



HMRI's Risk Profile Topic strategy for route crime 2007- 08 to 2009-10

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1. Introduction

This document summarises HMRI's overall policy and strategy for securing adequate control of risk arising from route crime on the rail network in Great Britain. Although it applies mainly to the activities of infrastructure controllers, including those involved in inspection and maintenance, it also extends to station and train operators, and to renewals contractors. Although this strategy concentrates on infrastructure controlled by Network Rail, where the majority of the route crime risk occurs, the principles described can also be applied to infrastructure outside the mainline network.

HMRI's route crime strategy covers risks arising from railway trespass and vandalism, mainly on the line of route but also including on-station and on-train trespass and vandalism where this endangers safety. It includes, for example, unauthorised access to the lineside via stations, but excludes graffiti and other anti-social behaviour which, in itself, does not create a health and safety risk. Prevention of suicide has been considered, as there is significant overlap with route crime risk control, however the acute post-traumatic stress risk in railway workers involved with railway suicides is covered separately under HMRI's occupational health strategy¹.

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, including the risk profile for route crime, are set out in a supporting document².

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 on HMRI's topic strategies³.

¹ HMRI's risk profile topic strategy for occupational health 2007-08 to 2009-10.

² Please contact the author for further information.

³ Introductory document to HMRI's risk profile topic strategies.

2. Nature and extent of the risk

Route crime is the cause of most deaths to members of the public on Britain's railways; while the majority are suicides, a significant number are accidental deaths due to trespass. The Rail Standards and Safety Board (RSSB) Safety Risk Model (SRM)⁴ estimates the risk from trespass (excluding suicide) as 44.8 fatalities and weighted injuries (FWI) per year. This represents the largest single source of risk on the mainline railway, accounting for almost a quarter of the total⁴. Adult trespassers being struck/crushed account for the majority (63%) of the trespass risk at 28.3 FWI per year, with the total risk to child trespassers at 4.3 FWI per year. Risk⁴ estimates for suicide/attempted suicide are 196.6 FWI per year, which includes 0.875 FWI per year shock and trauma events to railway workers.

Acts of vandalism, including placing objects on the line, throwing objects through windows, and train fires, account for about a half of all reportable train accidents⁵. The RSSB SRM estimates the risk from vandalism affecting trains as 0.93 FWI per year or 0.5% total risk on the mainline railway⁴. Although vandalism makes a much smaller contribution to overall risk than trespass, these incidents are of concern because they can lead to damage, injury, or catastrophic derailment as a result of obstructing the track, with the potential for multiple passenger fatalities. Stone throwing presents the largest element of vandalism risk, with injuries to passengers and train crew struck by objects thrown through train windows accounting for 62% of the total⁴. Train derailment caused by vandalism contributes 26% to the overall vandalism risk, with train collisions caused by objects deliberately placed on the line contributing a further 7%⁴.

Available intelligence indicates that the risk from trespass and vandalism has reduced significantly in recent years. Steadily decreasing trends in the numbers of trespass and vandalism accidents and near misses between 2000 and 2004 support this conclusion, as does the continuing downward trend in vandalism as a train accident precursor. The catastrophic risk from objects on the line due to vandalism, as modelled by the RSSB Precursor Indicator

⁴ RSSB Safety Risk Model Risk Profile Bulletin Version 5 August 2006.

⁵ ORR Annual report on railway safety 2005.

Model (PIM), had fallen by almost two thirds from its March 2002 baseline level by March 2006, and at a rate faster than the decline in the overall PIM value⁶.

2005 saw a continuing decline in reportable train accidents due to vandalism, including a further 5% reduction in serious obstructions of the track by vandals. Emerging data for the early part of 2006 indicated a continuation of this decreasing trend⁶. Less encouraging was the upturn in 2005 in accidental trespass deaths both for adults and children, reversing the previous steady downward trend⁵. The first quarter of 2006 also saw an increase in trespass deaths/injuries when compared with the same period in 2005⁶. There is however evidence from RSSB data analysis that hotspots for both trespass and vandalism have shown marked improvement in recent years, suggesting that local initiatives targeting high-risk areas are having an impact⁶. More detail on the extent of and trends in route crime risk can be found in the supporting document to this strategy².

