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OFFICE OF RAIL REGULATION

27 January 2014

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

Dear Carolyn,

RAIB report: Fatal accident at Gipsy Lane footpath crossing, Needham Market, Suffolk

I write to provide an update[1] on the consideration given and action taken in respect of recommendations 2, 3 and 4 addressed to ORR in the above report, published on 18 July 2012.

The annex to this letter provides details of the consideration given/action taken in respect of each recommendation where the status of:

- Recommendation 2 is 'Implementation on-going'. We expect to confirm the actions to address this recommendation have been completed by 1 August 2014.
- Recommendation 3 is 'In –progress'. We expect to update you on progress by 1 August 2014; and
- Recommendation 4 is 'Implemented by alternative means'. We do not propose to take any further action in respect of this recommendation unless we become aware that any of the information provided becomes inaccurate, in which case I will write to you again[2].

We will publish this response on the ORR website on 12 February 2014.

Yours Sincerely

Chris O'Doherty

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

2 In accordance with Regulation 12(2)(c)

Recommendation 2

The intent of this recommendation is for Network Rail to improve the accuracy and consistency of data collected at level crossings during site visits and make certain that any changes to previous data are fully understood.

Network Rail should have effective systems in place for accurate information gathering during data collection visits at level crossings.

Any changes from previous data collected should be clearly understood and feedback given to the relevant person where data is incorrect.

This includes data relating to:

- the number of crossing users where the quick census is undertaken;
- the use of whistle board protected crossings during the night-time quiet period;
- use of the crossing by vulnerable users;
- location of whistle boards;
- crossing length;
- traverse distance; and
- distance from each crossing gate and decision point to the nearest rail.

Brief Summary on what was previously reported to RAIB on 17 July 2013

1. Following this incident, Network Rail had improved its data handling and consistency in the Anglia Route. Network Rail expected further improvement when it restructured the Anglia Route level crossing management in 2013. There was to be 13 Level Crossing Managers and a Route Level Crossing Manager reporting to the Operations Risk Advisor.

2. Network Rail was in the process of appointing Level Crossing Managers. It was expected that all Network Rail Level Crossing Managers would be trained and operational by May 2013.

Update

3. On 28 November 2013, Network Rail advised::

- The Network Rail Recommendation Closure Form; and
- A presentation titled: *NR Response to Gipsy Lane #2*

4. A summary of the process and technological changes to improve the accuracy of data collection are contained in the PowerPoint document 'NR response to Gipsy Lane #2'. Process changes to improve accuracy of data include;

- *a new organisation,*
- *improved training,*
- *stakeholder engagement,*
- *mentoring and new guidance,*
- *Technology changes to improve accuracy of data include;*
  - o *new reporting, system integration,*
  - o *census innovation,*

- *data collection apps,*
- *system changes with mandated fields,*
- *a new customer relationship management system; and*
- *the introduction of narrative risk assessments*

5. Network Rail also provided PowerPoint presentation – *NR response to Gipsy Lane #2*an extract is provided below ‘’

Process Changes to Improve Accuracy of Data Collection - Delivered

- *Person undertaking the risk assessment (level crossing manager) now collects all the data themselves, no longer a fragmented approach with multiple hand off of information.*
- *All Level Crossing Managers have now undertaken 7 days of training specific to data collection and processing the risk assessment (was previously ½ day).*
- *New mentoring framework put into place for Level Crossing Managers - key area is the quality of the risk assessment.*
- *Guidance issued detailing the use of 38 additional sources of information to be used during the risk assessment.*
- *Guidance issued for the best practice for census data collection.*
- *Training & guidance on involving stakeholder in the Risk Assessment to improve accuracy.*

