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

Dear Andrew,

RAIB Report: Dangerous occurrence at Lindridge Farm user worked crossing, near Bagworth, Leicestershire

I write to provide an update¹ on the action taken in respect of recommendations 1, 2 and 5 addressed to ORR in the above report, published on 29 July 2013.

The annex to this letter provides details of the action taken. The status of recommendations 1 and 5 is '**Implemented**'. We do not propose to take any further action in respect of these recommendations unless we become aware that any of the information provided becomes inaccurate, in which case I will write to you again.

The status of recommendation 2 is '**Implementation ongoing**'. ORR will advise RAIB when further information is available regarding actions being taken to fully address this recommendation.

We will publish this response on the ORR website on 18 December 2015.

Yours sincerely,

Andrew Eyles

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

Recommendation 1

The intent of this recommendation is to require signalling re-control projects to establish what signalling source records exist for the area being re-controlled, how up-to-date they are and whether they are correlated. If signalling source records are not available, the project's scope should explicitly include activities at its start to produce them so they are available to designers and checkers for their design work, testers for testing the design prior to it being commissioned, and to the maintainers afterwards.

Network Rail should revise its project management processes and company standards to require that signalling re-control projects (ie projects transferring the control of signalling from one location to another when the interlocking, trackside signalling equipment and infrastructure are unchanged) identify the signalling source records that are needed for the design, checking and testing of these works. These projects should then be required to include activities within their scope of work to obtain these signalling source records, including correlating, updating or producing records as necessary

ORR decision

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

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

Status: Implemented.

Brief Summary on what was previously reported to RAIB on 9 June 2014

2. ORR was awaiting a more specific response from Network Rail setting out how it will place requirements on contractors for control of signalling source records for new projects.

3. On 30 October 2015 Network Rail provided the following closure statement:

Network Rail Investment Projects has reviewed applicable project management and contract processes and has briefed project teams and contractors on the incident at Lindridge Farm.

Network Rail STE Principal Engineer has reviewed the applicable standards for relevance of how projects define the limits of alteration, and whether the responsibilities are clearly defined. The review included NR/L2/SIG/11201 and supporting modules, NR/L2/SIG/30009 modules E810 and Z210.

The requirements were found to be clearly set out in the signalling design handbook, NR/L2/SIG/11201, which requires the designer, verifier and Responsible Design Engineer, to identify the source documents needed for the proposed alteration, the management processes for change and records return. The change process specifically includes the correlation element, and that correlation can only be omitted when a waiver is granted from the Route Asset Manager Signalling.

The specification of the limits of the proposed alterations is also controlled by NR/L2/SIG/11201, defined in the production of Project specification and design specifications. It is noted that signalling design details include the control centre in their document title, hence these are always included in the change for records, but there are two specific instructions that determine how retention of existing facilities are managed in interlockings, by following NR/L2/SIG/30009 E810, and change of control centres by following NR/L2/SIG/30009Z210, both generate an assessment report for retention of existing facilities.

These instructions were found to provide robust controls to projects to define and manage the source documents for a proposed alteration.

A further action was taken by STE to brief the Route Asset Managers (signalling) to increase awareness of the incident, aimed at informing the RAMs when considering granting correlation waivers on request from projects. The share with pain brief prepared by IP was briefed in June 2015.

Recommendation 2

The intent of this recommendation is to provide Network Rail SDG designers and checkers with a way of working which will remove the possibility of incorrect track circuit names being drawn on a signalling or scheme plan during its production, and then missed during the checking process. This way of working could be implemented in the software used by designers or by procedure. It is equally applicable to conceptual work (such as new designs) and non-conceptual work (such as the redrawing of an existing design).

Network Rail should, in consultation with its principal signalling contractors, review the ways of detecting and addressing incorrect track circuit names for all types of signalling or scheme plan production. The review should consider what manual or automatic methods can be used by designers and checkers. The findings of the review should then be implemented by means of a time bound programme for changes to the tools and mandated design processes that cover this activity.

ORR decision

4. ORR understands that, although Network Rail has reported a completion date of 31 December 2015, it may be encountering difficulties with the proposed software and its roll out. ORR therefore requested confirmation of the expected closure date and understands that Network Rail is in the process of producing a proposed timescale extension.

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

- taken the recommendation into consideration; and
- is taking action to implement it. ORR awaits a revised completion date from Network Rail.

