

HSE's annual report on railway safety 2004

5th DRAFT

04 July 2005

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Foreword – Allan Sefton, Director of Rail Safety, HM Railway Inspectorate (HMRI)

This is my last report on rail safety, as I will have retired before the next one is published. Exceptionally, this year's report on railway safety covers a nine-month period ending 31 December 2004. This is because we are required to align our future reporting arrangements with the rest of Europe and to report on a calendar year. But, this report, like all others, covers the whole of the rail industry, including metros, light rail and heritage and is not limited to the 'interoperable' mainline railway defined in EU Rail Directives.

Performance

Overall the picture remains one of steady and positive progress, particularly on the mainline, and it is worth reflecting for a moment on why this is so. I would identify three main contributory factors. First, the decision by Network Rail to bring maintenance work 'in-house' is, without doubt, an opportunity to improve track risk management, including the influence of the workforce and Trade Unions, and we are already seeing some positive results of this change in policy. Second, a fresh approach and focus on risk management that I shall discuss in greater detail below. Last, but not least, there are real changes in the culture of risk management in the Boardrooms of Network Rail and train operating companies which should be recognised and encouraged.

However, despite this modernising agenda there remain issues of real concern. After a year in which there were no train incidents involving multiple injuries and fatalities on the Network Rail controlled infrastructure, the underground or the minor railways, the derailment at Ufton Nervet level crossing after a Great Western train struck a road vehicle left seven people fatally injured, including the driver of the train. Our deepest sympathies go to the bereaved. HMRI has worked hard to meet their needs since the accident.

The number of fatalities to workers in this reporting period (9 months only) is 4 compared with 9 for the previous year (which included the incident at Tebay in February 2004 when 4 track workers were killed). However, there is no room for complacency. There have been 4 further worker fatalities since the beginning of 2005 and there remain serious concerns about the number of reported incidents leading to major and minor injuries. These show no sign of reducing.

The number of fatalities as a result of trespass and the number of train accidents due to vandalism continues to fall. However, vandalism still accounts for about half of all reportable incidents, and the potential for incidents caused by vandalism – obstructions on the track, fires, missiles thrown at trains – to lead to serious consequences remains worrying.

Focusing on risk

Last year, I announced that HSE now targets its resources towards aiding the industry's management of the risks of high consequence accidents and also monitors our own performance by direct use of the mainline Railway Group's own risk model and annual target for reducing catastrophic 'train accident precursors'.

While there has been real progress in the model's single performance index against the target in the past nine months, it has not been as good as we might have hoped. However, it is worth recording that the model indicates that a 21% improvement has been achieved since March 2002. The risk from signals passed at danger (SPADs), a significant contributor to the overall risk, has continued to fall as a result of the introduction of the Train Protection and Warning System (TPWS), and the anticipated risk reduction is being achieved. There is also clear evidence that the operation of TPWS has prevented some serious accidents. However, the fall in SPADs has now slowed and we are fast reaching the point where further reductions will mostly be dependent on non-engineering SPAD reduction measures.

Accidents at level crossings still hold the greatest potential for catastrophic risk on the railways. This was illustrated, all too graphically, by the tragic incident at Ufton Nervet level crossing last November. Ufton Nervet aroused public and political concern, and I applaud the significant progress that we have seen since then. However we must recognise that for real risk reductions to be achieved, even a risk based strategy of engineering improvements and crossing upgrades can only go so far. A more fundamental issue, and a more difficult nut to crack, is human behaviour and the intrinsic hazards of road/rail junctions with increasing traffic pressures in both modes.

The third significant contributor to the overall risk is irregular working. This element of the risk model is not well defined and includes a wide range of precursor incidents such as those that occur as a result of a failure to comply with rules. For real inroads to be made into reducing their occurrence, more work needs to be done to look at the activities that contribute to this element of the model and to seek new ways to tackle them. Again, understanding human behaviour/human factors, including management performance, will be key.

We will work closely with the industry to tackle all three of these problem areas.