3. Current picture

In recent years there has been a high level of co-ordinated effort by dutyholders, the RSSB, and British Transport Police, together with HMRI, to tackle route crime risk, via improvements in lineside security, reducing the availability of materials for vandalism, and public awareness/education initiatives. HMRI has been actively engaged in partnership working with the industry at national and local level, including inspection work to monitor management of lineside security and lineside materials on Network Rail controlled infrastructure (NRCI).

The economic costs of route crime for the industry; its effects on public confidence in rail travel; and the potential for catastrophic risk to passengers in the event of a derailment caused by vandalism, should act as powerful drivers for the industry to continue to address this issue. HMRI and the industry recognise, however, that recent reductions in route crime may be fragile, due to the inherent difficulties in influencing public behaviour. The

⁶ RSSB Railway Crime Safety Performance Report July 2006.

upturn in accidental trespass deaths on the mainline railway in 2005 confirms the need for the industry to continue to focus effort on route crime, and supports continued HMRI activity in this area.

A number of developments within the industry are likely to affect how dutyholders manage route crime risk in the future, and therefore HMRI's future strategic approach.

- The rail industry, via the RSSB's Safety Decisions Programme, is currently considering how the test of reasonable practicability should be applied for risks outside it's direct control, where individuals may willingly accept the risk, for example in relation to actions of trespassers and railway suicides. HMRI, via the Office of Rail Regulation's (ORR) safety policy function, will continue to engage in such debate.
- New industry arrangements for partnership working on community safety could affect how route crime risk is prioritised and managed on the mainline network, and also affect mechanisms for co-operative working with HMRI.
- On-going developments specifically within Network Rail, including changes to functional line management, and revisions to key company standards on route crime, are also likely to affect how route crime risk is managed on NRCI. These and other emerging issues are addressed as part of this strategy.

In the longer term, there may be implications for route crime risk management arising from wider Government transport policy. These may include changes resulting from progressive implementation of the Department for Transport (DfT) Community Rail Development Strategy, and any possible future move towards full community operation (microfranchising) of the infrastructure on designated routes. Close liaison with ORR safety policy and with industry stakeholders will be key in ensuring that such wider developments are reflected in HMRI's evolving route crime strategy.

4. ORR corporate strategy

ORR has a long-term vision that includes infrastructure controllers, operators, suppliers and funders working together to deliver a safe, high performing and efficient railway⁷. Over the 2006-2009 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 new combined economic and safety regulator, HMRI's core purpose is to secure the proper control by dutyholders of risks to the safety and health of passengers, employees and others who might be affected by the operation of Britain's railways.

For risks arising from route crime, HMRI's key objectives are:

- to direct our work activities so that they effectively contribute to maintenance of, and where reasonably practicable, further sustained reductions in:
 - catastrophic risk to passengers in the event of a derailment arising from deliberate obstruction of the line by vandals; and
 - the risk of children and young people obtaining unauthorised access to the lineside;
- to ensure that our work activities complement but also add value to those carried out by other industry stakeholders; and

⁷ ORR Corporate Strategy 2006-2009 (ORR April 2006).

- to continue to be in an informed position and engaged with industry dutyholders at the appropriate levels, so as to most effectively influence industry priorities and workplans on route crime, and monitor their implementation.

6. Strategic aims for route crime

A number of broad strategic aims have been identified to deliver HMRI's key objectives on route crime. These aims are to:

- devise risk and evidence based interventions with dutyholders, to ensure that effective strategies are in place to control route crime risk, in particular action to reduce, so far as is reasonably practicable, the risk to children and to passengers from a train derailment arising from vandalism;
- seek best available information and intelligence on route crime risk, and ensure that it is used effectively to inform targeted programmes of work where HMRI can add value and make a difference to risk reduction;
- ensure recommendations relating to the management of relevant risks from investigations of recent major incidents; from Rail Accident Investigation Branch (RAIB) investigations, as well as other HMRI and industry investigations are satisfactorily addressed;
- work proactively with and support railway industry dutyholders and stakeholders (e.g. employee representatives) in initiatives to tackle route crime risk, including on community and education initiatives;
- support and monitor industry research into innovative approaches to route crime risk reduction and new technology, and promote the use of appropriate research findings to inform future work by industry and by HMRI;
- promote transparency and consistency in HMRI's operational work and regulatory approach to route crime by production of clear guidance on current standards and enforcement issues where needed;
- undertake proportionate enforcement action on route crime in accordance with ORR's Enforcement Policy Statement; and

- be an Inspectorate capable of delivering the strategy with sufficient expertise, competence, resourcing and management arrangements.

7. Delivery of the strategy

Reducing the potential for catastrophic (low frequency, high consequence) risk will continue to be a key driver in HMRI's work in the medium term. This fits with ORR's Corporate Strategy and with the industry focus on prevention of major accidents in its Strategic Safety Plans, in support of the requirements of the Rail Safety Directive. However, the relative contribution that route crime makes to total catastrophic risk on the mainline network, as measured by the RSSB PIM, is small (objects on the line due to vandalism contributed only 0.6% to the overall PIM indicator for catastrophic risk on the mainline network by March 2006), and HMRI's efforts in this area need to be proportionate.

HMRI's work on route crime will continue to focus on monitoring the industry's progress in managing the risks, with particular focus on the risks to children and also derailment risks arising from obstructions placed on the line. Both the railway industry and HMRI recognise that adult trespassers are, in most cases, aware of a risk from unauthorised access to the railway. We also recognise the societal expectation that more protection should be afforded to vulnerable groups, particularly children, as well as to passengers and railway staff. HMRI's strategy seeks to reflect these considerations. Continuation of effective partnership working with key industry stakeholders on public behaviour issues, including route crime, at both national and local level, will be key in delivering HMRI's strategic objectives.

Although initial delivery of this strategy focuses on Network Rail controlled infrastructure, where the majority of route crime risk occurs, further work is proposed to better understand the route crime risk profile outside the mainline network, with the initial focus on London Underground Limited (LUL). Work is also included to continue to review intelligence and track recommendations arising from relevant incident investigation reports, and to explore use of proactive performance indicators on route crime, to inform future strategic priorities. Consideration of railway suicides in operational work plans will, in most cases, continue to be indirect, primarily via interventions on route crime

and occupational health (in relation to associated risks of acute post-traumatic stress in railway workers, addressed in HMRI's occupational health strategy¹).

Delivery of HMRI's route crime strategy for 2007-08 onwards will be achieved by a number of broad workstreams addressing key areas, each of which comprise one or more potential work activities to be delivered over the life of the strategy. The priority and resources allocated to work under this strategy will be determined each year as part of HMRI's overall business planning process. Potential key workstreams on route crime include:

Risk management:

- monitoring and review of route crime risk management by key dutyholders, including targeted inspection work on lineside security and lineside materials management;
- management of trespass risk at stations – provision of operational guidance for HMRI staff, and obtaining improved intelligence on risk management by station operators;
- incident investigation – effective targeting of HMRI resource on reactive work, and improved tracking of recommendations from relevant HMRI, RAIB, RSSB, and industry incident reports; and
- promoting consistent and transparent regulatory approach to route crime within HMRI, including production of additional/revised operational guidance where needed.

Policy and strategy development:

- collation and review of improved intelligence on route crime risk outside mainline network, with initial focus on LUL; exploration of the use of proactive performance indicators of route crime risk management across network to inform strategy development and targeted interventions; and

- engage with the industry and other Government departments, where appropriate, in the current debate as to the role of dutyholders in addressing trespass and suicide risk.

Influencing and partnership working:

- work to ensure continued effective partnership working with industry stakeholders at national and local level, including on education initiatives, in response to developments within the industry on managing community safety; and
- continued engagement in relevant route crime research, to inform strategy and operational interventions.

Further detail on how the proposed workstreams contribute to delivery of HMRI's key objectives on route crime is set out in the supporting document².