

**Risk Profile Topic Strategy for  
Railway Employee Safety  
2006-07 to 2009-10**

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# HMRI STRATEGY FOR EMPLOYEE SAFETY

## 1. Introduction

This document summarises HMRI's Employee Safety Strategy. The aim of the strategy is to secure reductions in risks to the safety of those working on the rail network in Great Britain. This will be done by enabling the Railway Inspectorate to better target and plan its work activities to ensure that duty holders suitably control existing risks and that they are encouraged to reduce those risks. The strategy comprises a set of measures to foster conditions that will lead to co-operative efforts by industry to bring down injury rates for railway staff. This document describes the current position, and states HMRI's policy and strategic aims.

The strategy concentrates on infrastructure controlled by Network Rail and LUL, but the principles described are applicable to all industry duty holders, and reference is made to light rail, metro and heritage sectors.

The strategy deals with safety issues. Occupational Health risks are dealt with separately, but there is some overlap between the two. For instance, work-related violence manifests itself as an assault and is reported as such to the Inspectorate, but the lasting effects to a member of staff can include many of the symptoms of stress that are covered by the Occupational Health Strategy. Similarly, there is mention in this document of discrete instances of musculo-skeletal injuries to staff from manual handling, as an indicator of the sometimes hazardous railway environment, but the chronic ill health effects are considered by the Occupational Health Strategy.

This strategy is informed by intelligence gathered from accident and incident data (both internal and external to HMRI), feedback from HMRI inspection activity, and discussions with industry stakeholders and within the Railway Inspectorate.

Detailed descriptions of the scope of the strategy and background information are set out in a supporting document. Contact the author for further details if required.

Furthermore, this strategy is one of a number of topic areas that have been treated in a similar way. The full context is described in an introductory document ([hyperlink to introduction](#)).

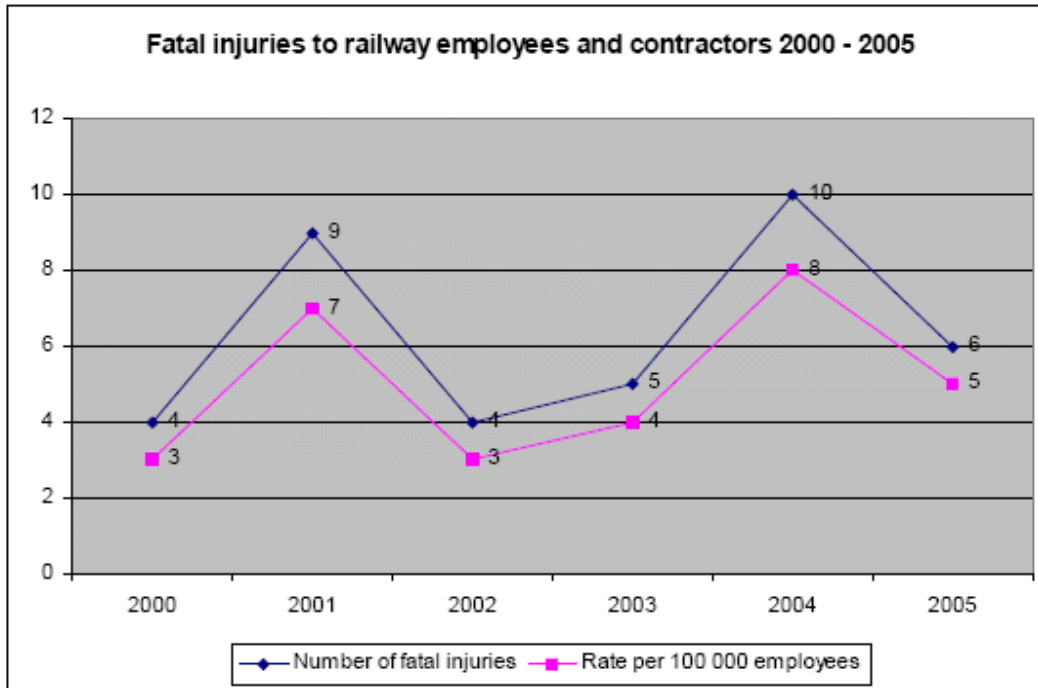
## **2. Nature and extent of the risk**

Unlike the other HMRI priority topics, this strategy concentrates on individual risks to workers, rather than catastrophic risk to staff and members of the public.