In recent months, the Railway Group has agreed that there is a need to revisit the existing annual target for improving their catastrophic accident risks precursor index that was aspirational and uncoded. However, the risk model itself has moved firmly up the agenda and is now rightly recognised by Network Rail and TOCs as key to any future approach. Work is currently in hand within the Railway Group to ensure that the links are made between managing the risk setting performance targets and costs, and we will be working closely with them on this.

London Underground Limited (LUL), which already employs a risk-driven approach to the management of safety, is working to create similar risk modelling tools. We are encouraging this because we believe valuable

lessons will be learned from more cross-industry analysis and sharing of risk management techniques and skills.

Similarly, we are glad to see more cross-industry liaison, secondments and appointments from other industries, and we are setting an example ourselves by two-way secondments of inspectors and managers between HMRI and LUL, and 'embedded' inspectors with Network Rail to manage particular regulatory projects.

Enforcement

For the third successive reporting period, the number of enforcement notices issued by the Inspectorate (14) has reduced compared with the previous year (56). The number of prosecutions heard fell from 23 to 17 but the resulting fines rose from £552 750 to £3 383 600 largely as a result of a fine of £2 million imposed on Thames Trains for offences that contributed to the collision at Ladbrooke Grove in October 1999. Issuing enforcement notices and, in addition, prosecuting duty holders (where this is deemed to be appropriate) are only two of a range of tools at the disposal of the Inspectorate and are used principally to underpin or stimulate action by duty holders. In line with HSC policy, our aim is firm but fair enforcement of health and safety law, and it is heartening to note that we are finding that many deficiencies can be dealt with before formal enforcement becomes necessary.

The way forward

I have already said that this will be my last report on rail safety. I expect to be handing over to my successor before the end of this calendar year. It is also the last report for HMRI whilst under the governance of the Health and Safety Commission and the Health and Safety Executive (HSC/E). HMRI and HSE's Rail Policy Division will be merging with the Office of Rail Regulation (ORR) around the end of 2005. We are working hard with ORR to ensure that all goes smoothly.

In the past four years, and more particularly in the last two, I have seen and been part of fundamental change both within the industry and within HSE/HMRI. The Rail Delivery Programme (RDP) to modernise the inspectorate, which was generously funded by central government, delivered in time and to budget in March this year. This programme was driven by the forthcoming fundamental changes to rail safety legislation to enact EU directives but it has also put in place the building blocks for a modern, outward looking Inspectorate that is eager to contribute to the modernisation of the industry. I believe this is a good inheritance for ORR. The path has not always been easy and I would like to take the opportunity here to thank my staff for the positive way they have responded. In the next few months, we will be working hard to embed the changes into our ways of working.

I have been asked whether this annual report will continue to be produced after this year when we move to ORR. The answer to that must be yes. The new Safety Authority will be required to produce a report each year for the European Rail Agency (which is why we have had to change our reporting periods). However, both the format and content is something that we will be discussing with ORR in coming months.

Finally, I would like to thank all my staff for their unflinching support to me over recent years and for the contribution they have made to better management of risk by the railways.

THE YEAR IN BRIEF

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

April 2004

Ladbroke Grove rail collision: sentencing of Thames Trains

On 5 April 2004, Thames Trains were fined a record £2 million for breaches of health and safety law resulting in the collision at Ladbroke Grove. The fine followed a one-day sentence hearing at the Old Bailey, where the judge also awarded costs to HSE of £75,000 in addition to the fine. Thames Trains pleaded guilty at a hearing on 10 December 2003 to charges that it breached Section 2(1) and Section 3(1) of the Health and Safety at Work etc Act 1974 (HSW Act).

www.hse.gov.uk/railways/ladbrokegrove.htm

The HSC's response to the Department for Transport's Rail Review

On 13 April 2004, HSC published its response to the Department for Transport's Rail Review, announced by Alastair Darling on 19 January 2004.

www.hse.gov.uk/railways/railreview.htm

May 2004

HSC welcomes second report on UK development of the European Signalling System

On 18 May 2004, HSC welcomed a report from the Strategic Rail Authority-led team developing a European signalling system (European Rail Traffic Management System) that will incorporate the safety (and other) benefits of a national automatic train control system.

