Translation of an excerpt of the investigation report

“Level Crossing accident Bf Bremen Burg – Hp Bremen-Oslebshausen on 26/08/2025”

Status as of 24/08/2026, version 1.1.

Note:

In accordance with Article 3 of Implementing Regulation (EU) 2020/572, points 1, 5 and 6 of Annex I of an investigation report shall be written in a second official European language. This translation should be available no later than three months after the delivery of the report.

The following English translation is a corresponding excerpt of the investigation report. The German language version is authoritative.

Excerpt translation:

1 Summary

The first section contains a brief description of the event, as well as information on the consequences, primary causes and safety recommendations provided in the individual case.

1.1 Brief description of the event

At around 07:29 on 26 August 2025, passenger train DPN 83205 collided with a passenger car, on the journey from Bremerhaven-Lehe Pbf to Twistringen at the level crossing (BÜ) in km 131.702 between the operating points Bf Bremen-Burg and Hp Bremen-Oslebshausen.

1.2 Consequences

Property damage amounting to an estimated EUR 1.3 million was caused to the railway vehicle, infrastructure and passenger car involved. The road user was fatally injured. Two other people were slightly injured.

1.3 Causes

In the course of the investigation of the event, the following acts, omissions, incidents or circumstances were identified as safety-critical factors. These are differentiated into causal or contributing factors and systemic factors in accordance with Implementing Regulation (EU) 2020/572. In addition, identified deficiencies in emergency management are addressed.

For better clarity of the factors and aspects of emergency management, a classification with markings in square brackets is used.

A detailed evaluation of the event under classification as safety-critical factors is given in the following chapters.

Done at: date/time, and Action / omission / circumstance / incident	More causal factor	Contributor factor	Systemic factor
24.07.2025 EIU design planning	-	Design planning assuming a different maximum line speed [F1]	Plausibility check of the draft planning for the NWS [S1]
26.08.2025, 07:22:46 Level crossing post opens barriers at BÜ	Opening the barriers on approaching train [F2]	-	-
26.08.2025, from 07:22:46 Road users enter the BÜ	Traffic part-passenger drives the BÜ when light signals are switched on [F3]	-	-

Table1: Summary of influencing factors

1.4 Safety recommendations

In accordance with Article 6 TEU and Article 26(2) of Directive (EU) 2016/798, the following safety recommendations are made:

Lfd. No	Addressee and safety recommendation	Affects companies
04/2026	Safety authority: It is recommended to improve the planning, release and documentation processes for the design planning of the post-warning system based on Delegated Regulation (EU) 2018/762, Annex II, Chapters 4.4.3 and 4.5.3.	EIU
05/2026	Safety authority: In order to manage the risks referred to in Delegated Regulation (EU) 2018/762, Annex II, Chapter 3.1.1, when replacing a level crossing with technical solutions, it is recommended that these be reviewed and further developed with regard to the defeat criteria and barrier opening.	EIU

5 Conclusions

The following section contains a summary of the identified causal, contributing and systemic factors. In addition, two further subsections are provided containing information about measures already taken, and additional comments

5.1 Summary and conclusion

In the context of the event investigation, the BEU identified two causal, one contributing and one systemic factors.

Contributing factor: Design planning assuming a different maximum line speed [F1]

The fact that the design planning for the NWS was based on a maximum line speed different from the VzG was considered by the BEU as a contributing factor. The faulty design had had an impact on the trackside position of the switch-on contacts for the NWS in the specific event.

Taking into account the actual maximum permissible line speed of 140 km/h in the design, instead of the assumed 160 km/h, would have led to a change in the trackside position of the NWS switch-on contacts by approximately 110 m, closer to the BÜ. The error in the design planning was not effectively detected by the underlying verification processes in the EIU SMS.

On the systemic factor: Plausibility check of the draft planning for the NWS [S1]

Although the EIU generally held processes in the SMS with regard to the plausibility check of a draft planning, the actual implementation and suitability of a planned plausibility check could not be demonstrated in the present case. Contrary to Delegated Regulation (EU) 2018/762, Annex II, Chapter 4.4.3, relevant decision-making processes could therefore not be transparently traced in terms of correctness, consistency and control of safety information. However, according to the BEU, these above-mentioned processes are the essential prerequisite to ensure that the use of TH BÜP with mobSi and NWS, as provided for by the EIU, only minimises risks in operation. Even if the EIU is already striving to further develop the NWS with regard to suitable technical possibilities, these upstream process steps of design planning for operational use will continue to be essential in the future. Therefore, the consistency and correctness of safety information for the downstream design of the property, plant and equipment must also be ensured and reproducible. The BEU therefore recommends safety recommendation No 04/2026 on the systemic factor [S1]. It is recommended to improve the underlying planning, approval and documentation processes for the design

planning of the NWS based on Delegated Regulation (EU) 2018/762, Annex II, chapters 4.4.3 and 4.5.3.

The causal factor: Opening the barriers on approaching train [F2]

Securing a BÜ by BÜP represents an increased risk due to the fact that an individual's error can directly lead to an accident. The untimely opening of the mobSi by the BÜP despite the approaching train journey was a violation of the regulations of Ril 456. This action created a situation with a high potential for danger, as train journey DPN 83205 approached the BÜ at that time. The BÜP was highly likely to have forgotten the train journey, despite the previous written entry in the 'proof of notifications'. When he became aware of this, he immediately initiated the re-closing of the barrier system, which, however, could no longer prevent the collision between the rail vehicle and the car. The TH-BÜP property, plant and equipment with NWS brought in by the EIU was intended to reduce the occurrence of hazards, but did not meet this requirement in the present event, see the above-mentioned explanatory notes to [F1] and [S1].

