RAIB
Rail Accident Investigation Branch

Near miss with track workers at Paddington, London, 18 July 2022

Important safety messages

This incident demonstrates the importance of:

- Persons in Charge and Controllers of Site Safety ensuring that deviations from planned safe systems of work are authorised by the responsible manager
- Controllers of Site Safety always remaining with their work group while they are on or near the line to ensure they can personally observe and monitor them
- railway staff challenging unsafe work practices
- safety-critical staff complying with their employer's drug and alcohol policies.

Summary of the incident

At around 01:17 hrs on 18 July 2022, a passenger train entering London Paddington station while travelling at 24 mph (39 km/h) narrowly missed two track workers. The two track workers were walking very close to the line that the train was travelling on and with their backs to the approaching train. In response to the train's second audible warning, they acknowledged its approach and moved clear of the train's path between one and two seconds before it reached their location.

The two track workers were part of a four-person Network Rail team who were maintaining signalling and telecommunications (S&T) equipment between Paddington station and a point 63 chains (0.8 miles or 1.3 km) west of the station. The team was led by a Person in Charge (PIC, the person with overall accountability for supervising and overseeing safe implementation of the work). The PIC was also fulfilling the role of Controller of Site Safety (COSS, the person responsible for establishing and maintaining a safe system of work which ensures that track workers are protected from train movements). Three other members of the group carried out the work, including the two staff involved in the near miss.

Forward-facing CCTV showing the two track workers moving clear of the train (courtesy of Great Western Railway).

One of the two track workers involved in the near miss was inexperienced and consequently required to wear a blue helmet while working on or near the line. Inexperienced track workers receive support and mentorship until they can display the appropriate knowledge, skills and behaviours required to work safely.