Some of the risks to railway employees are comparable to many other 'ordinary' industries, but there are significant differences. These are due to the hazards present in trackside and depot locations from moving trains and electrification. The high risk-profile of this topic is reflected in its receiving one of the highest totals in HMRI's Topic Scoring process (see introductory document).

Unlike some of the measures of precursors to catastrophic risk, the latest numbers for injuries to the railway workforce show no sign of reduction.

HMRI figures show that there have been around 350 major injuries to members of staff per year, and around 2000 over-3-day injuries. Unfortunately, there are fatalities each year. Here is a summary of numbers for recent years:



Thus it can be seen that there is little sign of significant reduction in the trend. The overwhelming majority of these deaths occur on Network Rail infrastructure. The most dangerous location is on or about the line, thus track workers account for over half of fatal injuries to employees.

**Analysis of risks** (see supporting document) can be summarised as follows:  
The employee groups at most risk of fatal injury are track workers and shunters

- The most significant contributor to that risk is being struck by a train
- Electric shock is a significant contributor to fatal risk
- The most significant causes of injury to rail staff are
  - ❖ Slips, trips and falls <2m
  - ❖ Violence to staff
  - ❖ Manual handling
  - ❖ Non-movement crush/trapped/struck incidents
  - ❖ Falls from height and from stationary rail vehicles
- There are flaws in all of the data available to industry, making precise comparisons or gauging of degree of risk difficult.

### 3. Current picture

Recent HMRI work on Network Rail controlled infrastructure has concentrated on monitoring efforts to promote Green Zone Working, and on the growing difficulties associated with possessions, particularly the emergence of incidents involving Road-Rail Vehicles (RRVs) and other rail-mounted plant. Also, like industry, the Inspectorate has focused on standards of safety critical communication.

Current interventions on Network Rail include more examination of the implementation of RT/LS/S/019, the standard containing the hierarchy of means of protecting workers on or about the line. In particular the Inspectorate is examining the apparently significant remaining amount of red zone working with human lookout, and analysing near-miss incidents in order to understand the obstacles to good planning. A number of fatalities in red zones have occurred during the last 18 months.

Findings from recent years include: Working Red Zone on NR seems to be taking place with considerable frequency, despite the provisions of recent line standards; Red Zone working with human lookout remains highly hazardous and accounts for most near misses; work in possessions is hazardous, due to the presence of vehicle movements and possible underestimation of risk by employees. Recent representations to Network Rail have led to their describing a series of projects aimed at improving the skills, processes, resources and equipment which support safe working. Much future HMRI effort will be devoted to evaluating these initiatives.

There has also been some work by the Inspectorate looking at the dangers of electrification, as this has been associated with a number of serious and fatal injuries over recent years, and the control of risks to shunters.

Work with both Network Rail and Rail Companies has scrutinised arrangements to protect their staff from the threat of work-related violence. This is an area where RIDDOR returns have shown slight decreases year on year, but industry figures have grown. This is partly, but not wholly, due to

altered reporting parameters. HMRI sits on a number of cross-industry forums and has witnessed the efforts being made to address this topic, one of the most serious concerns of staff. The current widespread inspection programme aims to promote best practice to those duty holders who might be doing less well.

Currently, the Delivery Plan for Train and Freight Operating Companies includes interventions on:

- Safety Critical Communications- drivers;
- Initiatives to tackle violence to staff;
- Shunting arrangements;
- Adequacy of possession planning and organisation;
- Fatigue management;
- Depot protection arrangements;
- Adequacy of risk assessment.

HMRI's interventions on LUL are targeted at tackling potential problems arising from the current extensive and complex programme of refurbishment and repairs. This includes examination of possession planning, safety critical communications and control of contractors as well as initiatives to tackle work-related violence.

There have been a number of incidents and accidents in recent years that reveal that similar risks to those on the mainline are present for workers on tramways, light rail and heritage rail. Future interventions by HMRI are being framed to take into account the relative risks from these undertakings whilst helping duty holders improve their safety management systems. These initiatives will recognize the particular features of these rail sectors e.g. the preponderance of volunteers in the heritage sector, the altered risks for tramways on highway sections and so on.

