head of Maintenance has completed a review identifying all the key roles across the route, this included Westbury. This review highlighted the key roles responsible for track maintenance.

A Work Activity Template assessment document for each role has been generated, these have been completed and will be reviewed every 6 months. An action plan will be created if the role exceeds the hours allowable in each assessment. Work hours are also tracked through Network Rail's internal system, Oracle. This allows the HOM to plot the trends, hours worked and potential fatigue of the maintenance staff.

Each work activity assessment document breaks down the tasks required within each role, the time spent on them and how many people are required to meet the demands. A copy of the template has been sent to the ORR inspectors.

The assessments (and subsequent action plans) will help to ensure the correct levels of engineering, technical, management and supervisory resource on the Westbury section. This will enable more effective time being spent on frontline assurance, including: time on site, time with teams, training and competency development and time spent checking and managing risk factors on the section. The specific objectives for each role will be updated to undertake minimum quantities of front line assurance, and a weekly record of time spent on front line assurance will be captured as a part of the 'Fatigue Monitoring' timecards. This will enable the Western Maintenance Leadership Team to assess the time spent on assurance activity across the route and make adjustments accordingly.

The outcome of the assessments showed that the section manager required extra resources. Since the assessment two supervisors are in post and some of the tasks have been streamlined to reduce work load. The assessment now shows adequate resources for the tasks required.

An updated 'Meetings and Communication Structure' across the Western Maintenance organisation has been implemented which provides a stable and documented structure for meetings, and includes the frequency, agenda, attendees, inputs, outputs and details for taking actions and filing minutes. This approach will facilitate improvement by driving accountability to the right levels throughout the organisation, ensuring that thorough and structured

discussion is undertaken on maintenance activities / risk and, more importantly, that these discussions are documented and actions are taken and delivered.