Technology Changes to Improve Accuracy of Data Collection - Delivered

- *Delivery of 3 phases of ALCRM [All Level Crossing Risk Model] enhancements to improves data quality overall.*
- *A report where the Level Crossing Manager would run the report after gathering census data and compare past census captures with their current assessment back in the office to understand if there is a skew in the current data.*
- *ALCRM system to calculate and display warning times and traverse times automatically avoiding the user making a mistake in calculations.*
- *“Are you sure” pop ups have been added to ALCRM to reduce the chance of a Level Crossing Manager entering incorrect data for those questions of high risk or with a high chance of error (exact questions to be confirmed, potential to focus on census focused questions).*
- *24 ALCRM reports delivered to support the management of data quality.*
- ***Risk Assessment Application** - This is essentially an electronic representation of the paper based Risk Assessment questionnaire that is currently used by the Level Crossing Managers and will improve data quality by:*
  - *Providing drop down lists and pre-populated fields to the Risk Assessment, thus reducing the chance of incorrect information being entered during the risk assessment.*

- *Data from the completed assessment will be electronically submitted to the ALCRM system via the use of web services, instead of the manual process that is currently used; thus ensuring the data collected during the assessment, is the data that is entered into ALCRM, and therefore reducing the risk of miss typing information.*
- *Pop- up alerts will also be included in this app thus aiding and ensuring the LCMs enter the correct information.*
- *Free Text fields will also be available for the Level Crossing Managers to make extra notes for the Risk Assessment ensuring any extra information about the level crossing is also captured.*

- *System Integration will deliver capability at a higher level which will assure that data is only mastered in one system; there is no needless data duplication and that existing manual data integrity processes will be automated. This work will enable the business reporting work stream to deliver reporting functionality that uses a consistent high quality data set – a single version of the truth. October 2013.*
- *The CRM project will obviously deliver a more robust mechanism for handling interactions with Authorized Users than the existing spread sheet / email process. September 2013.*
- *Business Reporting –This project will deliver an improvement to current reporting capabilities by providing an integrated reporting capability from the multiple data sources currently used by the Level Crossings Team. Ideally, the data will be mastered in one system thus reducing data duplication and thus having a single version of the truth. This project has a clear interaction with the SI project which will be the key enabler for this type of reporting. November 2013*
- *Mapping of incident data in SMIS to a master LC data set to enable misuse and accident reporting to be correctly allocated and reported. August 2013.*
- *Narrative Risk Assessment project will deliver the ability to auto generate a risk assessment, which can be read as a complete document, to contextualise the component parts of the risk assessment. Side benefit is that it can be used by the Level Crossing Manager to sense check the accuracy and completeness of the assessment.*

6. On 20 December 2013 Network Rail advised ORR that:

The ALCRM Assessment History Report allows users of ALCRM to compare key info available. It is on the Hub and allows the LXM [Level Crossings Manager] to compare the data from previous ALCRM assessment with the one being completed. This was previously very difficult to do because of the way the data was presented. However, this is still not live as data cleansing is required to ensure that the data is of an acceptable quality.

Network Rail expects that that the report will go live end of January / early February [2014].

ORR Decision

7. After reviewing all the information received from Network Rail, ORR 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.

Status: ***Implementation on-going -*** *ORR will confirm that all actions are complete by 1 August 2014.*

Recommendation 3

The intent of this recommendation is for Network Rail to develop guidance for use by the level crossing teams on the circumstances under which short-term mitigation measures are to be implemented at level crossings that have insufficient sighting or warning of approaching trains.

Network Rail should develop its guidance for use by level crossing teams to include:

- a clear definition of what constitutes a 'higher than usual' number of vulnerable users;
- implementing risk-reduction measures at crossings that have deficient sighting or warning times; and
- when speed restrictions must be imposed, what type of speed restriction is to be used (emergency, temporary or permanent) and the timescales for imposing speed restrictions.

Brief Summary on what was previously reported to RAIB on 14 February 2013

… bullet point 1: The National Level Crossing Team was engaged with human factors specialists. Part of their remit was to look specifically at what constitutes a 'higher than usual' number of vulnerable users.

… bullet point 2: Guidance was being produced as part of project (RM05) Interim Risk Mitigation. This project focuses largely on deficient sighting and there is a project manager and support assigned to the work..

… bullet point 3, this was rejected on the basis that it was considered to be extremely difficult to determine exactly when and where it is appropriate to apply speed restrictions; and it should be left to professional/expert judgement at the time.

