

RAIB Bulletin 01/2012

Track worker struck by a passing train near North Kent East Junction, 2 February 2012

Description of the accident

- 1 At approximately 13:05 hrs on Thursday 2 February 2012, train 2N36, the 12:56 hrs service from Charing Cross to Gravesend, operated by the Southeastern train operating company, struck equipment being carried by a member of a work gang who was standing close to the line. The impact pushed the person forward and he suffered minor injuries as a consequence.

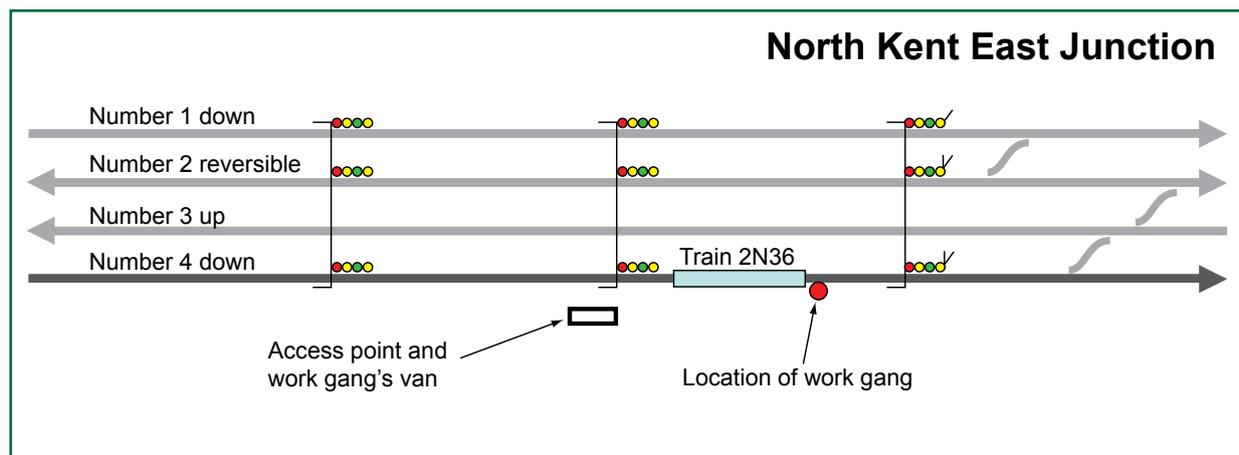


Figure 1: Simplified layout of the approach to North Kent East Junction showing the location of the work gang, and the approach of train 2N36 (not to scale).

Sequence of events

- 2 On the morning of the incident, a work gang, comprising a section manager and a supervisor (both employed by Network Rail) and a lookout¹ (supplied by McGinley Support Services) was carrying out a series of rail weld inspections at three separate locations in South London. Following their first site visit at Spa Road, the work gang travelled in their van 2.5 miles to an access point known as Bricklayers Arms, near to North Kent East Junction.

¹ A member of staff whose sole responsibility is to look out for and warn of approaching trains.

- 3 Before commencing the weld inspections near to North Kent East Junction, the section manager assumed the role of controller of site safety² (COSS) and briefed the other two members of the work gang on the safety arrangements. The inspections were to be undertaken on two rail welds located on number 4 down line (figure 1). The COSS instructed the lookout to stand about 15 metres from the location of the rail welds and to sound the warning horn if any trains approached along number 4 down line. The COSS was responsible for developing a safe system of work and implementing it on site, as permitted by the railway rule book. The signaller did not therefore need to be aware of the presence of the work gang and was able to signal trains normally to run over number 4 down line.
- 4 The two rail weld inspections were undertaken by the supervisor with the assistance of the COSS and took between 15 and 25 minutes to complete. During that time no trains ran on number 4 down line.
- 5 When the two rail weld inspections were complete, the COSS and supervisor moved into the cess and began to discuss the inspections that they had to undertake at the next location at Honor Oak Park. The cess is an area adjacent to the railway tracks. It does not always provide a safe place to stand clear of passing trains. The lookout realised the rail weld inspections had been completed and walked over to the COSS and supervisor. He positioned himself with his back to the direction from which trains would approach along number 4 down line. His equipment bag was hanging on the lookout flag poles that he was holding over his left shoulder (figure 2).



Figure 2: Forward facing CCTV image from train 2N36. The lookout has his back to the approaching train. The COSS is positioned to the right of the lookout. The supervisor is just beyond the COSS and cannot be seen in this image.

² A COSS is responsible for setting up, managing and briefing safe systems of work when that work is to take place on or near the line.

- 6 The driver of train 2N36 first saw the work gang when the train was about 500 metres from them. The on train data recorder (OTDR) recorded that the warning horn was sounded around this time with the train speed around 34 mph (55 km/h).
- 7 When the train was about 130 metres from the work gang the driver sounded the warning horn again because he could see they were close to the line the train was approaching on. The driver thought he saw one of the work gang acknowledge this second warning (the CCTV replay from the train captured the white helmet of the supervisor briefly appearing between the COSS and lookout), so he continued towards North Kent East Junction believing the work gang was in a position of safety relative to the train.
- 8 None of the work gang could recall hearing the warning horn from train 2N36. They were oblivious to the approaching train until it passed them by and the lookout fell to the ground. The driver of train 2N36 heard a noise as the train passed the work gang and immediately applied the train's emergency brakes. The train speed at this point was around 40 mph (64 km/h). When the train stopped, the driver contacted the signaller to report the accident.

RAIB investigation

- 9 The findings from the RAIB's investigation are:
 - The work gang became distracted when the rail weld inspections were complete – the COSS did not maintain the safe system of work and the lookout ceased to operate in that role.
 - The COSS and supervisor, although clear of the approaching train, were not in a position of safety. A position of safety is defined (in rule book module G1, section 6 (www.rgsonline.co.uk)) as at least 1.25 metres from the nearest rail, where the maximum permitted speed is less than 100 mph (161 km/h), as was the case at this location.
 - When the lookout stood adjacent to the COSS the flag poles that he was carrying over his left shoulder were close enough to the approaching train to be struck by it as it passed.
 - The train driver believed the work gang had acknowledged his train's approach and were therefore aware of the presence of the train.

Learning points

- 10 The RAIB has decided not to conduct a full investigation as it does not believe that it would lead to the identification of any significant new lessons that would improve the safety of the railways. The RAIB believes this incident highlights the importance of the following matters:

Infrastructure workers

- when work on or near the line has been completed, staff must ensure that they move to a designated position of safety, clear of any lines open to traffic;
- when acting as a COSS you must remain vigilant with regard to the safe system of work that you have set up and maintain it for as long as is necessary to secure the safety of the gang; and
- when acting as a lookout, you must only cease undertaking those duties on receiving a positive instruction from the COSS that you are no longer required to act in that role.

Train drivers

- It is sometimes difficult to tell if staff are in a position of safety relative to your approaching train, particularly from a distance or where you are approaching on a curve. If you are in any doubt whether people are in a position of safety, or you have not seen a definite acknowledgement of your train's warning horn, you must sound a series of short, urgent danger warnings using the warning horn, as described in the railway rule book module TW1, section 10.2c.

This issue was identified by the RAIB in its investigation of a fatal accident at Whitehall West Junction, Leeds on 2 December 2009³ and highlighted to drivers in the March 2011 edition of the 'Red Alert' trade publication. Southeastern advises that it provides copies of 'Red Alert' to its drivers and briefs them on relevant findings from RAIB investigations.

³ RAIB report 15/2010 available at www.raib.gov.uk

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