

## Recommendation Status Report: Freight train derailment at London Gateway, Essex

This report is based on information provided to the RAIB by the relevant safety authority or public body.

The status of the recommendation(s), as reported to us, are described by the following categories:

### Key to Recommendation Status

|   |  |
|---|--|
| <b>Open</b><br>(replaces Progressing and Implementation On-going)                                 | Actions to address the recommendation are ongoing.   |
| <b>Closed</b><br>(replaces Implemented, Implemented by alternative means, and Non-implementation) | ORR consider the recommendation to have been taken into consideration by an end implementer and evidence provided to show action taken or justification for no action taken.   |
| <b>Insufficient response:</b>   | The end implementer has not provided sufficient evidence that the recommendation has been taken into consideration, or if it has, the action proposed does not address the recommendation, or there is insufficient evidence to support no action being taken. |
| <b>Superseded:</b>  | The recommendation has been superseded either by a newer recommendation or actions have subsequently been taken by the end implementer that have superseded the recommendation.  |
| <b>Awaiting response:</b>   | Awaiting initial report from the relevant safety authority or public body on the status of the recommendation.   |

RAIB concern over the way that an organisation has responded to a recommendation are indicated by one of the following:

**Red** – RAIB has concerns that no actions have been taken in response to a recommendation.

**Blue** – RAIB has concerns that the actions taken, or proposed, are inappropriate or insufficient to address the risk identified during the investigation.

**White** – RAIB notes substantive actions have been reported, but the RAIB still has concerns.

# Recommendation Status Report



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|-------------------------|---|
| <b>Report Title</b>     | Freight train derailment at London Gateway, Essex |
| <b>Report Number</b>    | 14/2023   |
| <b>Date of Incident</b> | 24/12/2021  |

| Rec No.    | Status | RAIB Concern | Recommendation   | RAIB Summary of current status   |
|------------|--------|--------------|--|--|
| 14/2023/01 | Open   | None         | <p>The intent of this recommendation is to ensure that the vulnerability of the Ecofret 2 triple-wagon to derailment due to longitudinal compressive forces is fully understood and that the risk of this occurring is appropriately controlled.</p> <p>VTG Rail, supported by Wabtec UK Ltd, should investigate the dynamic behaviour of Ecofret 2 triple-wagons to better understand the operating conditions that result in longitudinal compressive forces acting on these wagons, their behaviour under such forces, and their capacity to resist derailment. This investigation should be used to identify appropriate mitigation measures such as design changes and operating restrictions, and should specifically include consideration of:</p> <ul style="list-style-type: none"> <li>• improvements to the bar coupler arrangement</li> <li>• control of lateral suspension movement</li> <li>• wagon payload restrictions</li> </ul> <p>(paragraphs 179a.i, 179a.ii and 179a.iii).</p> <p>This recommendation may also be applicable to other owners or operators of rolling stock made up of freight wagons that are permanently coupled together using bar couplers at both ends.</p> | <p>ORR has reported that VTG Rail has a proposed action plan and timescale for delivery to be taken in response to the recommendation. ORR will advise when the status of this recommendation changes.</p> |
| 14/2023/02 | Open   | None         | <p>The intent of this recommendation is to ensure that freight trains are configured and operated in such a way that the longitudinal compressive forces generated in service are not sufficient to cause derailment.</p> <p>GB Railfreight, working where appropriate with relevant industry working groups, should review the risks associated with longitudinal train dynamics when operating freight trains. It should use this to inform the development of instructions, best practice guidance and training for</p>   | <p>ORR has reported that GBRF has a proposed action plan and timescale for delivery to be taken in response to the recommendation. ORR will advise when the status of this recommendation changes.</p>     |

# Recommendation Status Report

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|------------|------|------|--|--|
|            |      |      | <p>operations staff so that longitudinal compressive forces are not generated that exceed the derailment resistance of the wagons forming the train. This work should include consideration of:</p> <ul style="list-style-type: none"> <li>the management of brake application and traction demands</li> <li>the effects of the train air brake system configuration, setting, degradation and operation</li> <li>the control of slack and pre-load in screw coupling and buffer arrangements</li> <li>the need for train configuration and payload restrictions and limits (paragraphs 179b.i and 179b.ii).</li> </ul> <p>This recommendation may also be applicable to other freight operating companies.</p>  |  |
| 14/2023/03 | Open | None | <p>The intent of this recommendation is to establish a robust and pragmatic industry-wide framework for managing the risks of freight train derailments due to longitudinal train dynamic effects.</p> <p>RSSB working with the freight operating companies should initiate a programme of work to raise the rail industry's understanding of longitudinal compressive forces in freight trains and the associated derailment risk. This work should incorporate:</p> <ul style="list-style-type: none"> <li>identifying, developing and validating analysis tools and techniques</li> <li>determining and validating relevant derailment criteria</li> <li>reviewing and developing a suitable derailment resistance assessment process</li> <li>identifying limits for longitudinal compressive force that can be generated in operational service, and the practical means by which it can be assured that these are not exceeded.</li> </ul> <p>RSSB should develop a timebound programme for the implementation of any appropriate changes identified, such as new or revised standards, guidance and operating rules (paragraph 180a).</p> | <p>ORR has reported that RSSB has a proposed action plan and timescale for delivery to be taken in response to the recommendation. ORR will advise when the status of this recommendation changes.</p> |