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Mr Andrew Hall  
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Hampshire GU11 2HP

Dear Andrew,

**RAIB Report: Dangerous occurrence involving track workers, near Roydon station, Essex**

I write to provide an update<sup>1</sup> on the action taken in respect of recommendation 1 addressed to ORR in the above report, published on 27 June 2013.

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

We will publish this response on the ORR website on 16 October 2015.

Yours sincerely,

**Andrew Eyles**

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

## Recommendation 1

*The intent of this recommendation is to improve the means by which controllers of site safety assess both the required and available sighting distance at sites of work.*

Network Rail should review, and then improve as appropriate, the methods by which controllers of site safety [COSS] assess both the required and the available sighting distance when at sites of work. The review should include:

- The accuracy, availability and presentation of information concerning the available sighting distances at sites of work (particularly in those areas where sighting is limited, or too short to permit a sufficient warning from one or more lookouts);
- Identification of recommended methods of assessing sighting distance when on site (including the use of special equipment); and
- The adequacy of existing training and assessments of competence related to the assessment of sighting.

## Brief Summary on what was previously reported to RAIB on 13 October 2014

1. ORR reported Network Rail's view that although most the intent of this recommendation had been implemented through the Lookout e-learning which went live on 7 July 2013, there were options for reinstating line side milepost markers. Work was to be undertaken to test feasibility of infrastructure changes with the Routes.

### Update

2. On 11 May 2015 Network Rail provided ORR with the following closure statement:

*The track training review group held on the 6 August 2013 which included a safety improvement specialist, industry track safety trainers/training managers, a training delivery specialist and trackside safety specialist reviewed the different options available to the COSS for assessing sighting distances.*

*The accuracy and availability of sighting distances needs to be measured when on sight, as vegetation and weather conditions can affect the distance the Lookout can clearly see. Areas where it is not possible to use lookouts are already captured and identified in the hazard directory.*

*The review group identified all possible methods of calculating sighting distance, ranking them on their accuracy and availability. It was considered that the use of range finders, using fixed assets and pacing the distance were suitable methods. It was identified that improvement of provision of mile posts may assist calculating sighting distances, however following a paper circulated to Route Asset Managers in March 2015*

*[attached at Annex B], it was established that mile posts are generally replaced and maintained and that with the introduction of GPS location tools it would be not be cost effective relative to the safety benefits to consider maintenance and replacement over and above current levels.*

*As a result of these findings, the June 2014 COSS training material was updated to reflect the recommended methods of calculating sighting distances.*



Roydon 1 -Extract  
from Training - COSS.

*In addition, it was also considered that making the lookout aware of how to calculate sighting distances would enable to Lookout to challenge the COSS if they did not feel that the calculation or available sighting distance was correct. As a result, updates were made to the Lookout training material in June 2014 which included part of the COSS training course on how to calculate and measure sighting distances as well as slides on how to challenge the COSS.*

*Furthermore, it was considered that it would be beneficial to help staff understand the limitations of the human perception of distance. This resulted in exercises being developed as part of the Lookout eLearning 'Be Aware Stay Safe' to make Lookout aware that their estimates of sighting distance can be inaccurate. As the majority of COSS holders also hold Lookout competence they will also benefit from the eLearning regarding sighting distances.*

### **ORR Decision**

3. The methods by which sighting distances can be measured are now clearly described in Network Rail training material. Further, the scope of the training has been widened to encourage lookouts to challenge COSS sighting decisions. These enhancements are carried forward in Network Rail's Planning and Delivery of Safe Work (PDSW) programme, which is currently operating in East Midlands prior to full national implementation.
4. As to the desirability of working red zone with lookout, both the 019 and the PDSW systems make this the last choice. With increased awareness of risk and the development of alternative warning systems, ORR expects the use of lookouts to decline into the medium term.
5. This recommendation deals with matters which existing and new processes are designed, and should be able, to cover. The refinements made are positive and should help. The recommendation has served its purpose, we believe, and on-going performance should be maintained through compliance with established law.
6. After reviewing information received, ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail;

- taken the recommendation into consideration; and
- taken action to implement it

***Status: Implemented.***

## **Network Rail Route Asset Manager – Mile Posts**

### **1. Introduction**

The purpose of this document is to highlight the actions that came out of a review that took place following the RAIB recommendations into a dangerous occurrence involving track workers near Roydon station Essex, specifically in relation to the use of mileposts to calculate available sighting distances.

### **2. Background**

The RAIB Investigation following the incident that occurred at Roydon in July 2012 (where a group of track workers had only two seconds to clear line before a train passed them) uncovered the fact that the required sighting distance the Lookout needed in order to provide sufficient warning at that location was not available. The COSS had assessed the sighting distance available to the Lookout to be at least 700m when there was in fact only 350m.

One of the subsequent recommendations from RAIB was that Network Rail should review and improve the means by which Controllers of Site Safety assessed the required and available sighting distances.

A review took place to consider the most appropriate means of assessing available sighting distances. To date these have included improved training on distance perception for Lookouts and COSSes, enhanced training for Lookouts which includes the ability to challenge the COSS on position and sighting distance and use of range finders. The review also pointed to the use of mileposts as an accurate means of assessing sighting distance, but noted that in many cases after large scale enhancement works, they are not replaced and where mile posts are in place they are not always clearly visible.

### **3. Current Issue**

Mile posts are considered to be a useful tool in the assessment of available sighting distances for Lookouts and COSSes when setting up a safe system of work. By enabling the COSS to accurately check that the required sighting distance is available, they will be able to place the Lookout in the correct position to give sufficient warning to track workers to clear the line in time for approaching trains.

It is also considered that where mile posts are in place, they would assist individuals placing possession protection (worksite marker boards, straps and detonators) more accurately, and consequently reduce the number of incidents involving protection placed in the wrong location.

It is noted that mile posts are not always in place or clearly visible in all locations. The Route Asset Managers are responsible for the installation and maintenance of mile posts on their Route, and hold the budget and ultimately the decision making responsibility for installing and maintaining mile posts.

#### **4. Actions Required**

Route Asset Managers are asked to REVIEW the availability and visibility of mile posts on their Routes and CONSIDER where improvements might be made in light of the safety benefits outlined in this paper. They are then asked to write a brief response to Louise Baldwin outlining any actions being taken as a result of these considerations.