www.hse.gov.uk/press/2004/c04020.htm

Rail gang supervisor fined for not doing safety check

On 18 May 2004, a trackworker gang supervisor was fined a total of £2000 for failing to carry out an essential cable avoidance tool (CAT) scan to check for hidden cables before excavation work at Waterloo Road in Sittingbourne on 11 March 2003. This resulted in his gang driving a metal spike through a 33Kv oil filled cable. Fortunately there were no injuries, and services were not affected, but the potential for death or serious injury was significant.

www.hse.gov.uk/press/2004/e04069.htm

Construction companies' £30 000 fine following piling rig fall onto railway

On 18 May 2004, two construction companies, Morgan Est PLC (Morgan) and Vinci Construction Grand Projets (VCGP), were fined a total of £30 000 for breaches of health and safety legislation. The prosecution followed an investigation by HMRI into an incident on 12 May 2003 when a piling rig fell across the London-Tilbury-Southend passenger and freight railway lines at Aveley viaduct, Thurrock, Essex, during construction works on the Channel Tunnel Rail Link.

www.hse.gov.uk/press/2004/e04070.htm

June 2004

Wicksteed Park fined after narrow gauge railway derailment

On 28 June 2004, Wicksteed Park Ltd pleaded guilty at Kettering Magistrates Court to failing to comply with health and safety legislation and was fined £15 000 after a derailment in September 2003. The incident involved a train carrying about 70 people that derailed on the 24" narrow gauge railway and injured several members of the public. An investigation showed that poor

maintenance was the main cause of the incident, with a shortage of ballast allowing the track to move.

www.hse.gov.uk/press/2004/e04090.htm

July 2004

Network Rail and AMEC Rail fined for derailment

On 2 July 2004, Network Rail Infrastructure Limited (NRIL) and AMEC Rail Limited (ARL) were fined a total of £70 000 at Southwark Crown Court. The case followed an investigation by HMRI into the derailment of a passenger train outside West Sutton station in Surrey in 2001. No injuries were caused by the incident and services were reinstated the following day.

www.hse.gov.uk/press/2004/e04080.htm

HSE consultation on proposals to allow train operating companies to run some Mark I trains during 2005

On 5 July 2004, HSE published a consultation paper seeking views on proposed exemptions to allow three train-operating companies and Network Rail to continue running some Mark I rolling stock past the regulatory deadline into 2005.

www.hse.gov.uk/press/2004/e04092.htm

Department for Transport's Rail Review: *The Future of Rail* White Paper

On 15 July 2004, Alistair Darling, the Secretary of State for Transport, announced the transfer of responsibility for railway safety regulation from HSC/E to the new Office of Rail Regulation (ORR) in *The Future of Rail* White Paper.

www.hse.gov.uk/railways/railreview.htm

August 2004

The future of rail passenger representation

Following DfT's Rail Review announcement, changes were announced to the structure of the Rail Passengers Council. The Government's White Paper *The Future of Rail* set out changes to rail passenger representation.

www.railpassengers.org.uk/Council

September 2004

HSC publishes proposals for new safety regulations for railways and other guided transport systems

On 6 September 2004, HSC launched a public consultation on proposals for new safety requirements for railways and other guided transport systems.

www.hse.gov.uk/press/2004/c04040.htm

HSE subsequently published a web-based revised guide on the Railway and Other Transport Systems (Approval Works, Plant and Equipment) Regulations 1994 (ROTS).

www.hse.gov.uk/press/2005/e05030.htm

Rail Public Inquiries: progress on recommendations

On 14 September 2004, HSC published its third progress report on the recommendations made following recent rail Public Inquiries. Of the total of 295 recommendations arising from the four Public Inquiries reports into rail safety, 27 were awaiting completion.

www.hse.gov.uk/railways/railpublic3.pdf

HSE publishes annual report on Railway Safety 2003/04

On 21 September 2004, HSE published its annual report on the safety record of Britain's railways during the period 1 April 2003 to 31 March 2004.

