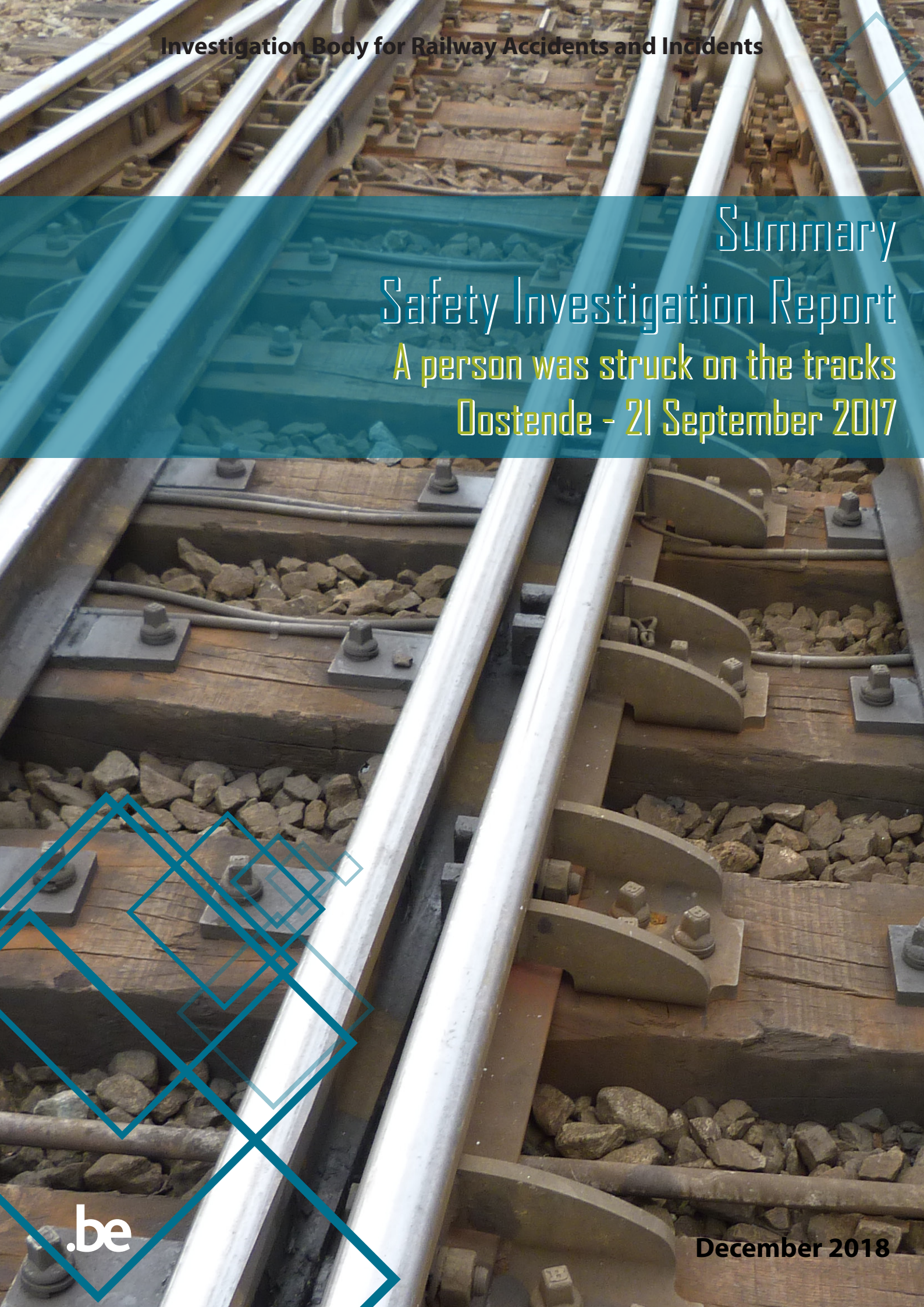
Investigation Body for Railway Accidents and Incidents

Summary
Safety Investigation Report
A person was struck on the tracks
Oostende - 21 September 2017



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December 2018

DOCUMENT VERSION TABLE

Version number	Subject of revision	Date
1.0	First version	10/12/2018

1. SUMMARY

On Thursday, 21 September 2017, around 7:00 am, 2 employees of a contracting firm specialised in railway works are performing preparatory work along a track in service in Ostend. These activities are taking place outside of the scheduled working hours and the protection measures provided are therefore not yet applicable at that time.

