AGENDA ITEM 7

TRANSPORT FOR LONDON

SAFETY, HEALTH AND ENVIRONMENT ASSURANCE COMMITTEE

SUBJECT: SIGNAL PASSED AT DANGER PERFORMANCE ON THE EAST LONDON LINE

DATE: 1 DECEMBER 2010

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1 PURPOSE AND DECISION REQUIRED

1.1 This report is to inform the Committee on Signal Passed at Danger (SPAD) performance on the East London Line (ELL) since the opening. A description of the events, how they have been managed and what further action is being considered is provided.

1.2 The Committee is asked to note the paper and the actions being taken.

2 BACKGROUND

2.1 There have been four SPADs to date on the ELL. All of these occurred in the period from the 27 April to 17 June 2010, since when there has been none.

2.2 The level of SPADs on London Overground is better than the comparable train operating companies operating in a similar suburban context, both in absolute and normalised numbers. LOROL drivers on the ELL also pass more signals per kilometre travelled than most comparable lines.

2.3 London Overground conducted what is believed to be the largest recruitment and training programme of staff ever undertaken by the rail industry in such a timescale. To deliver and achieve this level of competent staff is seen as a major success.

2.4 There is a well known set of patterns where the risk for drivers having a SPAD is higher. This includes the period at about four months after qualification and then again after two years. There were no signs of these patterns occurring in these incidents, which did not occur at these intervals for any of the drivers who had a SPAD.

Status of SPAD events on ELL since opening

2.5 Since opening there have been four instances of signals passed at danger on the ELL.

(a) EL205 (27 April 2010) – In this incident, the LOROL driver came to a stop 20 metres past the signal. The incident was ranked medium risk because the train ran into the overlap past Dalston Junction platform end, into which other trains could have been signalled, although there were no other trains in the area at the time. A formal inquiry has been completed and a report and recommendations issued.

(b) EL234 (29 May 2010) – In this incident, the LOROL driver overran the signal by a distance of 44 metres. The incident was ranked low risk given the geography at this signal. A local inquiry has been completed and root causes identified.

(c) EL3037 (5 June 2010) – In this incident, the driver was a Bombardier depot employee. The train overran the signal by a distance 25 metres within the depot boundaries. The incident was ranked low risk. A formal inquiry has been completed and recommendations issued. The recommendations will be actioned by Bombardier.

(d) EL290 (17 June 2010) – In this incident the LOROL driver came to a stop 21 metres past the signal. The incident was ranked low risk. LOROL convened and concluded a local inquiry into the root causes of the SPAD.

Follow up actions

2.6 Following the first SPAD at EL205, London Overground examined the Signalling Overrun Risk Assessment (SORA) for all signals along the ELL to determine if further action was required. The review concluded that there are further issues at EL205 and EL207, with changes to the signals being progressed through normal change procedures. The EL205 report recommended changes to locations of the Train Protection and Warning System (TPWS) antennae to mitigate further the SPAD risk. Pending these modifications, a warning notice is displayed for the drivers at their booking on point.

2.7 In summer 2010, LOROL carried out an external review of its training and competency processes in the light of the driving experiences on the ELL. A contractor undertook this work and concluded that there was a well managed and effective framework. The training programme was given '....a clean bill of health'.

2.8 Following the fourth SPAD, London Overground commissioned its technical adviser to undertake a thorough review of the signalling design and installation following these incidents.

2.9 London Overground's technical adviser's report, 'Review of Signalling Principles Following Signals Passed at Danger on London Overground Maintained Infrastructure' (RFS0067), concluded:

(a) '... that the signalling on the East London Railway has been developed and designed in accordance with the signalling principles and practice as set out in Railway Group and Network Rail Company Standards and appears to have been subject to Technical Approval in accordance with NR/L2/SIG/30035. There are no generic features of the application and interpretation of these standards, or any overall derogations or non-compliances that would directly result in the SPAD risk on this infrastructure being higher than elsewhere.

(b) ‘Using information supplied by TfL, the adviser has reviewed all signals recently passed at danger on London Overground Managed Infrastructure (LOMI) to determine if the LOMI signalling principles are a factor. No SPAD causation factors have been identified that are directly attributable to signalling principles and design decisions at these specific signals.’

2.10 In seeking to explore further what can be learnt from other railways, two meetings have occurred. First, London Overground Operations, Heathrow Express (HEX) and LOROL have met to learn what HEX did following a series of significant SPADs that it experienced on its railway. This joint meeting highlighted a number of initiatives, which LOROL is now developing for application in the London Overground context. The second meeting was with East Midlands Trains that highlighted industry best practice in dealing with multiple SPADs occurring in a TOC in a short space of time. This has also lead to lessons which will be transferred to the LOROL operations.

3 COMMENTARY

3.1 There are some important factors that place these events in context:

(a) Both London Overground and LOROL accept that they should seek to achieve a zero rate of SPADs.

(b) One of the SPADs (EL3037) was not caused by a LOROL driver but a Bombardier Transport UK shunter moving a train in the depot. The issue of Bombardier staff competence is being looked at further. The position and visibility of EL3037 is also being reviewed, as are the stopping distances, although as the London Overground’s technical adviser’s report makes clear, they are to standard.

(c) The analysis by London Overground’s technical adviser found that there was a read-through risk at EL205 due to the close spacing of signals ahead and problematic sighting at EL234 due to track curvature. Both risk causes may be mitigated by replacement of the existing long-range colour light signals (these have a beam spread of 12.5^{o}) with close-range colour light signals (with a beam spread of 3^{o}); this is currently being considered.

(d) A less significant factor, but worthy of further consideration, is the positioning of signal post telephones at approximately 20m from a signal, including right-hand positioned signals. Drivers may use these (wrongly) as stop point markers. This is also to be considered.

4 CONCLUSION

4.1 Both LOROL and London Overground are committed to achieving zero SPADs. After the first three months in which these incidents occurred, there have been no SPADS, a performance seen as being much better. Not withstanding the independent reports indicating that the design and installation of signals and the training of drivers was sound, London Rail will continue to seek further improvements, including implementing the lessons from the HEX and East Midlands studies.

5 RECOMMENDATION

5.1 The Committee is asked to NOTE the paper and the action being taken.

6 CONTACT

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