www.hse.gov.uk/railways/annualreport0304/index.htm

October 2004

McGinley Recruitment Services and Balfour Beatty Rail fined

On 1 October 2004, McGinley Recruitment Services Limited (MRS) and Balfour Beatty Rail Infrastructure Services Limited, (BBRIS) were fined a total of £325 000 in the Central Criminal Court, London. The prosecution followed HSE's investigation into the death of rail worker Michael Mungovan on 9 October 2000.

www.hse.gov.uk/press/2004/e04136.htm

HSE grants Mark I rolling stock exemptions

On 22 October 2004, following an open public consultation, HSE granted exemptions to three train-operating companies and Network Rail to allow continued operation of Mark I rolling stock in southern England past the regulatory deadline of 31 December 2004 set by the Railway Safety Regulations 1999. This allowed the operators Southern, South West Trains Ltd and South Eastern Trains Ltd to continue to run Mark I rolling stock without central door locking until 30 November 2005, subject to conditions.

www.hse.gov.uk/railways/liveissues/mark1stock.htm

November 2004

Network Rail fined £20 000 following cable strike

On 29 October 2004, Network Rail Infrastructure Ltd (NRIL) pleaded guilty and was fined £20 000 following a prosecution by HMRI after lineside workers struck a buried 11 000 volt cable during lineside maintenance work at Bargoed, Mid Glamorgan, on 11 June 2003.

www.hse.gov.uk/press/2004/e04153.htm

Network Rail and Jarvis Facilities Limited fined following child's death

On 3 November 2004, Network Rail Infrastructure Limited (NRIL) and Jarvis Facilities Limited (JFL) received fines totalling £285 000 at Liverpool Crown Court because of inadequacies of lineside fence maintenance. HMRI's prosecution followed its investigation into the death of eight-year-old Heather Foster, who died following contact with the electrified third rail of railway track near St Michael's Station, Merseyside on 14 August 2000.

www.hse.gov.uk/press/2004/e04152.htm

Train derailment at Ufton level crossing near Ufton Nervet, Berkshire

On 6 November 2004, seven people died and 37 people were taken to hospital after a derailment at Ufton automatic half-barrier (AHB) level crossing near Ufton Nervet, Berkshire. The 17:35 First Great Western service from London Paddington to Plymouth collided with a car at Ufton level crossing. The British Transport Police (BTP) and Thames Valley Police (TVP) investigated, with technical assistance from HMRI. On 10 November, HMRI published its [interim report](#) into the incident, preceded by a press release.

www.hse.gov.uk/press/2004/e04156.htm.

Railway Safety and Standards Board (RSSB) Formal Inquiry into the derailment at Ufton level crossing

RSSB is managing and organising a rail industry Formal Inquiry by a three-person panel independent of any of the organisations involved. The Coroner's Inquest started on 11 November 2004.

www.rssb.co.uk/formal_announce_ufton.asp

Train collision with level crossing gate at Rowston, Lincolnshire

On 15 November 2004, the Central Trains 08:04 Lincoln to Peterborough service collided with a level crossing gate at Rowston Manual Controlled Gate (MCG) level crossing, between Scopwick and Ruskington, Lincolnshire. There were no injuries.

December 2004

Wessex Trains fined £10 000 following injury to a mechanical fitter

On 17 December, Wessex Trains was fined a total of £10 000 following a HSE prosecution after an investigation into an incident where a mechanical fitter sustained severe injuries to his hand. On 9 January 2004, the fitter's right hand was trapped in a diesel multiple unit's ribbed multi-vee auxiliary belt, resulting in all four fingers being crushed and his little finger being amputated to the first joint.

www.hse.gov.uk/press/2004/e04175.htm

Train collides with a van on a level crossing near Helpringham

On 6 December, the Central Trains 12:41 Peterborough to Lincoln service collided with a van on the Pump House level crossing (an agricultural user-worked level crossing) near Helpringham in Lincolnshire. The two occupants of the van were killed.