At 7:08 am, passenger train E1807 (Oostende / Antwerpen-Centraal) is departing from platform VI in the Ostend train station. From platform VI, the train is sent over switches to a track that provides access to normal track B of Line 50A.

During the departure, the train driver focuses on signal K6-K.7 at the end of the platform and on the position of the switches in front of him. In addition, he notices a 'red signal' in the distance, which he identifies as a red mobile signal indicating that passage is prohibited. Given the position of the switches, he must focus on this 'red signal' to determine whether or not this signal is meant for him.

As soon as the train passes signal K6-K.7, it leaves the lit platform behind.

Down the line from signal K6-K.7, the train passes over an S-shaped curve formed by connecting switches. Down the line from the S-curve, the train driver interrupts the traction[1].

The train driver notices the presence of a person sitting crouched down the line from the switches, within the danger zone of the track. The train driver applies the brake but is unable to avoid a collision. The person within the danger zone of the track is struck by the train and killed instantly.

The **direct cause** of the accident is the performance (outside of the scheduled working hours) of work by the contracting firm's staff on a track in service, without prior authorisation and in the absence of the protection measures provided.

The victim is an assistant foreman in training. Working and moving around safely in a railway environment is taught, first theoretically and then in practice. The assistant foreman first received a theoretic safety training and is accompanied at the project site by a foreman, a supervisor with a safety function, who is teaching him the technical aspects of the function on the day of the accident. Because of his safety function, the supervisor must monitor that the applicable safety principles are known and implemented correctly.

On the day of the accident, the foreman is accompanying the assistant foreman without applying the correct safety principles.

According to the retained hypothesis, the **indirect factor** causing the accident is the fact that the foreman underestimated the danger posed by a failure to hear and see an approaching train in a timely manner, as well as the danger posed by a failure to be noticed by the train driver of an approaching train in a timely manner.

1 *100 m down the line from signal K6-K.7 or 10 seconds after passing signal K6-K.7. This is 163 m up the line from the site of the accident (approximately 23 seconds prior to the accident at a speed of 25 km/h).*

ADDITIONAL FINDINGS

The danger of a failure to hear and see an approaching train in a timely manner as well as the danger of a failure to be seen by the train driver in a timely manner is discussed in the welcome brochure, training and toolbox meeting of the subcontractor. However, on the day of the accident, it appears to have been insufficient to make the involved employees adequately aware of the risk of working in the danger zone of a track in service when protection measures are not taken.

The assumption that the arrival of a train can be noticed in a timely manner with certainty by individuals performing work, is based on a dangerous illusion. The assumption that train drivers can bring their train to a halt in a timely manner is based on a dangerous illusion as well.

The Investigating Body advises the subcontractor to continue its efforts to sensitise his staff about the danger posed by moving trains and to reflect on ways to guarantee the unconditional implementation of safety arrangements by his staff.

The welcome brochure of the subcontractor provides for an LMRA prior to the start of the work. The subcontractor describes the LMRA as a check-up in the form of a reflection moment. However, the LMRA procedure of the subcontractor does not provide for written confirmations and is therefore not traceable.

The correct application of the LMRA reflection, as provided by the subcontractor in the welcome procedure, should undoubtedly have led to the conclusion that the work on 21/9 could not be performed in a safe manner and should therefore not have been performed.

The Investigating Body advises the subcontractor to further sensitise his staff about the importance of the LMRA and to reflect on ways to guarantee the application of the LMRA by his staff.

Given the severity and the frequency of occupational accidents[2] with workers in a railway environment, the Investigating Body aims to request all contracting firms and the railway sector to pay special attention to this issue. The Belgian Construction Confederation is aware of this issue as well. The Confederation organises awareness campaigns regarding the dangers associated with the performance of works in a railway environment, among others.

The Investigating Body wants to share its findings and recommendations with the widest possible audience. The Investigating Body therefore organises, in close collaboration with the Belgian Construction Confederation, the railway sector and the contracting firms for railway works, a seminar[3] around the topic of working safely in a railway environment.

2 *Melsele, Engis, Neufvilles, Duffel, …*
3 *Following the example of a previously organised seminar about an accident on a level crossing "Pittem Lessons Learned".*

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http://www.mobilit.belgium.be