



Rail Accident Investigation Branch

Serious Irregularity at Cardiff East Junction

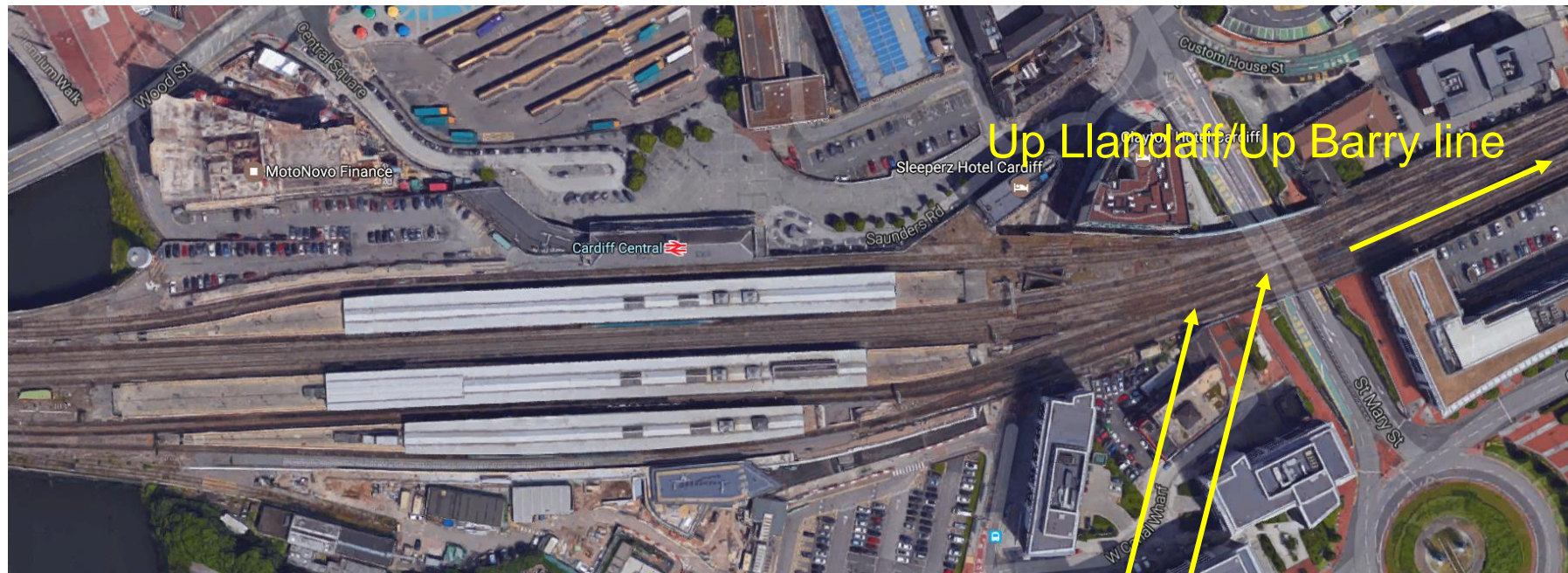
Investigation Seminar - Birmingham

Rowan Joachim (Lead Inspector)

