Railways: accidents

Standard Note: SN3114
Last updated: 20 March 2012
Author: Louise Butcher
Section Business and Transport

This note outlines the statutory framework for investigating accidents on the railway and provides information on five of the most serious accidents in the past fifteen years.

After every accident there is an accident report published, usually compiled by the Rail Accident Investigation Branch (RAIB). In the case of more serious accidents there is also often a public inquiry. Many of the safety improvements to the railway have come about following recommendations from public inquiries that followed serious accidents. It has proven very difficult for rail companies, including Railtrack/Network Rail, to be prosecuted for serious accidents. Where Network Rail has been found liable for accidents it is usually fined and there is an ongoing debate about the fact that public money, or money that might otherwise be invested in the railway, is used to pay these fines.

Information on other rail-related matters, such as safety, level crossings and Network Rail, can be found on the Railways Topical Page of the Parliament website.

Contents

1 Statutory responsibility

The Office of Rail Regulation (ORR) is the independent health and safety regulator for the railway industry, including metros, light rail and heritage, following implementation of the *Railways Act 2005*. It covers the safety of the travelling public as well as workers on the railways. As the independent economic and safety regulator, ORR can take enforcement action to ensure that those who have duties under the law are held to account for failures to safeguard health and safety.

ORR's health and safety strategy is to secure the proper control by duty holders of risks to the health and safety of employees, passengers and others who might be affected by the operation of Britain's railways. HM Railway Inspectorate (HMRI) sits within the ORR and they have Inspectors and policy advisors who work together to develop and deliver the strategy.

The term 'duty holders' means railway operators such as Network Rail, the freight and train operating companies and contractors who have responsibilities under health and safety law. The organisations which manage the business of the railways have the direct responsibility for health and safety but HMRI aims to work with the rail industry to help them in identifying common problems and to agree actions and priorities.

The *Railways Act 1993* brought all railway safety legislation within the framework created by the *Health and Safety at Work Act 1974*, as amended, and confirmed the Health and Safety Commission (HSC) as the principal provider of policy advice to Ministers on railway safety issues. The duties of the ORR with respect to railway safety for the most part replicate those of the HSC as set out in sections 11 and 50 of the 1974 Act. A Memorandum of Understanding exists between the HSE and ORR in order to ensure effective coordination and cooperation between these organisations in relation to the regulation of health and safety, including policy matters and the enforcement of health and safety law, on railways, tramways and other guided transport systems in Great Britain.

HMRI carries out inspections and audits to check that the rail industry has management systems in place and that they are effective in controlling the health and safety risks as set out in the safety cases. HMRI also targets risk areas of particular concern under what is called mandatory inspection programmes.

HMRI is responsible for the investigation of breaches of criminal law and health and safety legislation on the railways while the ORR and the Rail Accident Investigation Branch (RAIB), investigate accidents on the railways. RAIB carries out investigations into the most serious rail accidents and incidents without apportioning blame or liability with a view to enabling lessons to be learned, improving safety on railways and preventing similar accidents and incidents. HMRI is responsible for implementing any recommendation made by RAIB following the completion of their investigations.

2 Fatal rail accidents, prosecutions and fines

2.1 Overview

Since 1980 there have been many minor and several major accidents on the railway. The major ones are given in the table below:

Date	Location/incident	Deaths and injuries
23 February 2007	**Grayrigg** in Cumbria: Virgin Pendolino train from London to Glasgow derailed; the train travelled a further 600 metres and came to rest on the side of the railway embankment.	one person died and 28 were injured, including the train driver
6 November 2004	**Ufton Nervet**, between Reading and Newbury in Berkshire: the First Great Western service to Plymouth collided with a car on a level crossing.	seven people died and 37 were hospitalised
10 May 2002	**Potters Bar**: the coaches of a West Anglia Great Northern train from King's Cross to King's Lynn left the tracks immediately to the south of Potters Bar station.	seven people died and 40 were injured
28 February 2001	Great Heck, near **Selby**: a GNER passenger train hit a land rover on the track and then collided with a laden coal train.	13 people died and 75 were injured
17 October 2000	**Hatfield**: a GNER train travelling from King's Cross to Leeds was derailed.	four people died and 34 were injured
5 October 1999	**Ladbroke Grove**: a high speed passenger train collided with a turbo diesel multiple unit train travelling in the opposite direction.	31 people died, including both drivers, and 227 people were hospitalised
19 September 1997	**Southall**: an InterCity train from South Wales ran into a freight train.	seven people died and 150 were injured
8 August 1996	**Watford**: a passenger train passed a signal and collided with an empty train at a junction.	one passenger died and 69 were injured
15 August 1994	**Cowden**, Kent: a head-on collision on a single line.	five people died (three rail staff and two passengers) and 12 were injured
27 September 1991	**Newton**, Scotland: a head-on collision on a single lead junction where two lines came down to one leading up to a junction.	four people died (two train drivers and two passengers) and 22 were injured
8 January 1991	**Cannon Street** station in Central London: a train ran into buffers.	two commuters died and 542 were injured
March 1989	**Purley**, South London: two trains collided.	five died and 90 were injured

Date (cont...)	Location/incident	Deaths and injuries
December 1988	**Clapham Junction**: two commuter trains collided after a driver correctly stopped to report a faulty signal; many survivors died as a third train ploughed into wreckage.	35 people were killed and 113 injured
July 1986	**Lockington**, Yorkshire	nine people died and 11 were injured
July 1984	**Falkirk**, Scotland	13 people died and 44 were injured.

2.2 Southall

On 19 September 1997 an accident occurred at Southall, nine miles west of Paddington, when an InterCity train from South Wales ran into a freight train. Seven people died and 150 were injured. An inquiry into the accident was held between September and December 1999, chaired by Professor John Uff QC FREn. The terms of reference were "to determine why the accident happened and in particular to ascertain the cause or causes, to identify any lessons which have relevance for those with responsibilities for securing railway safety and to make recommendations". The Southall Rail Accident Inquiry Report was published in January 2000.[1]

Great Western Trains was cleared in July 1999 of the manslaughter of the seven people who died in the accident. Mr Justice Scott Baker ruled in a pre-trial hearing that the company could only be prosecuted if a person deemed to be a "controlling mind and will" of the company was prosecuted, and no such person could be found or charged. The judge in this case complained that "it is virtually impossible to bring a successful prosecution against a large corporation".[2]

2.3 Ladbroke Grove

On 5 October 1999 there was a collision at Ladbroke Grove Junction in West London when high speed passenger train collided with a turbo diesel multiple unit train travelling in the opposite direction. Thirty-one people died, including both drivers, and 227 people were hospitalised.

The HSC, with the consent of the then Deputy Prime Minister, John Prescott, directed that an inquiry be held under Section 14(2)(b) of the HSW Act. Lord Cullen was appointed by the HSC as Inquiry Chairman. The Act required the Inquiry to be held in public. The terms of reference of the inquiry were:

- to inquire into, and draw lessons from, the accident, taking account of the findings of the HSE's investigations into immediate causes;
- to consider general experience derived from relevant accidents on the railway since the Hidden Inquiry, with a view to drawing conclusions about the factors which affect safety management and the appropriateness of the current regulatory regime; and

---

1 HSC, H*Southall Rail Accident Inquiry Report*H, 31 January 2000

2 "Railtrack Charged After Man Died Reporting Fault", *The Independent*, 29 July 1999

- in the light of the above, to make recommendations for improving safety on the future railway.

Lord Cullen decided to divide the inquiry into two parts. Part 1 was held in 2000, and inquired into the crash while Part 2 was held later, and inquired into the general question of how safety on the railways was managed and regulated. Between Parts 1 and 2 of the Cullen Inquiry another, separate, inquiry (the Joint Inquiry) inquired into factors common to the crashes at Ladbroke Grove and Southall, including train protection systems and signals passed at danger. The Inquiry was chaired jointly by Lord Cullen and Professor Uff (who chaired the inquiry into the crash at Southall).