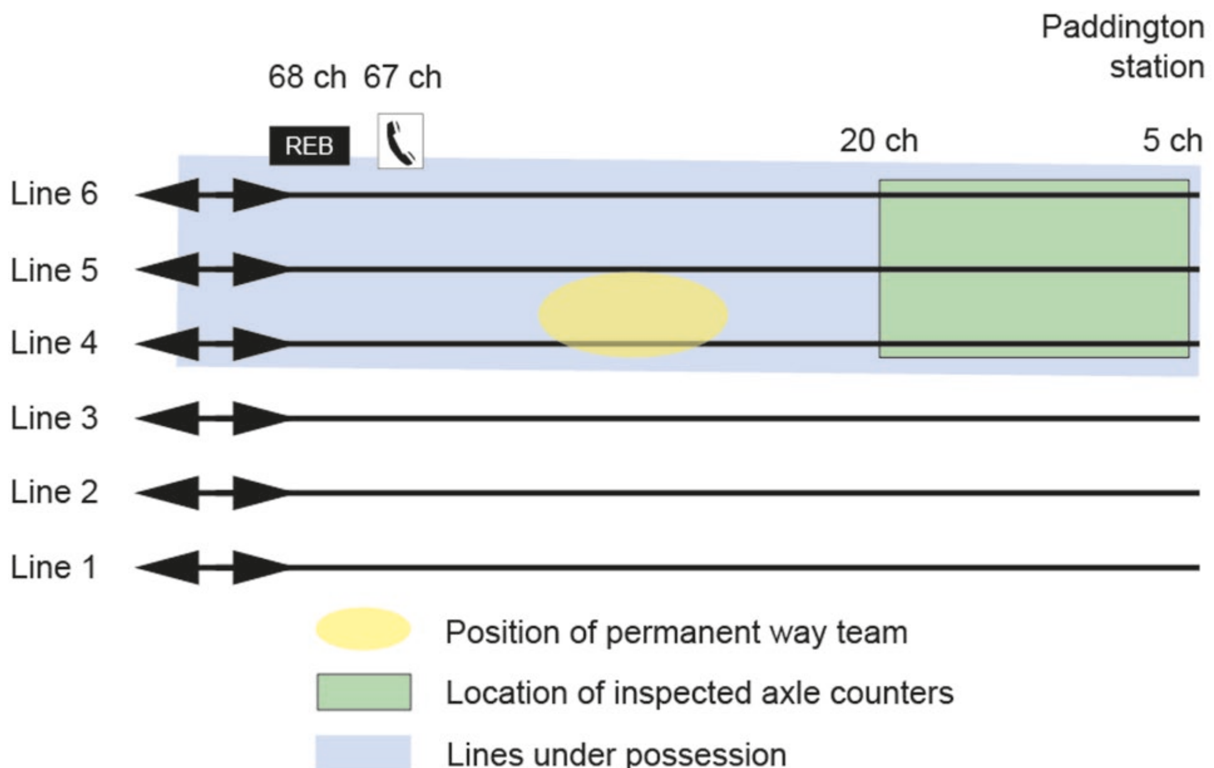
Cause of the incident

This incident occurred because the two track workers had moved away from lines that were blocked to railway traffic and were walking very close to an open line. This was a result of the PIC, while also acting as COSS, not adequately planning the work or supervising the group while they were working on the track. Members of the group did not challenge the unsafe nature of the system of work established by the PIC or the unsafe behaviours of members of the group.

Two S&T teams had originally intended to access the track near Paddington station under a possession (where the railway is blocked to service trains so that engineering work can be carried out). However, when the two teams met at a depot near Paddington station at around 18:00 hrs on 17 July, they decided that staff shortages meant that they would need to work as a single S&T team under one of the two PICs previously assigned to the teams.

The S&T team had over six hours to prepare before starting work, but did not consider if the work previously assigned to the two teams could be completed safely with the remaining staff available and in accordance with the planned safe systems of work. Neither of the PICs responsible for the two original teams informed the manager who had previously approved their safe systems of work (the responsible manager) of the planned change in activity. The PIC/COSS responsible for the new single team also did not update the information contained within the relevant safe work packs (used to document the safe system of work). This is required by Network Rail procedures (specifically standards NR/L2/OHS/019 issue 10 dated 5 December 2020 'Safety of people at work on or near the line').

At around 00:35 hrs on 18 July, the S&T team entered the track from platform 10 at Paddington station and inspected axle counters on lines 4, 5 and 6, up to 15 chains (0.2 miles or 0.3 km) west of the station. This was the maintenance work originally assigned to the first of the two S&T teams. The work was undertaken within a separated safe system of work. This was arranged with the lines the team were working on (lines 4, 5 and 6) blocked under the possession but with the adjacent lines (1, 2 and 3) open to traffic.



Track layout and features of interest (not to scale and not all features shown).

