

Our approach to ensuring the general public is protected from railway health and safety risks

Introduction

As the health and safety regulator for Britain's railways¹, we check that the rail industry is protecting workers' health, safety and welfare, and protecting others against health or safety risks arising from work-related activities on Britain's railways.

Broadly speaking, railway companies² are responsible for managing health and safety risks. This responsibility includes protecting people who are not workers or passengers, but who could be put at risk by railway activities.

This statement explains our approach to assuring that railway duty-holders take effective action to protect **members of the public who are not passengers**.

Protecting members of the public who are not passengers is important because there are approximately 200-250 fatalities to the general public on Britain's railways each year; most result from trespass and suicide incidents.

Our vision for Britain's railways³

- zero workforce and industry-caused passenger fatalities and an ever decreasing overall safety risk; and
- for all parts of Britain's railways to have excellence in health and safety culture and risk control processes.

Main sources of risk

The main sources of risk to members of the public (who are not passengers) from the railways are:

- unauthorised access to railway premises, where people decide, deliberately or not, to go on to railway premises as trespassers and come to harm; and
- where pedestrians, cyclists, horse-riders and motorists make mistakes or deliberately ignore safety procedures when using legitimate railway access points, such as level crossings or station platforms.

Specific risk areas

Trespass

We define trespassers as people who go on to parts of the railway where they have no right or authority to be, for example, someone who uses a gap in a railway

¹ This includes the mainline railway network, light railways, trams and heritage railways.

² Known as "duty-holders" in law.

³ ORR's strategy for 2009-14 – see: <http://www.rail-reg.gov.uk/upload/pdf/388.pdf>

boundary fence as a short cut across the railway⁴. Some trespassers cause damage to property and equipment, through vandalism and graffiti, and threaten workers and passengers lives, as well as putting themselves, at risk. Historic data indicates that trespassers are typically 16 - 40 year-old males.

In the ten years 2001- 2011, there were on average 44 trespass fatalities on Britain's railways annually⁵, of which about 95% were caused by electrocution or being struck by moving trains⁶.

The railway industry uses a model to estimate risk across Britain's mainline network. It is run by the Rail Safety and Standards Board (RSSB) and called the Safety Risk Model (SRM). It estimates that 82% of the total fatality risk to members of the public on Britain's mainline railways results from trespass incidents⁷. Further, the model suggests that trespass is the cause of 79% of the total risk to the public on Britain's mainline railways.

London Underground Ltd reports around 250 trespass incidents and two trespass fatalities that disrupt services annually: most are caused by trespassers being electrocuted or struck by moving trains.

Level crossings

Level crossings remain the largest single cause of train accident risk to members of the public on Britain's mainline railways. Accidents involving pedestrians at level crossings account for 15% of the total risk to the public on Britain's mainline railways; more than half of incidents involve pedestrians being struck by trains. Between 2001 and 2011, on average nine members of the public were killed at level crossings annually⁸, (when incidents classed as suicides at crossings are excluded).

The SRM estimates that of the total risk being struck by or colliding with a train at level crossings, 55% is borne by public pedestrians and 29% by road vehicle occupants. Generally, such incidents occur because crossing users make a mistake themselves, are led into error by misunderstanding, or deliberately ignore safety procedures and cross the tracks into the path of approaching trains.

Suicides (suspected and attempted)⁹

In the ten years 2001-2011, there were on average 209 suicides and suspected suicide fatalities reported on Britain's mainline railways each year¹⁰ of which seven involved road vehicle drivers in incidents believed to be suicides. Around 20% of railway suicide attempts result in non-fatal severe and life-changing injuries.

In the same ten year period, on London's Underground network, there were (on average) 22 suicides and 40 attempted suicides each year.

⁴ For RSSB's definition of trespassers - see page 215 of RSSB's Annual Safety Performance Report, 2010/11.

⁵ See page 129, chart 141 of RSSB's Annual Safety Performance Report for 2010/11.

⁶ See page 123 of RSSB's Annual Safety Performance Report for 2010/11.

⁷ See page 123 of RSSB's Annual Safety Performance Report for 2010/11 – see:

<http://www.rssb.co.uk/SPR/REPORTS/Pages/default.aspx>

⁸ See page 129, chart 141 of RSSB's Annual Safety Performance Report for 2009/10.