Presented by Mark Young

13 November 2019

Photo of area of incident



From Google Earth

817A

817B

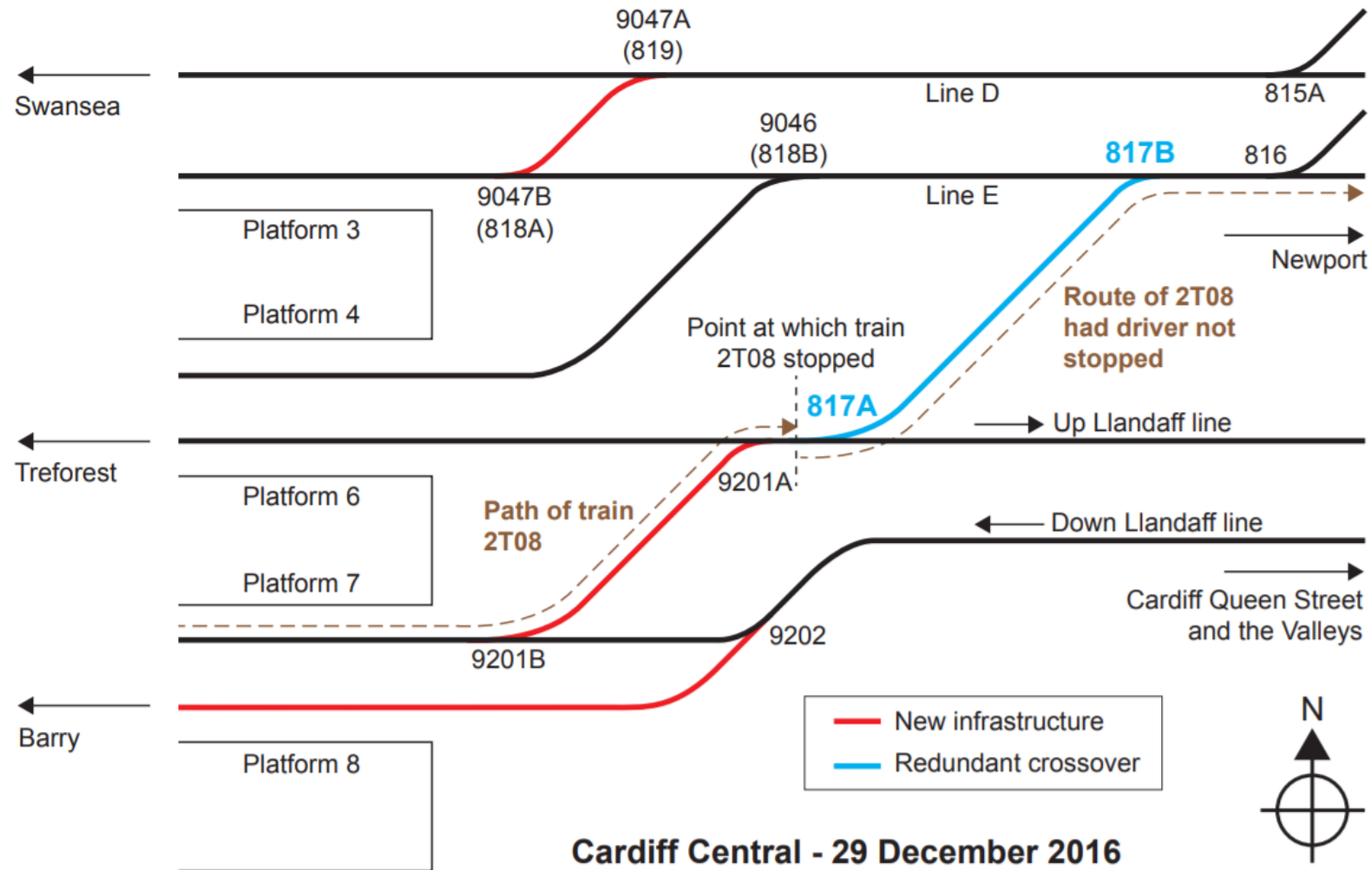


What happened?

29 December 2016 08:37 - Cardiff East Junction

- 2T08 08:36 Cardiff Central – Treherbert, first train on this route on this day, departed platform 7.
- Driver stopped at toes of incorrectly set points.
- Reported to signaller – struggled to identify where the train was - points not displayed on screen.
- Line re-opened post Christmas blockade.
- Due to re-close 3 January 2017 for relaying of line E and removal of 815B, 816 and 817B redundant points.
- No casualties, no damage, short delay.

Cardiff Central track layout





Why did it happen?

Why were the points left unsecured and undetected?

- The points had not been identified as requiring to be secured by the team securing points during the work.
- The responsibility for checking the securing of redundant points was not clearly allocated or understood and arrangements were not made for the checks to be made.
- Possible influence of fatigue
- For further details please read RAIB report 15/2017

Organisational Factors

- A group culture had developed between long standing members of the team that led to insular thinking about methods of work and operational risk
- Many of the team members had worked together for a number of years and a great deal of trust had developed between them – which has many positives, but also some cons (unless carefully managed):
 - The development of fixed mind-sets about methods of work;
 - A lack of recognition of alternative procedures for undertaking tasks;
 - An incomplete understanding of the risks to which the project might be exposing the operational railway.

Lack of Recognition of the Scale of the Risk

- The team did not recognise that the securing of eight point ends, in addition to a large workload arising from the commissioning stage, resulted in an increased risk to the railway if something was missed or went wrong.
- Despite the large number of ends that required securing, witness evidence suggests this work was regarded as a minor part of the total works to be completed, relative to the large list of tasks for this stage of works, and of little overall risk to the railway.

Processes, Accountability and Assurance

- Team members were content to rely on the word of other team members to confirm that the points had been correctly identified and secured in position.
- Accountability for checking that the work was correct was not clearly defined within the team.
- The project team did not appreciate the need or the importance of carrying out an independent check against the design, for assurance purposes.

Network Rail's Governance - Documentation

- The required documentation was completed for the project, but not all areas were covered in sufficient detail;
 - there were insufficient versions of the signalling scheme plan,
 - documentation was not thoroughly completed or checked.
 - Mistakes such as the omission of one of the redundant point ends were not picked up or corrected in document checks.
- The project did not adequately plan the decommissioning activity required, the focus was on the commissioning aspects of the work.

Network Rail's Governance – Team Behaviours

- The document management system used by the project was not user friendly;
 - Witnesses from the project team explained that it was an onerous and time consuming task to access files.
 - This may explain why the team preferred to rely on word of mouth.
- Key members of the project team were of the view that after decommissioning, 817A and 817B points no longer existed;
 - In part because the points were shown as removed on the signalling stage plan, despite the fact that 817A points remained in the layout until Easter 2017.

Network Rail's Governance - Lack of Senior Management Support

- During the night shift on 28/29 December, running up to the handback of the railway to the operator, a single individual acted as programme manager, senior manager on duty and project manager on site
 - The escalation process, in place for when things go wrong, could not be implemented effectively.
- Not clear whether this was due to lack of resources or a poor project decision during planning.
- Other Network Rail staff were on-call and available by phone, there is no evidence that any of them were consulted at the time.