The Ladbroke Grove accident occurred at the time when the Southall Rail Accident Inquiry was sitting. In response to the public concern over the status and future of train protection systems Professor Uff (Chairman of the Southall Rail Accident Inquiry) and Lord Cullen, with the support of the HSC, took the view that there were wider matters, common to both incidents, which it would be appropriate to consider by means of a Joint Inquiry. The HSC therefore proposed joint working arrangements between the two chairmen to enable them to consider these matters together in a Joint Inquiry. The matters identified as appropriate for the Joint Inquiry were train protection and warning system (TPWS); the future application of Automatic Train Protection (ATP); and SPAD (Signals Passed at Danger) prevention measures.[3]

Chaired jointly by Lord Cullen and Professor Uff, the public hearings commenced on 19 September 2000 and concluded on 13 October 2000. Final submissions were presented in public on 27 October 2000. The report was published on 28 March 2001.[4]

In October 2003, directors of Thames Trains escaped prosecution for the Ladbroke Grove crash. The decision on Thames Trains came after a four year-long investigation by the CPS who finally stated that there were no grounds for action against the company's senior managers for gross negligence.[5]

2.4 Hatfield

On 17 October 2000 a GNER train travelling from King's Cross to Leeds was derailed near Hatfield, Hertfordshire. Four people died and 34 were injured.

An investigation into the cause of the derailment at Hatfield was undertaken jointly by HSE and the British Transport Police (BTP), with the latter taking the lead. The HSC requested that the derailment be investigated under section 14(2)(a) of the HSW Act. The aim of the investigation was to determine why the derailment occurred; what remedial action needed to be taken to prevent further incidents; and whether enforcement action, including prosecution, was appropriate. An independent Incident Investigation Board was set up to oversee the investigation. The Board was chaired by Sandra Caldwell (Director of HSE's Health Directorate and previously Chief Inspector of Construction and Member of the Channel Tunnel Rail Authority) and had members entirely independent of HSE. The Board's terms of reference were:

---

3 for more information on all of these issues, see sections 5 and 6 of: HC Library note HSN605

4 HSC, H*The Ladbroke Grove Inquiry: Part 1 Report*H, 28 March 2001; and HSC, H*The Ladbroke Grove Inquiry: Part 2 Report*H, 28 March 2001

5 "Train firm bosses spared charges of manslaughter", *The Independent*, 2 October 2003

- To ensure the thorough investigation of the Hatfield derailment by HSE and thereby establish its causation, including root causes;

- To identify and transmit to the appropriate recipients any information requiring immediate attention;

- To examine HSE's role in regulating safety on the railways with regard to this incident, both prior to and in the investigation of the incident, within the context of the existing regulatory framework applicable to railway safety and in securing compliance with regulatory requirements by the infrastructure controller and other duty holders involved; and

- To report findings to the Executive and Commission as soon as possible.

The HSE published two interim reports into the derailment, on 17 October 2000 and 23 January 2001 and on 22 August 2002 the HSC published recommendations prepared by the Investigation Board.[6] The final report was published on 24 July 2006.[7]

On 14 July 2005 Mr Justice Mackay dismissed all the manslaughter charges against managers from Railtrack and Balfour Beatty over the Hatfield crash. He instructed the jury "It is not open to you to convict any of the six defendants on charges of manslaughter. The trial will proceed on the health and safety charges faced by all defendants".[8] On 18 July Balfour Beatty changed its plea on the health and safety charges and admitted that it committed "safety blunders", Network Rail (which assumed responsibilities for the track and infrastructure from Railtrack in October 2002) continued with their no guilty plea.[9] On 6 September Balfour Beatty's rail maintenance unit and Network Rail were convicted of offences under the HSW Act. Balfour was fined a record £10 million and Network Rail was fined £3.5 million; while Balfour appealed the fine the taxpayer picked up the bill for Network Rail's portion of the fine.[10] In July 2006 Balfour's fine was cut to £7.5 million after appeal.[11]

2.5 Potters Bar and Grayrigg

On 10 May 2002 the coaches of a West Anglia Great Northern train from King's Cross to King's Lynn left the tracks immediately to the south of Potters Bar station in Hertfordshire. Seven people died and 40 were injured.