Work was underway with RSSB to consider [these points] including speed restrictions as a mitigation measure in the Level Crossing Risk Management Toolkit (LXRMTK) It should be noted that speed restrictions can be used in a multitude of scenarios.

Update

8. On 25 November 2013, Network Rail advised that:

Network Rail's National Level Crossing Team is in the process of developing a long term vision which will move Network Rail away from:

- *decision points; and*
- *having separate timings for vulnerable users and non-vulnerable users.*

However, in the short term, to meet the recommendation, Network Rail will develop interim guidance based on the following;

i) What is a vulnerable user? i.e. mobility impaired, encumbered, older people, those with pushchairs and dog walkers. Anyone who takes longer to cross.

ii) What is not a vulnerable user? i.e. cognitive impairment and children. Children are classed as 'at risk' users who don't necessarily understand the implications of using a crossing and risks.

iii) What proportion or percentage do vulnerable users represent of crossing use?

iv) How to calculate this at lightly used level crossings. i.e. what is statistically significant.

9. On 18 December 2013, Network Rail provided ORR with a copy of its interim guidance on vulnerable users (attached).

ORR Decision

10. ORR is challenging Network Rail for justification of the interim 'formula' to be applied to the number of vulnerable users at census that should trigger increased travers times i.e:

- only one in five traverses seen is made by a vulnerable user, the 50% safeguard would not typically be applied;
- two in five is made by a vulnerable user, it is especially important that a risk based decision is made;
- three to five are made by vulnerable users, the 50% safeguard would always be applied

11. ORR is satisfied that Network Rail has addressed Bullet Points 2 and 3 (above), as it has produced and circulated an Interim Risk Management Guidance document (attached).

12. After reviewing all the information received from Network Rail, ORR 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.

ORR will update RAIB on the justification for the interim formula to be applied to the number of vulnerable users at census.

Status: ***In progress*** **-** *ORR will update RAIB by 1 August 2014*

<u>Recommendation 4</u>

The intent of this recommendation is for Network Rail to enhance the cost-benefit analysis function within the ALCRM so that all benefits are properly considered.

Network Rail should combine within the ALCRM, the two different cost-benefit analysis tools currently used by the level crossing risk management teams so that all benefits are properly considered as part of the cost-benefit analysis of risk reduction measures.

Brief Summary on what was previously reported to RAIB on 17 July 2013

Network Rail advised that it now intended to meet the intention of the recommendation by alternative means, by removing CBA from ALCRM and mandating the use of its standalone CBA. This was to be modified to properly model level crossing risk reduction, linking to the RSSB Safety Risk Model.

Update

13. On 28 November 2013, Network Rail provided ORR with a copy of:

- The Network Rail Recommendation Closure Form;
- Level Crossing Guidance Document, LCG 04, Level Crossing Cost Benefit Analysis Assistant User Guide; and
- Level Crossing CBA Assistant briefing slides

14. The closure statement advises that:

Working in collaboration with the Route level crossing teams, an enhanced and simplified cost benefit analysis tool has been implemented which gives the capability for all benefits to be properly considered.

A model office of LCMs [Level Crossing Managers] and subject matter experts was held and the results of the office were incorporated into the scope for the changes to the CBA model. The ALCRM CBA functionality was removed so that only one method remained and this method is contained in the Network Rail safety-related CBA tool (Level Crossing Cost Benefit Analysis Assistant).

Note: ALCRM does use the Value to Prevent Fatality figure [VPF], 2006/7. It is noted that the score produced by ALCRM's CBA calculations can be skewed as it does not allow for monetary inflation. The VPF figure will be updated during the changes and a plan will be created to update the figure annually.

ORR Decision

15. The single CBA which sits outside of ALCRM is now being used by level crossing managers. This addresses the recommendation by alternative means.

16. The Value per Fatality in the CBA has been updated to £1,748,000, as recommended by RSSB.

17. After reviewing all the information received from Network Rail, ORR 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.

ORR will write to RAIB again if it becomes aware that the information above is inaccurate.

Status: *Implemented* *by alternative means*