Annual report of health and safety on Britain's railways 2023 to 2024

Health and safety across the railway sector: the regulator's view

Introduction

In this section we provide an overview of our main findings across each of the railway sectors that we regulate, setting out key risk areas and the effectiveness of their management by the railway sectors. We set out the evidence supporting our conclusions, including (where appropriate) the results of our Risk Management Maturity Model (RM3) assessments. RM3 is one of our key tools for assessing health and safety management systems. It measures an organisation's ability to manage risk maturely and achieve excellence in risk control. It looks at the areas of policy, monitoring, audit and review, planning and implementing, securing co-operation and confidence and organising for control and communication. It uses a 5-level scale to assess performance and identify areas for improvement; for more information on RM3, the assessment criteria and 5-level scale, please see Risk Management Maturity Model (RM3) 2019.

How ORR assesses harm and risk performance

The collection of good data from across Britain's railways is critical to:

- identify trends and quantify risk;
- set the correct risk control priorities; and
- measure performance.

ORR uses industry information about actual harm and modelled risk to measure health and safety performance on Britain's railways:

- **actual harm** caused to individuals, which is measured using the Fatalities and Weighted Injury (FWI) index. It is a composite measure of risk or harm that combines fatalities with physical injuries, which are weighted according to their relative severity.
- **modelled risk**, which uses historic data to periodically quantify the frequency and potential average consequence from a particular set of circumstances that could lead to a safety incident. The RSSB Safety Risk Model (SRM) periodically takes a snapshot of all significant risks on the mainline and their monthly Precursor Indicator Model (PIM) tracks trends in key catastrophic precursor train accident risk. London Underground (LUL) and the tramway sector use similar approaches with sector specific safety risk models.

However, these measures rely on, and are limited by, being outcome-based incident indicators: they measure harm-causing incidents to quantify current catastrophic train accident risk trends but are not necessarily useful as future predictive or underlying risk indicators. We overcome this through use of our RM3 assessment to 'triangulate' our view of industry performance using a broad range of data and intelligence sources, such as:

- **Inspections**, where through our planned, proactive work we examine the management and control of risk 'on the frontline'.
- **performance indicators**, for example, near-miss events, which had the potential to cause harm;
- **content indicators**, such as asset management performance; and
- **context indicators**, such as measures of safety management culture and duty holders' risk management values.

When analysing harm over time, it is important to consider the annual trends of passenger numbers and freight traffic. More information on rail usage can be found on ORR's Data Portal.

This Annual Health and Safety Report uses final and some provisional railway data from within ORR and across the industry. Our Rail Safety Quality Report sets out our main data sources. Data for non-mainline operations is primarily based on reports submitted by duty holders under the Reporting of Incidents, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR), either from LUL's Information Exchange (IE2) or our own online RIDDOR reporting tool. However, we also use reports supplied by duty holders and industry bodies such as the LRSSB, UK Tram and the Heritage Railway Association.

Confirmed safety data for April 2023 to March 2024 will be issued in our rail safety statistical release, scheduled for publication in September 2024. It will contain finalised numbers from both mainline and non-mainline sectors.

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