On 17 May 2002 the HSC announced that it had formally asked the HSE to investigate the derailment and to make a report to the HSC as soon as possible.[12] The terms of reference of the inquiry were to:

- ensure the thorough investigation of the derailment and thereby establish its causation, including root causes;

- identify, and transmit without delay to duty holders and other appropriate recipients, any information requiring immediate attention to further rail safety;

---

6 HSC, H*Hatfield Derailment Investigation: Interim Recommendations of the Investigation Board*H, 22 August 2002

7 ORR, H*Train Derailment at Hatfield: a final report by the Independent Investigation Board*H, 24 July 2006

8 "Hatfield rail death charges are dismissed", *The Guardian*, 15 July 2005

9 "Engineering firm admits safety errors at Hatfield", *The Times*, 19 July 2005

10 "Hatfield firm has yet to pay a penny of £10m fine", *London Evening Standard*, 25 April 2006

11 "Record £10m Hatfield fine cut to £7.5m", *Financial Times*, 6 July 2006

12 HSE press notice, "HSC requests HSE investigation of Potters Bar derailment", 17 May 2002

- examine HSE's role in regulating railway safety prior to the incident, in the context of the existing regulatory framework, and in securing compliance with legal requirements by the infrastructure controller and other duty holders;
- consider the incident in the context of other recent railway incidents and recommendations made following their investigation; and
- make recommendations for future action.

The HSE investigation focused on establishing the direct and root causes of the accident and has published three reports, on 14 May 2002, 4 July 2002 and 29 May 2003. Two of these reports included recommendations designed to prevent a similar accident from happening again and, generally, to make safety improvements on the railways. The HSE reported to the Secretary of State and the Investigation Board in November 2004 and according to a Rail Safety and Standards Board (RSSB) press notice, the final report issued in April 2005 is not publicly available.[13] All available documents, including a summary of the final report, are available on the Railways Archive website.[14]

In November 2006 Network Rail admitted 'risk creation' for the 2002 Potter's Bar accident, and in March 2007 it was fined £4 million.[15] The then Secretary of State for Transport announced to the House on 8 December 2005 that there would not be a public inquiry into Potters Bar.[16] Following a legal challenge by the family of one of those killed in the Potters Bar accident, it was confirmed in August 2006 that there would be no public inquiry.[17]

The inquest into the Potters Bar derailment was adjourned in February 2007 following the accident at Grayrigg in Cumbria when a Virgin Pendolino train from London to Glasgow derailed; the train travelled a further 600 metres and came to rest on the side of the railway embankment. One person died and 28 were injured, including the train driver. After the RAIB report into the Grayrigg accident was published in October 2008[18] the Secretary of State wrote to the affected parties to seek their views on how to proceed in both cases.[19] In June 2009 the Secretary of State for Transport, Lord Andrew Adonis, announced his decision that the public interest was "best served by the continuation of the two inquests that have begun into the deaths resulting from the rail accidents at Potters Bar and at Grayrigg". Therefore, he decided not to convene a public inquiry into the accidents, either individually or jointly.[20] A report on the implementation of the Grayrigg report recommendations was published in April 2011.[21]

In November 2011 the inquest into the death of Mrs Margaret Masson in the Grayrigg derailment concluded that badly maintained points caused her death.[22] Consequently, in January 2012 the regulator announced that it had started criminal proceedings against

---

13 RSSB press notice, "Potters bar derailment: rail safety and standards board issues final report", 12 April 2005

14 for general information, Hfollow this linkH and for a summary of the final report Hfollow this linkH [accessed 20 March 2012]

