Rail Accident and Incident Investigation Unit

Summary
Safety Investigation Report
Collision with a person on the track by a passenger train
Ruisbroek - 27 February 2021

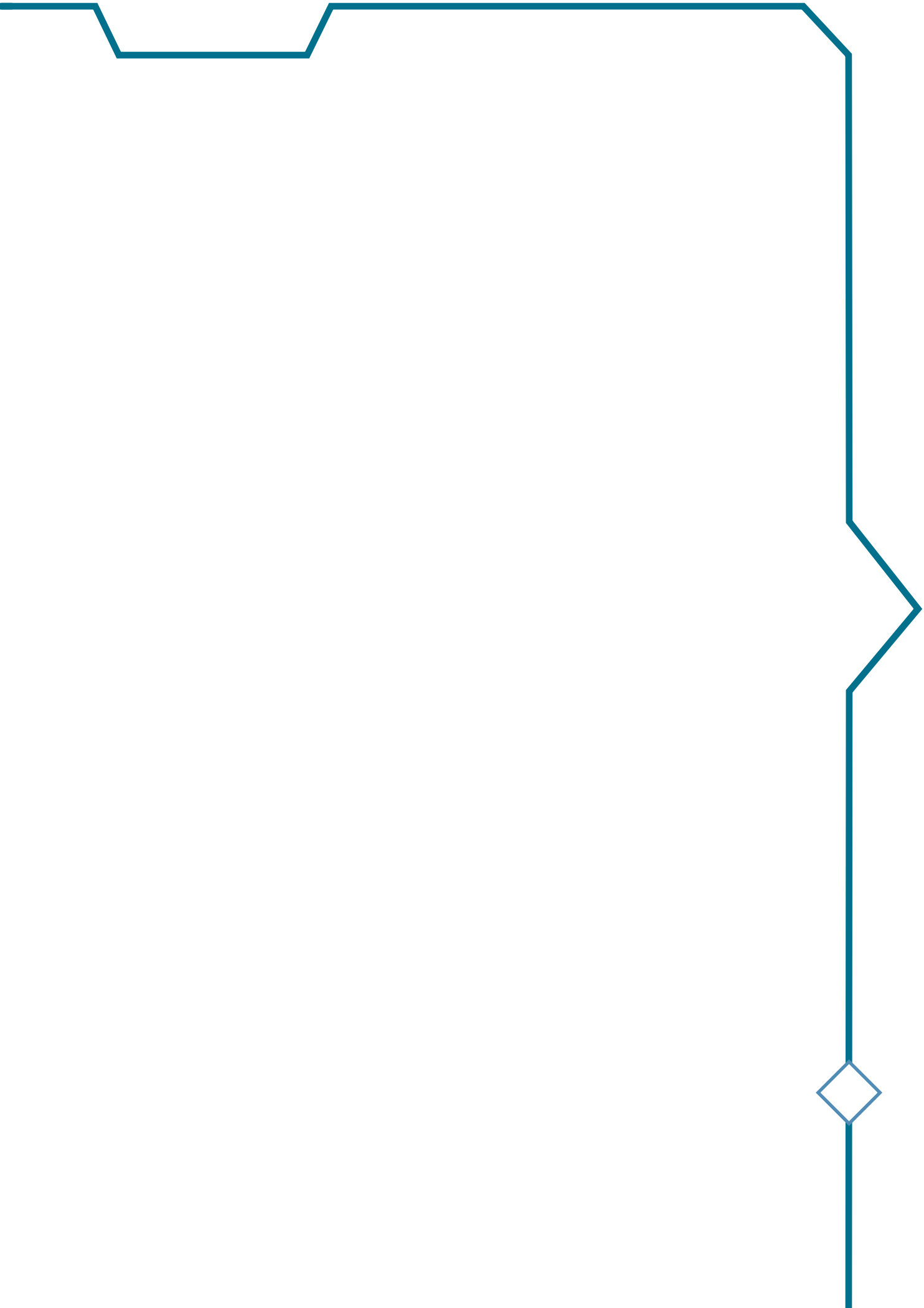
be

June 2022

REPORT VERSION TABLE

Version number	Subject of revision	Date
1.0	First version	15/06/2022
1.1	Refinements	30/03/2023

Any use of this report with a different aim than of accident prevention - for example in order to attribute liability - individual or collective blame in particular - would be a complete distortion of the aims of this report, the methods used to assemble it, the selection of facts collected, the nature of questions posed and the ideas organising it, to which the notion of liability is unknown. The conclusions which could be deduced from this would therefore be abusive in the literal sense of the term.
In case of contradiction between certain words and terms, it is necessary to refer to the Dutch version.



