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6 December 2021

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

Dear Andrew,

RAIB Report: Collision at Frognal Farm User Worked Crossing on 23 October 2017

I write to provide an update[1] on the action taken in respect of recommendation 3 addressed to ORR in the above report, published on 23 August 2018.

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 3 is **'Implemented'.**

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 on 7 December 2021.

Yours sincerely,

Oliver Stewart

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

Recommendation 3

The intent of this recommendation is to improve the understanding that users of private level crossings equipped with power operated gates have of the process for using such crossings safely, so that the risks created by automating part of a user worked crossing are appropriately mitigated. This recommendation repeats recommendation 2 of the RAIB's report on the accident at Oakwood Farm level crossing on 14 May 2015 because there is evidence that the original recommendation was not being implemented as intended.

Network Rail should develop and implement a programme for a timely review of the safety of other user worked crossings it has fitted with POGO equipment and those it intends to fit in the future. The review should be based on a proper understanding of the risks associated with POGO equipment and include particular consideration of the following:

a) the types of location where the installation of POGO equipment is likely to be unsuitable;

b) the design standard for crossings fitted with POGO equipment;

c) the ways in which users in different types of vehicles operate the crossing gates, including the function of the gate operating buttons;

d) the clarity of instructions to enable unfamiliar users to use the crossings safely and to minimise reliance on the briefing of all visitors by authorised users (which is not always practicable);

e) improving the conspicuity of the miniature stop lights (e.g. using two miniature stop lights on each side of the crossing, the use of larger 'road traffic light' style red and green lights, flashing red miniature stop lights, or wig wag lights) and the number and clarity of the signs, to minimise confusion and distraction; and

f) whether the opening of the gates should be disabled unless the miniature stop lights are displaying green lights.

This review should draw on the findings from recent relevant research (eg RSSB's research into signs at private level crossings (T983) and human factors advice). Any measures for safety improvements at such crossings should then be implemented at higher risk locations and incorporated into the standards for future designs.

In addition the review should consider, where manual crossings are partly or fully automated, making the process by which the user is informed it is safe to cross simple and intuitive and as fail safe as possible, ensuring the user is guided to make contact with the signaller where required (paragraphs 129b, 129c i).

ORR decision

1. To address this recommendation (along with Oakwood Farm rec 2), Network Rail has undertaken a number of measures including:

- the introduction of interim improvements at level crossings with POGO equipment or user operated lifting barriers to reduce the opportunity for any re-occurrence;
- implementing standards change to improve the design and application of POGO;
- developing and concluding product acceptance to interlink gates and miniature stop lights (where provided); and
- promoting the use of enhanced instructional signage at level crossings with POGO equipment in advance of legislative change.

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
- has taken action to implement it

Status: Implemented.

Previously reported to RAIB

3. On 13 August 2019 ORR reported the following:

Although it is clear that Network Rail have undertaken significant work to address Oakwood Farm rec 2, it is not clear from the response how each part of the recommendation has been addressed. We have asked Network Rail to redraft the response to show clearly how each of the points a-g in the recommendation is being addressed.

Update

4. On 5 November 2021 Network Rail provided the following closure statement:

Frognal Farm 3
Oakwood Farm 2 clo

Previously reported to RAIB

Recommendation 3

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Network Rail should develop and implement a programme for a timely review of the safety of other user worked crossings it has fitted with POGO equipment and those it intends to fit in the future. The review should be based on a proper understanding of the risks associated with POGO equipment and include particular consideration of the following:

a) the types of location where the installation of POGO equipment is likely to be unsuitable;

b) the design standard for crossings fitted with POGO equipment;

c) the ways in which users in different types of vehicles operate the crossing gates, including the function of the gate operating buttons;

d) the clarity of instructions to enable unfamiliar users to use the crossings safely and to minimise reliance on the briefing of all visitors by authorised users (which is not always practicable);

e) improving the conspicuity of the miniature stop lights (eg using two miniature stop lights on each side of the crossing, the use of larger 'road traffic light' style red and green lights, flashing red miniature stop lights, or wig wag lights) and the number and clarity of the signs, to minimise confusion and distraction; and

f) whether the opening of the gates should be disabled unless the miniature stop lights are displaying green lights.

This review should draw on the findings from recent relevant research (eg RSSB's research into signs at private level crossings (T983) and human factors advice). Any measures for safety improvements at such crossings should then be implemented at higher risk locations and incorporated into the standards for future designs.

In addition the review should consider, where manual crossings are partly or fully automated, making the process by which the user is informed it is safe to cross simple and intuitive and as fail safe as possible, ensuring the user is guided to make contact with the signaller where required (paragraphs 129b, 129c i).

ORR decision

1. Although it is clear that Network Rail have undertaken significant work to address Oakwood Farm rec 2, it is not clear from the response how each part of the recommendation has been addressed. We have asked Network Rail to redraft the response to show clearly how each of the points a-g in the recommendation is being addressed.

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 implement it, but have not clearly indicated how each part of the rec is being addressed.

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 22 May 2019 Network Rail provided the following initial response:

Network Rail is progressing actions to deliver recommendation 2, Oakwood Farm which wholly encompass the delivery of Frognal Farm 2 by their completion.

The current position relating to Oakwood Farm 2 is outlined in the updated action plan below.

Action Plan – Oakwood Farm 2 (update April 2019)

Further to the extension paper submitted on 30/09/2018, there has been a significant development within Network Rail regarding the future of POGO equipment.

The POGO product acceptance process, initiated to address reliability and safety problems, has been terminated due to the supplier's inability to meet contracted requirements. Network Rail considered using an alternative supplier to support the product acceptance process, but the cost of alterations required to bring the pre-purchased equipment up to the required standard were too high for the project to remain viable.

Whilst future rollout is therefore managed, 28 sites remain operational across the network following Routes assessments of localised risks and compliance to Special Inspection Notice 173. To mitigate the reputational risk to Route customers of decommissioning equipment which has been operating without issue to date across these sites, the project will continue in a condensed form to provide the necessary support to life extend equipment and manage safety.

The project will now review low-cost life extension options for POGOs. A suite of guidance documentation will be produced for use by Routes, detailing how to life extend, set-up and maintain their operational POGOs using pre-purchased equipment.

Linking POGO and MSLs at the 8 operational sites, remains firmly in scope. The concept to achieve this was proven as part of the project within CP5. Jacky Duffin Wood will form the pilot to this, with the 7 further POGO/MSL sites to follow thereafter.

Key elements to be delivered by the project:

- *Provision of guidance to Routes to enable safe installation, maintenance and life extension of POGO without supplier support*
- *Development and deployment of a product standard, including site suitability and installation and maintenance criteria*
- *Improving user understanding of crossing protocol across the 28 sites, building on the results of the HAZID and content of SIN 173*
    - *Enhanced briefing for authorised users and invitees*
    - *Ergonomic layout of signage and equipment tailored to POGO and POGO/MSL locations:*
        - *new signage, absorbing the guiding principles developed by RSSBs T983 research paper;*
        - *clarity of instruction on how to operate the crossings;*
        - *removal of unnecessary signage and prioritisation of key safety messages;*
        - *conspicuity of signage and equipment (including MSLs); and*
        - *manual release pins clearly identified and accompanied with clear instructions.*
- *A linked POGO and MSL system solution that will prevent the POGO system opening the gates when the MSL is displaying a red aspect.*

Timescale: 31 December 2019