15 "Rail network faces unlimited fine over 16 safety breaches", *The Times*, 1 November 2006; and: "Network Rail fined £4m for Paddington disaster", *The Independent*, 31 March 2007

16 HC Deb 8 December 2005, c126WS

17 "Public inquiry into rail crash ruled out", *Financial Times*, 1 August 2006

18 RAIB, H*Rail Accident Report: Derailment at Grayrigg, 23 February 2007*H, October 2008

19 HHC Deb 19 November 2008, c24WS

20 HHC Deb 19 July 2009, c39WS

21 ORR, H*Summary of position in respect of the 29 recommendations made by RAIB in association with the derailment at Grayrigg on 23 February 2007*H, 8 April 2011

22 "Network Rail faces threat of fine for Cumbria rail crash", *Financial Times*, 5 November 2011

Network Rail for a breach of health and safety law which caused the derailment near Grayrigg. Network Rail is facing a charge under section 3(1) of the *Health and Safety at Work etc Act 1974*. This results from the company's failure to provide and implement suitable and sufficient standards, procedures, guidance, training, tools and resources for the inspection and maintenance of fixed stretcher-bar points.[23]

3 Appendix: Quintinshill, 1915

Britain's worst rail crash killed over 220 people on 22 May 1915 at Quintinshill near Gretna in Scotland when a troop-carrying train hit a local passenger train and another passenger train (the Scotch express) crashed into the wreckage. Stanley Hall outlines the cause of the accident in his book *Railway Accidents*:

> The signalman had forgotten that the local passenger train was standing up on the main line. He had therefore cleared all his signals for the troop train. The signalmen were changing shifts and both were involved. The troop train had been preceded by a goods train, which had been turned into the loop at Quintinshill, and when it was clear of the up main line the signalman had sent the 'Train out of section' signal to the signalbox in rear, Kirkpatrick. He should then have maintained his block indicator at 'Train on line' and sent the bell signal 'Blocking Back inside Home Signal' to protect the local train, but he failed to do so.
>
> The fireman of the local train had gone to the signalbox as soon as his train had been crossed to the up line, in order to remind the signalman of its presence as required by rule. The fireman should then have remained in the signalbox as a continuing reminder, unless the signalman had confirmed that he had taken protective measures (i.e. blocking back, and placing a metal collar over the up main line home signal to prevent its being cleared in error). The signalman did not take any protective measures and the fireman returned to his train without that vital assurance.[24]

Signalmen Tinsley and Meakin were found guilty at the assizes and served terms of imprisonment. They were found to have connived in altering the time of their shift changeover, and one of them was engaged in forging the entries in the train register when the crash occurred.

Most of the carriages of the troop train had wooden underframes and wooden coach bodies, in addition to gas lighting and as a consequence the fire took hold easily. There was serious damage: virtually all 15 coaches of the troop train were destroyed and consumed by fire; two passengers were killed on the local train; 215 passengers, including the driver and fireman, were killed on the troop train; seven passengers were killed on the Scotch express and several hundred were injured.[25]

The troops on the train were officers and men of the 1/7th (Leith) Battalion Royal Scots, Territorial Force bound for Liverpool on their way to Gallipoli as part of 156th Brigade of the 52nd (Lowland) Division. The remnants of the battalion arrived in Gallipoli on 13 June 1915 where it took part in the attacks on Gully Ravine and Achi Baba. A Memorial Cairn was raised on the site overlooking the area of the disaster in May 1995.

---

[23] ORR pres notice, "HRegulator prosecutes Network Rail for Grayrigg train derailmentH", 13 January 2012

[24] Stanley Hall, *Railway Accidents* (Ian Allen Publishing, Surrey), 1997, pp46-47

[25] for more information, MPs and their staff can view/order the Railway Inspectorate report of the accident from the House of Commons Library on x3636; the public can contact the House of Commons Information Office on 0207 219 4272 (Ref: Cd 8114, PP1914-1916, lx, 467)