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25 March 2014

Ms Carolyn Griffiths
Chief Inspector of Accidents
Cullen House
Berkshire Copse Road
Aldershot
Hampshire GU11 2HP

Dear Carolyn

RAIB report: Collision between a train and a lorry and trailer on Llanboidy automatic half barrier level crossing

I write to update you on the consideration given and actions taken in respect of recommendation 3 addressed to ORR in the above report published on.

The annex to this letter provides details of the consideration and actions where recommendation 3 is now classed as implemented.

We do not intend to take any further action in respect of this recommendation unless we become aware of an inaccuracy in which case we will write to you again.

Yours Sincerely

A handwritten signature in blue ink, appearing to read 'C O'Doherty', is written over a light blue rectangular background.

Chris O'Doherty

Consideration by ORR

1. All 6 recommendations in the report were addressed to ORR when the report was published on 27 September 2012. On 1 August 2013 we reported that recommendation 1 had been implemented by alternative means, recommendation 2 was subject to non implementation, recommendations 4, 5 and 6 had been implemented and recommendation 3 was in progress.
2. Further consideration given and actions taken in relation to recommendation 3 are presented below.

Recommendation 3

The purpose of this recommendation is to ensure that the effect of misalignment of the road is taken account of in the Network Rail level crossing risk management process.

Network Rail should revise its risk management process for level crossings to take account of risks arising from the misalignment of the road over the crossing relative to the rest of the road

Previously reported

3. We previously reported that the Network Rail National Level Crossing Team was developing guidance for risk assessors to aid them when carrying out site visits/data collection. This guidance was to specifically include factors relating to road alignment/layout and its effect on driver behaviour and also how to escalate these issues with highways authorities. It was anticipated that this guidance would be available by 31 December 2013. The original response to RAIB can be found at Annex B

Update

4. Network Rail have confirmed that the guidance was published on 19 February 2014. The guidance is titled LCG 06 'Deviating from the marked carriageway: Road alignment and other influencing factors' and is attached for information. ORR has considered the guidance and can confirm that it addresses the recommendation.

ORR decision

Having considered the responses and the guidance provided by Network Rail, 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 implemented it

Status: Implemented

The effect of misalignment of the road is taken into account in the level crossing risk management process. The process involves the following aspects of the crossing:

- *Long straight roads/curved approach*
- *Road approach speeds*
- *Junctions in the vicinity of the level crossing*
- *Features on the approach – distraction*
- *Gradient/ surface*
- *Signage*
- *Flood water*

The Level Crossing Data Collection Form is currently used by Mobile Operations Managers (MOMs) and Operations Risk Control Coordinators (ORCCs) to gather data for the risk assessments; this form is also used to provide any additional details about the level crossing approach that have been identified.

March 2013 will see the national roll-out of Level Crossing Managers complete. The Level Crossing Manager's role is to gather the data for the risk assessment and perform risk assessments. They will also perform the asset inspection and a number of other activities around improved stakeholder engagement. MOMs and ORCCs will no longer collect data for risk assessment or perform risk assessments once all the LCMs are operationally live

13. ORR did not consider that the above response addressed risks arising from misalignment of the road over the crossing. We asked Network Rail for clarification and received the response below on 8 March 2013.

The National Level Crossing Team is currently developing guidance for risk assessors to aid them when carrying out site visits / data collection. This guidance will specifically include factors relating to road alignment / layout and its effect on driver behaviour and also how to escalate these issues with highways authorities. It is anticipated that this guidance will be available by 31 December 2013.

Background information relating to level crossing risk management process:

When a crossing is being renewed or enhanced all elements of risk are considered as part of option selection and a new ground plan is developed. This incorporates road layout and alignment of approaches with the site specific design of the level crossing. Therefore the renewal / enhancement offers the best opportunity to review the crossing layout and optimise the approach alignment. During the lifetime of the level crossing it is subject to regular risk assessments which utilise the All Level Crossing Risk Model (ALCRM).

As part of this process risk assessors must consider the environment and approaches to a level crossing. ALCRM requires specific data inputs to model risk and this includes specific questions about the approach roads as per our original response.

ALCRM models a number of factors relating to approach roads including; road speed, layout, proximity to junctions, long and straight roads etc. Although there is not a specific algorithm relating solely to alignment of approaches, it is implicit within the process that the risk assessor considers the alignment. ALCRM is a very

complex tool but like all risk models it should not be expected to account for every single element of risk within its calculations.

The risk assessment questions within ALCRM have been designed in a structured way to lead the risk assessor through a logical process to understand the traverse of the crossing as the user would experience it, thus understanding the impact or likelihood of a user driving onto the wrong side of the road while traversing the crossing. Misaligned crossings should be discussed at Road Rail Partnership Groups (RRPGs) with a view to carrying out joint risk assessments with highways authorities as appropriately.