#### **4. ORR Corporate Strategy**

This strategy strives to be compatible with the long term vision of the Office of Rail Regulation of infrastructure controllers, operators, suppliers and funders working together to deliver a safe, high performing and efficient railway. Over the 2006-09 period ORR's focus will be on:

- Securing continuous and sustained improvement in safety, performance and customer service;
- Pursuing relentless improvement in the industry's efficiency and value for money, and
- Through these and other actions enabling the railway to grow and develop to meet the requirements of funders and aspirations of stakeholders.

#### **5. HMRI's core purpose**

Within the newly combined economic and safety regulator, HMRI's core purpose is to secure the proper control by duty holders of risks to the safety and health of passengers, employees and others who might be affected by the operation of Britain's railways.

#### **6. Strategic aims for employee safety topic**

Intelligence arising from HMRI's inspection and investigation activities, as well as discussions with key stakeholders have identified themes that cut across various aspects of railway activities and are seen as crucial to fostering improvements in the safety culture of the industry. These underpin the HMRI strategy, and can be summarised thus:

- In a variety of locations there are incidents due to non-compliant behaviour;

- This can be tacitly encouraged by a culture that rewards getting the job done;
- Levels and quality of supervision may be inadequate;
- Safety information has become too complex and bureaucratic;
- Staff do not always understand what comprises a safe system of work;
- There are obstacles to good planning
- For various categories of incident, if there is to be lasting improvement, HMRI needs to influence duty holders to change their safety culture;
- Some areas of significant risk, e.g. violence to staff, are the subject of innovative efforts by the railway industry; HMRI can promote best practice across the board;
- Rules, procedures and safety information need to be made simpler and more relevant;
- Levels of supervision need to be improved;
- Human factors need to be understood and addressed in order to tackle non-compliant behaviour;
- Technology can help to better protect staff and, ultimately, to lessen the need for them to be exposed to risk.

Within the overall HMRI policy of targeted action, we will seek to address the subjects listed above and aim to achieve reductions in the incidence of injuries of all kinds to members of staff by :

- Concentrating Inspectorate work activities on those topic areas judged most critical during the Topic Planning Process and where HMRI can make a difference and add value to existing activity - mainly the risks to track workers and shunters from moving trains;
- Ensuring that proportionate attention is also paid to other significant risks e.g. violence to workers;
- Utilising expertise within HMRI to gauge how well duty holders understand and can improve the human factors and safety culture

characteristics which lead to non-compliance with existing rules and provisions designed to control the risks to workers;

- Championing an improved supervisory culture within the industry;
- Engaging industry stakeholders to streamline procedures, modernise them to reflect current practices, and reduce the 'bureaucracy of safety';
- Influencing stakeholders to explore technological advances that can better protect staff working on the track;
- Promoting asset management systems that lessen the need for human interface to repair, maintain and replace equipment, particularly in an unplanned manner;
- Recognising that industry is making significant efforts in some fields and targeting HMRI resource in areas where we can add the most value and make a difference to risk reduction.

## **7. Delivery of the strategy**

Key workstreams will be identified for each year and discussed within HMRI as part of the annual planning process. Interventions will be based on risk and evidence. There is a variety of means of delivering these workstreams.

The principal way is by inspection. The strategy will contribute to decisions made about which aspects of a duty holder's safety management system to examine as part of the rolling delivery plan arising from ROGS certification and authorisation. The strategy can also inform any other statutory work arising from these and other regulations.

Reactive and investigative work in relation to accidents, incidents and complaints can add to the information and intelligence HMRI holds about worker safety and can inform our future work by enabling us to target topic areas or certain aspects of the industry.

We can also expand on our knowledge and further our aims by liaising with stakeholders and intermediaries such as Trade Unions, RSSB. We can

influence stakeholders and duty holders, seeking to work with and support them. We can involve them in initiatives e.g. open days and educational events for staff safety representatives.

Where appropriate we can initiate, monitor and support appropriate research projects.

We can ensure we learn the lessons from investigations of recent major incidents and that the recommendations from Rail Accident Investigation Branch investigations, as well as HMRI and industry inquiries, are satisfactorily addressed.