HSE's Director of Rail Safety to lead HMRI into the merger with ORR

Dr Allan Sefton, Director of Rail Safety, announced that he would remain in post until HMRI's merger with the Office of Rail Regulation (ORR). This extends Dr Sefton's contract beyond his planned retirement date of 14 April 2005 and was agreed by HSE's Director General, Timothy Walker, and ORR's Chair, Chris Bolt.

www.hse.gov.uk/press/2004/e04171.htm

INCIDENT INVESTIGATION

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

Key facts

- First Great Western train derailed after striking a road vehicle at Ufton level crossing – 7 people fatally injured.
- Two derailments at Willesden and at Llandeilo resulted in no injuries.
- A collision between a passenger train and a van at a user-worked crossing resulted in both occupants of the van suffering fatal injuries.
- A second incident involving a train and a van at a level crossing resulted in minor injuries only.

Summary

Presented here are some of the incident investigations undertaken by HMRI inspectors during the period 1 April 2004 to 31 December 2004.

On 23 April 2004 a Shrewsbury to Swansea train service became derailed while entering Llandeilo station. Network Rail instigated an investigation. The immediate cause of the derailment was identified as facing points being open as the train approached, resulting in the wheels of the train splitting the points. A response is awaited from Network Rail concerning their proposed action plan to implement recommendations arising from the investigation.

On 18 May 2004 at Upminster Station a female passenger pushed her bag into the closing doors of a departing train, and was then dragged along the platform by the bag straps looped round her wrists. A member of c2c station staff realised

what was happening and managed to wrench the strap from the passenger's wrist. She fell to the platform and suffered minor injuries from the fall. The incident was investigated by HMRI, with no inherent failure being found in either equipment or procedures. Recommendations were made to c2c on how it could reduce the probability and consequences of a similar incident.

On 12 July 2004 at Willesden Junction (High Level) Station, a freight train derailed on the bridge approach to the station, directly over the West Coast Main Line. The leading six wagons were derailed, leaving one wagon resting at an angle against a parapet. Some debris fell onto Station Approach and the line below, breaking the windscreen of a driving van trailer on the West Coast Main Line. Nobody was injured. An HMRI inspector attended the incident and noted the generally poor condition of the track in the area. Gauge spread was indicated; track components had been already scheduled for renewal.

On 22 October 2004, the driver of a large van at Plassers (West Ealing) AOCL (automatic open crossing, locally monitored), drove onto the crossing at the same time as a local train. In the resulting collision, the van and parts of the crossing mechanism were badly damaged. The train suffered minor damage to the left hand side of the front cab. Some passengers received cuts and bruises and the van driver suffered a dislocated shoulder. In the investigation, no fault was found in either the working of the crossing or in the way the train was driven. BTP are considering prosecution of the van driver.

On 6 November 2004 seven people were killed at Ufton level crossing, between Newbury and Reading. The First Great Western service struck a car at the crossing, causing the leading power car of the train to derail. Catastrophic derailment of all vehicles occurred as the train passed over the facing points at the London end of a goods loop some 91 metres further on. Five passengers, the train driver and the car driver were fatally injured. There were also 37 passenger injuries. It is thought that the car driver stopped his vehicle on the crossing before

the barrier sequence commenced and made no attempt to leave the vehicle once the crossing traffic signals began to flash and the barriers descended.

On 6 December 2004 a Central Trains service from Peterborough to Newark struck a van at Pumphouse 122 user-worked crossing. The van was pushed down the track until it struck the parapet of a bridge. Both occupants of the van suffered fatal injuries. The three train passengers and the train crew were not physically injured: the train driver suffered severe shock. Acceptable and well-maintained notices were displayed at the crossing; a telephone is now to be provided on both sides of the crossing.

ENFORCEMENT

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Key fact

- There were 14 enforcement notices issued in the nine-month period between 1 April and 31 December 2004. This compares with 56 in the twelve-month period 1 April 2003 to 31 March 2004.

Summary

During the period, HMRI inspectors issued 14 enforcement notices: 9 improvement notices (IN) and 5 prohibition notices (PN). This is the third consecutive reporting period where there has been a reduction in the need to issue enforcement notices.

