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

Dear Andrew,

RAIB Report: Derailment of a tram at East Croydon, 17 February 2012

I write to provide an update¹ on the action taken in respect of recommendations 1 and 2 addressed to ORR in the above report, published on 28 March 2013.

The annex to this letter provides details of the action taken regarding recommendation 1 and 2. The status of recommendation 1 is '**implemented by other means**'. The status of recommendation 2 is now '**Implemented**'. We do not propose to take any further action in respect of either 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 4 December 2015.

Yours sincerely,

Oliver Stewart

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

Recommendation 1

The intention of this recommendation is to promote a review of the signalling and operational arrangements at East Croydon and to take any action needed to make them fit for purpose.

London Tramlink should review the operational and signalling arrangements at East Croydon to consider whether undue reliance is being placed on the correct operation of track circuits. If found necessary:

- additional measures to alert tram drivers to the stopping position in platforms should be provided; and/or
- the signalling and/ or point control arrangements should be modified.

ORR decision

1. Atkins were commissioned by London Tramlink to review the signalling at East Croydon and recommended a significant signal redesign. Pending this work proceeding as part of other major works planned for the East Croydon area, as an interim measure London Tramlink have electrically isolated the points at East Croydon, to ensure that the centre platform remains out of use. The points are not being used in normal operations and are in position to bring trams into platform 3. The points can only be moved by manual intervention. By doing this London Tramlink have removed the risk of the operational circumstances that lead to the derailment being able to happen again.

2. ORR in reviewing the response provided by London Tramlink has concluded that in accordance with the Railway (Accident Investigation and Reporting) Regulations 2005, it has:

- taken the recommendation into consideration; and
- has considered long term solutions to address the risk and taken action address it by alternative means in the short term

Status: Implemented by other means

Previously reported to RAIB on 29 January 2014

3. We previously reported that Lloyds Register, on behalf of London Tramlink were carrying out a review of the operational and signalling requirements at East Croydon.

Update

4. On 26 January 2014 London Tramlink provided a copy of the Lloyds Register report and a review of the options to reinstate automatic route settings at East Croydon. The next stages are:

The final solution is a combination of recommendations which our Chief Engineer is pulling together into a mods submission (for February meeting) but in brief they are:

- *The installation of stop lines for both vehicles at all platforms at East Croydon*

- *The introduction of an additional reset loop after ECR 06 & ECR03 to allow for better detection/clear of stored demand*
- *A change to the logic of the mode A to remove the use of route codes to direct trams into platform 1 and 2*

The time frame for all works will be roughly 5 months as Thales will need to re-write some software for bullets 2 and 3 above but we will look to install stop lines within the next month.

5. On 10 September 2015, London Tramlink wrote to ORR to report that until work can be carried out to implement the engineering solution identified, the points at the location remain secured and isolated, putting the centre platform at East Croydon out of use. The circumstances that led to the incident could not arise now.

6. The longer term engineering solution to resignal East Croydon will form part of a wider redevelopment of the station and surrounding area.

Recommendation 2

The intention of this recommendation is to reduce the risk of rail head contamination affecting the correct operation of track circuits. This should include inspections immediately after events which could lead to accumulation of silt.

London Tramlink should identify areas of paved track where silt collects and instigate an improved inspection and cleaning regime where such silt may affect the safe operation of the tramway system.

ORR decision

7. ORR is satisfied that London Tramlink has taken appropriate action to address the risk identified in the recommendation. ORR in reviewing the response provided by London Tramlink has concluded that in accordance with the Railway (Accident Investigation and Reporting) Regulations 2005, it has:

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

Status: Implemented

Previously reported on 29 January 2014

8. We previously reported that AECOM were undertaking a desktop study of the East Croydon/Cherry Orchard Road area to review topography, low spots etc. They had obtained topographical survey data and were in a position to review this in conjunction with the CCTV survey carried out by Enterprise Mouchel earlier this year.

Update

9. On 26 January 2014 London Tramlink provided a copy of the AECOM drainage report and the town centre drainage survey the following update. The next stages are:

The drainage surveys have been completed for the entire town centre. This survey and the as built information was used by AECOM to carry out a review of the existing layout and issues with a view to improving the overall drainage in the location of ECR06. The report's recommendations are for some additional drainage channels on the track and the cleaning regime enhancements which are now in place. The plan is to use the town centre closures this summer to undertake the work.

10. On 10 September 2015, London Tramlink provided a further update:

London Tramlink has identified areas of paved track where silt collects. As mitigation we've increased our cleaning and inspection regime. Every two weeks the cross drains and track grooves are cleaned by London Tramlink engineering staff.