⁹ RSSB has adapted the Ovenstone criteria for identifying suicides and suspected suicides from trespass fatalities. - see page 212, appendix 7 of RSSB's Annual Safety Performance Report for 2010/11.

¹⁰ See page 134, chart 148, of RSSB's Annual Safety Performance Report for 2010/11.

Other risks to the public arise when vehicles from highway or premises adjacent to the railway, end up on the track and are struck by a train. There are around 73 vehicle incursions on to the railway annually, of which 49% end up ‘foul of the line’ and 6% are struck by or make contact with trains.

Tramways

Between 2005 and 2009 there were on average 120 collisions between trams and road vehicles and an average of 30 other notable incidents on Britain’s tramways¹¹ annually. Tram systems have grown over recent years in GB. Overall safety performance compares well with similar European tram systems: tram - road vehicle collision numbers remain low and have gradually declined between 2003 and 2009.

However, the sector needs to improve on how it manages change. Despite the lower speeds and the lighter rolling stock involved, collisions between trams and road vehicles and pedestrians still have the potential to cause serious harm.

Principles of risk control

The public must have access to parts of the railway infrastructure, for example, stations and level crossings. The majority of the risk to members of the public on Britain’s railways arises from their own inadvertent, misjudged or deliberate risk-taking actions.

Railway duty-holders have a legal responsibility to protect all members of the public in accordance with the relevant health and safety law; this includes taking *reasonably practicable* steps to reduce the risks to trespassers.

We recognise that some boundaries between railway and other transport systems, for example level crossings, rely in part on risk being at least partly controlled by members of the public themselves, through following rules and instructions. This means railway duty-holders do not have direct control over all of the means of controlling the risk. For example, road users must obey signs and other instructions when approaching level crossings to ensure the safety of themselves and others, including those travelling on trains.

How duty-holders help control risks to the public

- duty-holders must, by law, make an assessment of the risks to the public;. This will help them decide what they need to do to remove or reduce the risks;
- duty-holders must use their risk assessment to inform action to remove or reduce risks to the general public, in line with legal duties, by following relevant technical, maintenance and operational standards. The risk can be controlled by:
 - the installation and management of boundary fencing and signage;
 - the maintenance, upgrade or closure of footpath and level crossings;
 - clear signs at level crossing which give users instructions on how to use the crossing safely;
 - the maintenance and improvement of railway equipment and railway structures, such as bridges; and
 - the management of access routes at stations and depots.

¹¹ Page 169, table 10.4i of National Rail Trends 2009-10:– see: <http://www.rail-reg.gov.uk/server/show/nav.1528>

- the industry also works to publicise safety issues such as:
 - Network Rail's level crossings' campaigns¹²;
 - working with schools and other groups to educate young people about the dangers of the railway; and
 - London Underground's safety awareness posters at stations.

Our approach to public risk control

- we check that railways duty-holders have the necessary arrangements in place to control risks to members of the public. In doing this we seek to ensure the right balance has been struck by the duty-holder between risk control and cost¹³;
- we investigate incidents and complaints about rail health and safety to identify causes and check how well duty-holders are controlling risks;
- we encourage partnership working. For example government, local authorities, British Transport Police, other public and commercial bodies, such as landowners, can all help safeguard the public's safety. An important aspect of level crossings safety is the joint risk assessment process which enables appropriate controls to be worked out between duty-holders. Educating crossing users to follow rules and use crossings safely is important to deter deliberate misuse and warn trespassers, particularly school children, about the dangers of the railway;
- we recognise that the deliberate and dangerous behaviour by some members of the public is a significant issue and we support incident investigation and prosecution by the British Transport Police, particularly where members of the public endanger themselves and others; and
- where we find that duty-holders are not doing enough to protect the public, we may use our enforcement powers to make them comply with their legal duties, in line with our enforcement policy statement and enforcement management model¹⁴.

What members of the public can do to help keep themselves and others safe on and around the railway

- to follow the rules and instructions provided for their protection; and
- help the railway industry by reporting unsafe conditions, dangerous public behaviour, or misuse of the railway infrastructure, or the boundaries between the railways and roads.

¹² See: <http://www.networkrail.co.uk/aspx/2292.aspx>

¹³ Assessing whether risks on Britain's railways have been reduced SFAIRP - see: <http://www.rail-reg.gov.uk/server/show/nav.1118>

¹⁴ See: <http://www.rail-reg.gov.uk/server/show/nav.2298>