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

Brief Summary on what was previously reported to RAIB on 9 June 2014

6. ORR reported to RAIB that Network Rail had confirmed that an industry briefing had been drafted to remind designers of the need for a numbering grid (as required by standard NR/L2/SIG/11201/ModA2 'Minimum Requirements of Design Details') and to include split sections. Guidance on manual checking methods was documented in the Signalling Design Handbook, however, this was also to be included in the briefing as a reminder to designers and checkers. Network Rail had agreed to provide ORR with the publication date and content of the briefing.

7. Network Rail had also confirmed that automatic checking methods were available as part of the ISP 3.0 plan software, which was currently under trial and due for rollout in March 2014.

Update

8. On 26 October 2015 Network Rail submitted a revised completion date of 31 December 2015, supported by the following statement:

Network Rail has been waiting for the rollout of DTP to enable its machines on the latest version of Balfour Beatty Plans (v6) which allows the automatic identification of duplicate identities. This won't be done in its entirety until at least the end of the year (2015) as there have been a number of issues with DTP testing of all of our design packages and compatibility.

Network Rail has also written to its supply chain (Via SSL as the developer of BB Plans) as they will all need to upgrade to the latest version of BB Plans or they will be unable to update any signalling plans produced by our Signalling Design Group or other adopters of plans version 6.

Therefore timescale extension to 31 December 2015 due to our in service testify of software packages vs Windows 7.

Recommendation 5

The intent of this recommendation is to show a level crossing in the correct place on the signaller's display when telephones are fitted to it. It calls for Network Rail's standards to define who can make the changes to the signaller's display, what information is needed to make the changes and how the changes will be checked afterwards. This recommendation also calls for the change to the level crossing to be

recorded in the signalling records, either by updating records such as the signalling plan, or by entering the change in the deficiency register.

Network Rail should have procedures in place that require the signaller's display to be updated in a controlled manner when telephones are being fitted at a level crossing for the first time. The requirements should also include what steps must be taken to record the change to the level crossing in the signalling source records.

ORR decision

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

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

Status: Implemented.

Brief Summary on what was previously reported to RAIB on 9 June 2014

10. ORR reported to RAIB that Network Rail had identified that

- *a proposal was to be made to institute a control on uncontrolled and unauthorised amendments to Signaller's displays and for Signaller's to report any unauthorised changes;*
- *a re-briefing of the requirements contained in standard NR/L2/INI/02009 [Engineering Management for Projects] was also to be carried out to reinforce the need for telecoms engineering staff to carry out the Interdisciplinary Reviews and Inter-Disciplinary Check when introducing additional operational infrastructure requiring to be shown on Signaller's displays; and*
- *consideration was to be given to providing suitable labelling or other means to remind staff that alterations to a signaller's display shall only be undertaken by an authorised and competent person in accordance with signal engineering standards and requirements.*

Update

11. On 23 February 2015, Network Rail provided an update stating:

Network Rail has procedures in place to manage changes to signallers display:

The Signal Design Hand-book NR/L2/SIG/11201 mandates the correlation (module A7) of signalling records, the production of design, records and management of interfaces (paragraph 6.2) when making changes to the signal system including level crossings and signallers display.

Section 5.4.1 of the Sponsor's Handbook issued 14 January.2014 defines responsibilities for identifying risks and appointing competent people to manage those aspects of the work in line with CDM Regulations. This applies to small

projects as well as large ones and equally to Infrastructure projects delivered work and work delivered by other delivery mechanisms.

Provision of telephones at level crossings incurs consequential signalling design/record alterations for signalling layout and signaller's display, inter disciplinary co-ordination is managed by the requirements of NR/L2/INI/02009 Engineering Management for Projects.

The Route Asset Manager (Signals) maintains a record of known signalling design record deficiencies to inform any planned signalling alterations and to prioritise record deficiencies for correction.

In recognition of the human errors observed in application of these procedures the following actions have been undertaken:

- The Professional Head of Operations has briefed operational staff that changes to signaller's displays shall only be undertaken by an authorised and competent person in accordance with signal engineering standards and requirements (e.g. NR/L2/SIG/11201). Uncontrolled changes to signaller's displays are not permitted and any deficiencies should be identified and reported to the Route Asset Manager (Signal). This was briefed at the Operations Management Group meeting on 10 April 2014.*
- The requirements contained in NR/L2/INI/02009 were re-briefed at the Telecoms Senior Renewal & Enhancements Engineers meeting on 21 November 2013 to reinforce the need for telecoms engineering staff to carry out the Interdisciplinary Reviews and Inter-Disciplinary Check when introducing additional operational infrastructure requiring to be shown on Signaller's displays.*
- Associated with national general cascade briefings to staff for awareness of the issues identified at Lindridge Farm, the specific awareness briefings listed above are aimed at reinforcing the understanding of published procedures to prevent re-occurrence of this issue.*