

Oliver Stewart
Senior Executive, RAIB Relationship and
Recommendation Handling

Telephone 020 7282 3864
E-mail oliver.stewart@orr.gsi.gov.uk

15 October 2019



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

Dear Andrew,

RAIB Report: Train passed over Lydney level crossing with crossing barriers raised on 23 March 2011

I write to provide an update¹ on the action taken in respect of recommendation 3 addressed to ORR in the above report, published on 15 December 2011.

The annex to this letter provides details of the action taken regarding the recommendation. The status of recommendation 3 is '**implemented**'.

We do not propose to take any further action in respect of this 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 16 October 2019.

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 that, for both normal and degraded operating modes, signals protecting new and upgraded MCB crossings should return to danger if the crossing barriers are raised significantly above the fully lowered position.

Network Rail should modify its standards and design practice so that signals protecting new MCB level crossings, and signals protecting MCB crossings upgraded in future, always show a stop aspect when the barriers are raised significantly above the fully lowered position.

ORR decision

1. Following the incident on 23 March 2011, Lydney level crossing has been upgraded to an MCB-CCTV level crossing. Changes to the interlocking / approach locking would prevent a similar incident happening.
2. Network Rail have assessed all of the other MCB level crossings on the network to identify any that have a configuration that could lead to a similar incident. They found Lydney was the only one affected in this manner.
3. The relevant signalling design standards (NR/L2/SIG/11201/Mod X22 Issue 2) was updated prior to the Lydney incident and should ensure that the protecting signals will return to red under the conditions described in the Lydney incident.
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 implement it.

Status: Implemented.

Previously reported to RAIB

5. On 24 March 2016 ORR reported that on 1 December 2015 it was informed by Network Rail that after an internal review it had re-opened recommendation 3. An action plan was provided, with a target completion date of 31 December 2017.

Update

6. On 16 December 2018 Network Rail provided a closure statement which included the following summary:

The installation at Lydney level crossing, the subject of the recommendation, has since been modernised and brought up to current standards as a type MCB-CCTV, and no longer has configuration that would lead to a repeat incident. Current standards and requirements effectively manage the risks arising from level crossings operated under degraded working scenarios, all of

which prevent the block interlocking from allowing protecting signals to clear under all of these scenarios. This recommendation may therefore be closed.

Recommendation Intent Satisfied?

The intent of the recommendation is that, under normal and degraded operating modes, signals protecting MCB crossings should return to danger if crossing barriers are raised significantly above the fully lowered position. Current standards and requirements prevent signals from clearing when barriers are not detected in the fully lowered position, and should a degraded working operation be enacted then protecting signals will be replaced. It is concluded that the recommendation intent is satisfied.

Previously reported to RAIB

Recommendation 3

1. I am writing to provide an update 1 on the action taken in respect of recommendation 3 addressed to ORR in the above report, published on 15 December 2011.

The intent of this recommendation is that, for both normal and degraded operating modes, signals protecting new and upgraded MCB crossings should return to danger if the crossing barriers are raised significantly above the fully lowered position .

Network Rail should modify its standards and design practice so that signals protecting new MCB level crossings, and signals protecting MCB crossings upgraded in future, always show a stop aspect when the barriers are raised significantly above the fully lowered position.

2. On 27 November 2012 we reported to RAIB that Network Rail had proposed the non-implementation of this recommendation and that ORR was considering this position. At that time the status of recommendation 3 was 'In progress'.

3. On 1 December 2015 ORR was informed by Network Rail that after an internal review it had re-opened recommendation 3. The following action plan has been provided, with a target completion date of 31 December 2017:

Network Rail will be amending the required controls for signals protecting all MCB type design requirements. The following is the intended control for normal working:

When the "Crossing Clear" function is positively confirmed, or the level crossing is in degraded working and interlocking controls are disabled, and the level crossing barriers are raised above 42 degrees from horizontal, all protecting signals shall be replaced to red.

It will be necessary to carry out further assessment on the requirements for degraded working, though it is likely that the main principles will not be altered since existing requirements for these all ensure that the protecting signals do not clear under these circumstances. While barriers are in a position between 0 and 42 degrees from horizontal, this is in conjunction with the operation of flashing red road lights.

The detailed work required to assess a// the requirements to change the controls will be added to the workbank for change to the relevant Network Rail Standard documents, currently NRIL2/SIG/11201/ModX02, NRIL2/SIG/11201 /ModX21 and NRIL2/SIG/11201 /ModX22. However, it is envisaged that Network Rail will be incorporating the requirement into revised requirements arising from a revised suite of documents that set requirements in documents for level crossing principles and design requirements that will supersede the current Standards.

4. In the light of this information ORR considers that Network Rail is taking action to implement recommendation 3, and that the status of this recommendation is now **'Implementation ongoing'**. ORR will advise RAIB when further information is available regarding actions being taken to address these recommendations.

5. We will publish this response on the ORR website on 31 March 2016.