In the past, following the serious railway crossing accident between the Neustadt am Rübenberge (a. Rbge.) and Hagen (Han) stations, the Federal Railway Accident Investigation Office issued several safety recommendations relating to reliable item security on 15 May 2017. As a result of the safety recommendations, the EIU further developed, among other things, the NWS to minimise risks caused by mishandling a BÜP on the BÜ. The BEU considers the continued further development and use of NWS on alternatively secured by BÜPs in principle positive, since the NWS in combination with a TH-BÜP generated an increase in security compared to the previously solely dependent on human action, for example by means of barrier bands. Due to the NWS and technically based emergency closure, railway crossing accidents throughout Germany could be avoided in the past.

On the day of the event, a system from the manufacturer UPZ Sitech GmbH was used on the 'Grambker Dorfstraße' BÜ, which detected the approach of a train journey to the BÜ on a time-based basis by means of switch-on contacts on the trackside. In contrast to a regular technical BÜ fuse, the NWS used did not currently have track contacts that affect the elimination of the opening prevention time of the NWS. For the system used on the day of the event, the opening prevention time and the local position of the switch-on contacts had been determined by planning using the wrong maximum permissible line speed.

The BEU recommends that, in order to control the risks arising from the operation of the installation in accordance with the requirements of Delegated Regulation (EU) 2018/762, Annex II, Chapter 3.1.1., when replacing a BÜ with technical solutions, these should be reviewed and further developed with regard to the switch-off criteria and barrier opening. For this reason, the BEU recommends safety recommendation 05/2026 on the causal factor [F2].

The causal factor: Road users enter the BÜ when light signals are switched on [F3]

Driving on a BÜ when the light sign system is switched on represents a situation with danger to life and limb. In the case of the present event at the 'Grambker Dorfstraße' BÜ, there was an infringement of Paragraph 19(2)(2) of the StVO, since the road user did not wait for the extinguishing of the light sign, which still showed red light, when he perceived the opening barriers, and did not drive the BÜ in time. In accordance with the objective of the BEU set out in Chapter 2, no questions of guilt or liability are relevant in the context of this accident investigation. These were not the subject of the investigation and are not the subject of the presentation in the investigation report.

5.2 Measures taken since the event

The BÜP was blocked for further use by the EIU after the event.

After the event, the replacement fuse on the 'Grambker Dorfstraße' BÜ was managed in accordance with the instructions 'No 815.8010-W-102-!' (version 2.0) and the full barrier closure of the mobSi was rebuilt on a semi-barrier system. The planning speed, which was incorrectly chosen too high in the project planning, was reduced to the correct value of 140 km/h in accordance with the VzG and the project planning was revised accordingly. As a result, the track-side position of the switch-on contacts for the NWS was also adjusted.

At the time of the report, the regular technical security of the BÜ 'Grambker Dorfstraße' was restored after the completion of the construction project in accordance with Betra.

Furthermore, the EIU informed that an implementation plan for the further development of the NWS was drawn up by the specialist departments at the headquarters of DB InfraGO AG, which was submitted to the BEU. In the broadest sense, the realization of a draught-induced elimination of the NWS is planned – in contrast to the current, temporary effect of the NWS by means of opening prevention time.

According to the EIU, the aim is to harmonise with the manufacturers on the basis of currently differing product solutions.

Several scenarios relating to the BÜP had been drawn up. These would be in coordination between the EIU and the manufacturers with regard to further measures:

a) Procedure BÜP secures BÜ in time: The train must use the first axle to enter the switch-off point in the direction of travel behind the BÜ.

b) Procedure BÜP does not secure BÜ in time: It is currently being worked out.

c) Procedure BÜP early cancellation of the BÜ fuse: It is currently being worked out.

d) Procedure for multi-track BÜ: It is currently being worked out.

The aim of the EIU is to forego the approach time in the future.

After that, the requirements will be merged and the existing specifications will be adapted. The specifications are then to be finalised with the manufacturers for the respective NWS.

5.3 Additional observations

Not applicable.

6 Safety recommendations

In accordance with Article 6 EUV and Article 26(2) of Directive (EU) 2016/798, the following safety recommendations are made:

Lfd. No	Addressee and safety recommendation	Affects companies
04/2026	Safety authority: It is recommended to improve the planning, release and documentation processes for the design planning of the post-warning system based on Delegated Regulation (EU) 2018/762, Annex II, Chapters 4.4.3 and 4.5.3.	EIU
05/2026	Safety authority: In order to manage the risks referred to in Delegated Regulation (EU) 2018/762, Annex II, Chapter 3.1.1, when replacing a level crossing with technical solutions, it is recommended that these be reviewed and further developed with regard to the defeat criteria and barrier opening.	EIU

The causal factor [F1]: 'Plausibility check of the design planning for 'TH-BÜP' is given for the above safety recommendation for the associated systemic factor [S1], so that no specific recommendation is made for the causal factor [F1].