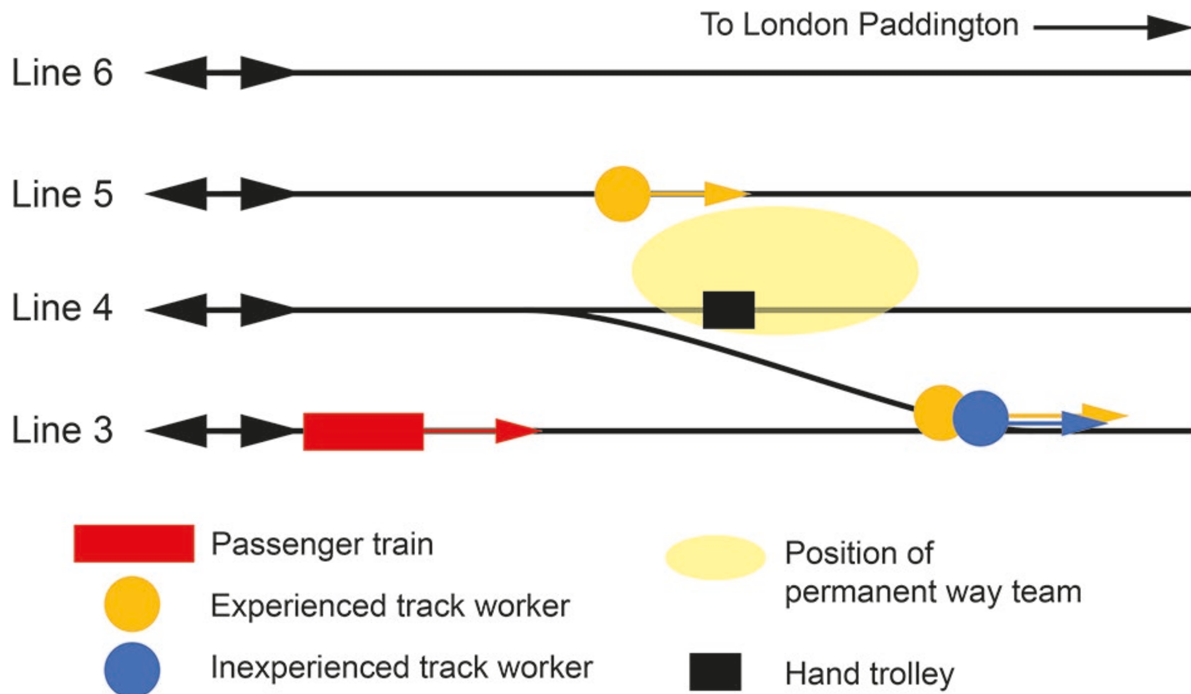
As part of a separated safe system of work, a site warden is appointed to warn other team members if they attempt to move into an unsafe area (within two metres of an open line). This meant that members of the S&T team were not permitted to step into the six-foot (the space between two adjacent tracks) which separated line 4 (which was blocked to traffic, along with lines 5 and 6) and line 3 (which was open). If they had attempted to do so, they should have received a warning from the site warden to alert them of the need to return to the safe area.

The PIC/COSS for the team appointed himself as the site warden. Handbook 7 of the Rule Book (GERT8000-HB7, 'General duties of a controller of site safety', issue 6, dated September 2019) states that 'If you act as a site warden, you must take no part in the actual work'. A frequently asked questions supplement to NR/L2/OHS/019 makes it clear that being a PIC constitutes taking part in actual work. This means that the PIC/COSS was prohibited from working as a site warden by the requirements of the Rule Book and the relevant Network Rail standard.

The team completed the axle counter inspection at 00:50 hrs. As this was earlier than had been planned, the PIC/COSS decided there was also time to complete the maintenance work previously assigned to the second S&T team. The team walked to a signal post telephone located 62 chains (0.8 miles or 1.2 km) from Paddington station, where the PIC/COSS instructed three members of the team to inspect the telephone and then walk back to Paddington station independently. While they did this, the PIC/COSS planned to inspect paperwork in a railway equipment building (REB) 20 metres further west and then to take a personal needs break before walking back to Paddington station to rejoin the team.

The PIC/COSS's instructions meant he was no longer effectively fulfilling the role of COSS as this required him to stay with the group. Although the three track workers going to inspect the signal post telephone included a qualified COSS and site warden, the PIC/COSS did not appoint anyone to take over these roles from him once he left the group. The other members of the group did not challenge this unsafe method of working, although the two experienced members of the group had the required knowledge and experience to know that it was unsafe and did not comply with the relevant rules.

After the PIC/COSS had left them, the three members of the group completed the maintenance of the signal post telephone and began walking back towards Paddington station. One track worker walked in the four-foot (the space between the rails) of line 5, while the other two walked in the four-foot of line 4, as they found that underfoot conditions were better there. Around 47 chains (0.6 miles or 1.0 km) from Paddington station, the group encountered a six-person permanent way team who were also working in the possession and who had placed a hand trolley on line 4. At this point, the inexperienced track worker (wearing a blue helmet) was walking in front of the more experienced members of the team. One of these team members was close behind him on line 4 and the other was around 20 metres behind, on line 5.



Track layout (not to scale and not all features shown).