SUMMARY

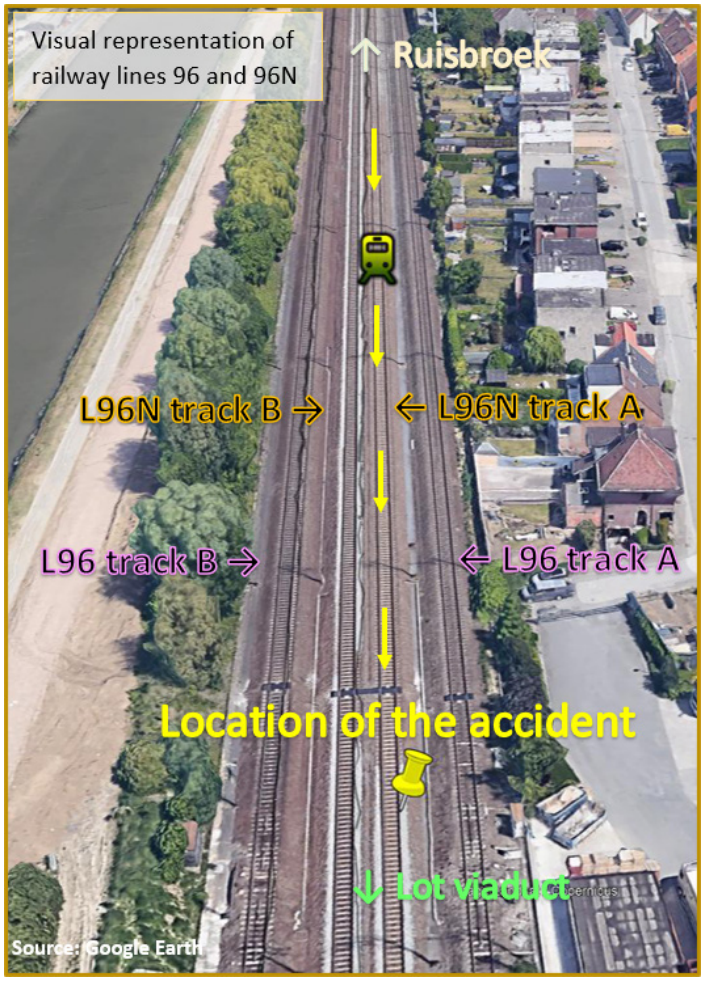
During the night of 26 to 27 February 2021, signalling and cable works are carried out on lines 96 and 96E. These works fall within the framework of an assignment of the infrastructure manager Infrabel, for which TUC RAIL acts as project supervisor. The company APK Infra is the contractor that carries out the assignment after a tendering procedure.

The works start in Buizingen and continue through Lot towards Ruisbroek. Up to Lot station, lines 96 and 96N run parallel to each other. Beyond Lot station, both tracks of line 96 continue on level ground, while both tracks of line 96N go up the Lot viaduct. Beyond this viaduct, both tracks of line 96N run between tracks A and B of line 96.

On 27 February 2021 at 05:56 a.m., passenger train E3726 departs from Bruxelles-Midi/Brussel-Zuid station and continues its journey towards Ruisbroek on line 96N track A.

At around 06:00 a.m., it is still dark and there is a dense fog at that time. An APK Infra employee moves from track A to track B of line 96 which are out of service. However, the employee has to cross the tracks of line 96N which are in service. When he enters the danger zone of track A of line 96N, he is struck by passenger train E3726.

The study of the data registered on board of the train shows that the speed of the train was 144 km/h at the moment when the train driver applied the emergency brake. No speed reduction was planned and the reference speed of line 96N, which was not exceeded by train E3726, is 160 km/h. This was not the first train to pass at this location: three de-icing trains previously passed on line 96N.



In the weekend of 26 and 27 February, the contractor divided the work into two teams.
A kick-off meeting was organised, during which the planning and the safety measures were discussed.
The planning states that:

- one of the two teams (team 1) carries out works on track A of line 96,
- the other team (team 2) carries out works on track B of line 96.

A foreman and a road-rail crane are provided for each team.
According to this planning, neither team 1 nor team 2 need to cross the tracks of line 96N while carrying out the works.
The reason for crossing the tracks could not be determined. The crossing of the tracks was neither communicated nor discussed.

Before work begins, the contractor examined the situation and carried out a risk analysis related to the activity. According to the regulations of the infrastructure manager and the safety and health plan of the project supervisor, no additional safety measures have to be applied when the width of the six-foot way is more than 4.5 metres. The width of the six-foot way between track A of line 96 and track A of line 96N on the one hand, and that between track B of line 96 and track B of line 96N on the other hand is more than 4.50 metres. One safety measure has been taken: « technical separation » (slewing limiter) is a technical solution to prevent machine movements and handled loads from entering the loading gauge of the adjacent track.

All employees received training and have signed a safety instructions sheet for works next to or in the vicinity of tracks. This instructions sheet states that, without a work reason, it is absolutely prohibited to cross tracks in service. The employee had indeed received trainings and signed the documents. He had more than 15 years of experience. He possessed a safety badge and was familiar with the site. The week before, he already carried out works in this zone.

The contractor makes a Last Minute Risk Assessment (LMRA) sheet available for his employees. The idea of the LMRA is to carry out a final check, a final risk evaluation to ensure that works can be started safely: the check is carried out before the works start. However, the Last Minute Risk Assessment sheet is dynamic and is also used to verify whether the risks evaluated earlier still correspond to a new situation on the job site. The Last Minute Risk Assessment sheet should have been used before crossing the tracks.
Several procedures and instructions are in place. On the night of the accident several workers crossed the tracks. It is important to monitor that these procedures and instructions are applied and complied with by employees in the field.

As the planning did not include any movement between the tracks, no crosswalks were mentioned at the kick-off meeting.
However, the importance of reminding people that it is not allowed to cross tracks in service, and that in case of unforeseen circumstances they must use crosswalks cannot be emphasised enough.

Various measures have been taken by the contractor, such as the organisation of a repeat of the training course on safe working alongside the tracks and of the instructions on working alongside the tracks.

The Investigation Unit makes no recommendation in view of the measures taken by the contractor, the infrastructure manager and the project supervisor.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