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OFFICE OF RAIL AND ROAD

8 October 2018

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

Dear Andrew,

RAIB Report: Near-miss at Butterswood level crossing, North Lincolnshire, 25 June 2013

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 16 June 2014.

The annex to this letter provides details of the action taken regarding the recommendation, the status of which is now '**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 becomes inaccurate, in which case I will write to you again.

We will publish this response on the ORR website on 9 October 2018.

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 for Network Rail to be able to identify level crossings that have suffered a power supply failure so that prompt action can be taken to manage the consequences of the failure including consideration of the benefits of recent technological developments that allow remote condition monitoring at reasonable cost.

Network Rail should evaluate the practicality of remote condition monitoring of the power supply system, and key sub-systems whose failure can have the same effect as loss of power supply, at all locally monitored level crossings, so that prompt action can be taken to manage the failure (such as telling train drivers that the crossing has failed and arranging for technical staff to attend the level crossing to investigate the failure).

ORR decision

1. Network Rail have addressed the intent of the recommendation by a different solution. Instead of remote condition monitoring, Network Rail are using existing data loggers at level crossings to alert maintainers when there is a fault. This is seen as a medium-term solution, with a longer-term aspiration to monitor level crossings over intelligent infrastructure. Network Rail have updated the relevant asset policy for CP6 to enable detailed development of this solution and where required other suitable monitoring techniques.

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 11 June 2018 ORR reported that whilst ORR it was is satisfied with Network Rail's proposed approach to implement this recommendation it asked Network Rail to provide an update on progress and a detailed timescale for implementation.

Update

4. Following timescale extensions, Network Rail provided a closure statement on 24 January 2018:

RAIB Butterswood REC 3 Closure Statement

Current condition

The failed state of the level crossing was not indicated to the point of control (signal box, control room or maintainer). Automatic locally controlled level crossings of the type ABCL and AOCL do not have provision for reporting a failed mains power supply to signaller, control room or maintainer. In the event of mains failure, the crossing defaults to degraded operational mode where procedures are in place for safe operation of the crossing. This depends on the correct application of the procedures by the train driver – this is susceptible to human error or mistake.

Risk

1. *Dependency on procedures and susceptible to human error or mistake*
2. *Longer time when the crossing is on back-up supplies – this could have an effect on other ancillary equipment like data loggers which do not have a long battery autonomy.*

Action Plan

SIN 165 was developed and published to survey the current installations to fill in the knowledge gaps in these particular areas:

1. *Power supply system components and configuration*
2. *Signalling circuits and their configuration*
3. *E&P and Signalling interfaces*

A high level strategy to use an already installed data logger to provide alarm signals to maintainer has been developed. The advantage is that it uses installed assets and modifications to the circuits will be minimal. SIN 165 will verify the practicality of this solution for each installation. There is a longer term plan to monitor all level crossings over intelligent infrastructure and this solution gives a quick win and redundancy in at completion of the II project.

Asset policy statement EP 233 has been included in the CP 6 submission to enable detailed development of the above option and where required other suitable monitoring techniques.

Implementation Plan

Action	***Output***	***When***	***Who***
Mandate LX power supply remote monitoring	*Update EP 233*	*Complete*	*NE*
Review options for power supply monitoring	*Strategy to modify and use data logger for power monitoring*	*Complete*	*SM*
Develop practical solution for power supply monitoring	*CP 6 Business case*	*Complete*	*NE*