As the two track workers on line 4 approached the trolley, they stepped out into the crossover between lines 4 and 3. The inexperienced track worker stated that he was aware that line 3 was open to approaching traffic but had decided to walk between the lines because it was an easier route. The experienced track worker reported that he had inadvertently followed the inexperienced worker due to a loss of concentration. Both workers continued to walk in the crossover for around 10 metres unaware that 2P97 was now approaching on line 3. It is unclear why the track workers continued to walk in the crossover after passing the trolley, rather than returning to the lines which had been blocked.

On-train data recorder evidence and forward-facing CCTV images from train 2P97 show the train approaching Paddington station at around 01:17 hrs. Both the S&T and permanent way teams were obscured from the driver's view until around 24 seconds before the train reached their location. This was because the train was approaching the teams on a curve. Four seconds after the track workers were first visible to the driver, he sounded the train's horn to warn of the train's approach while travelling at 36 mph (58 km/h). Five seconds before the near miss occurred, and while the train was travelling at 32 mph (52 km/h), the driver sounded the horn again. He then made an emergency brake application one second later.

The driver stated that he initially believed that all track workers were on line 4 but as the train approached, he realised that two of the track workers were extremely close to line 3. The curvature of the track, the dark conditions and the reflection of the train's headlights on a number of people wearing high-visibility clothing would almost certainly have made it more difficult for the driver to distinguish the two track workers walking close to line 3 from the larger group of track workers situated on the blocked lines.

It is unclear why the two track workers did not move out of the path of the train when the driver sounded the first warning. At the point where the driver sounded the second warning, the more experienced track worker had just stepped into the four-foot of line 3, suggesting that he was unaware of the danger from the approaching train. When the second warning horn sounded, both track workers immediately acknowledged the approaching train and moved clear of the train's swept path.

The near miss was immediately reported by the train driver and the track workers. In accordance with Network Rail's drugs and alcohol policy at the time of the near miss (NR/L1/OHS/051, dated March 2016), all four members of the S&T team were tested for the presence of drugs and alcohol. Three returned a negative result, however, the inexperienced track worker tested positive for a recreational drug.

Previous similar occurrences

There have been many similar incidents investigated by RAIB. Notably similar examples include:

- RAIB safety digest 02/2022 describes how, on 14 January 2022, a passenger train travelling at 95 mph (153 km/h) narrowly missed two track workers and struck a tree that they had felled, at Uphill Junction, Somerset. The tree's position meant that a site warden should have been used but the COSS had stood down the group's site warden before the tree was cut down.
- RAIB safety digest 05/2021 describes how, on 22 July 2021, an empty passenger train travelling at 69 mph (111 km/h) narrowly missed two track workers who were working close to the edge of a platform at Eccles station, Greater Manchester. The track workers were working under a line blockage that had been taken by a COSS. When handing back the line blockage, the COSS stated to the signaller that all staff were clear of the line despite not having told the track workers to move to a position of safety or being in a position to personally observe them.
- RAIB safety digest 18/2017 describes how, on 18 September 2017, a passenger train travelling at 125 mph (200 km/h) encountered three track workers on Dutton Viaduct, Cheshire. The last of the workers moved clear of the track less than half a second before the train passed. The track workers had accessed the track in an unplanned way and were working outside their planned safe system of work.

- RAIB report 21/2013 describes how, on 4 December 2012, a passenger train struck and fatally injured a track worker (fulfilling the role of COSS) at Saxilby, Lincolnshire. A group of five track workers had been working under a line blockage with an adjacent line open to traffic. Before the accident (during an initial line blockage), the COSS had implemented a separated safe system of work and appointed himself as the site warden. During a second line blockage, the COSS had not implemented a safe system of work and was struck by a train while working in the six-foot between the two lines. None of the other track workers challenged the absence of a safe system of work or the actions of the COSS.

A wider summary of previous RAIB learning, including further similar incidents relating to the protection of track workers from moving trains, can be found on RAIB's website.