Although we cannot afford to be complacent, it is heartening to note that many deficiencies were dealt with before formal enforcement became necessary.

Notices are used by HMRI to underpin or stimulate action by duty holders, including infrastructure and station controllers, train operators and contractors. Some typical examples are summarised below.

Enforcement notices

An IN was served on Mobile Frag Sales Limited requiring them to notify users that a serious risk had become apparent during the operation of their Rail Cropper product.

Following an incident at Marston Green near Birmingham, an IN was served on Network Rail Infrastructure Limited because of shortfalls in three areas related to the safety of employees and others when working on or about 25kV overhead line equipment.

A PN was served against Birse Rail Limited due to their inadequate control of risks from large mechanical plant reversing in close proximity to members of the public.

Summary of enforcement notices issued 1994/95 – 2004

	Improvement (IN)	Prohibition (PN)	Total
1994/95	12	3	15
1995/96	15	8	23
1996/97	20	4	24
1997/98	14	19	33
1998/99	15	6	21
1999/00	31	14	45
2000/01	40	11	51
2001/02	105	24	129
2002/03	81	22	103
2003/04	39	17	56
2004 *	9	5	14
* 2004 covers a 9-month period from 1 April 2004 to 31 December 2004			

PROSECUTIONS

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

Key fact

- In the nine-month period from 1 April 2004 to 31 December 2004, there were 17 prosecutions heard resulting in fines totalling £3 383 600. This compares with 23 prosecutions in the previous twelve-month period (2003/04), where fines totalled £552 750.

Summary

The 17 prosecution cases resulted in fines totalling £3 383 600, with £252 390 awarded in costs. Most of the cases relate to incidents that occurred between two and five years ago, including the prosecution of Thames Trains (by the Crown Prosecution Service) regarding their role in the Ladbroke Grove collision.

The table below summarises prosecutions and fines over the last seven years, with a further table detailing the prosecution cases heard between 1 April and 31 December 2004.

Summary of prosecutions 1998/99 – 31 December 2004

Year	Number of prosecutions heard	Total fines	Total costs
1998/99	10	£695 000	£66 704
1999/00	11	£1 899 000	£31 475
2000/01	12	£1 115 000	£96 226
2001/02	13	£469 000	£66 230
2002/03	11	£183 500	£36 375
2003/04	23	£552 750	£119 076
2004*	16	£3 383 600	£252 390

*2004 is a 9-month period from 01 April 2004 to 31 December 2004.

Summary of prosecutions heard 1 April 2004 – 31 December 2004

HSE Case No.	Defendant	Date of offence	Location	Legislation breached	Date of hearing	Penalty imposed	Costs	Nature of incident
F220000087	Wales and West Passenger Trains Ltd t/a Wessex Trains	09/01/2004	Exeter depot	HSW Act 1974 S3	17/12/2004	£7 500	£2 284	Severe injuries to right hand of person carrying out fault finding on Class 153 DMU at Exeter Depot. No safe system of work or suitable and sufficient risk assessment.
F220000087	Wales and West Passenger Trains Ltd t/a Wessex Trains	09/01/2004	Exeter depot	HSW Regs 1999 (No3) (1)	17/12/2004	£2 500	£0	Severe injuries to right hand of person carrying out fault finding on Class 153 DMU at Exeter Depot. No safe system of work or suitable and sufficient risk assessment.
F220000076	Wicksteed Park Ltd	07/09/2003	Wicksteed Park	HSW Act 1974 S3 (1)	28/06/2004	£15 000	£2 354	Several minor injuries following narrow gauge railway derailment. Various faults and poor maintenance; incompetent staff; operational procedures not followed by crew.
F220000067	Network Rail Infrastructure Ltd	11/06/2003	Bargoed, Mid Glamorgan	HSW Act 1974 S3 (1)	29/10/2004	£20 000	£6 519	Failure to implement safety management systems to mitigate risk from ground penetration works and buried services.
F230000422	Morgan Est PLC	12/05/2003	Aveley Viaduct, Thurrock	HSW Act 1974 S3 (1)	18/05/2004	£15 000	£2 514	Piling rig fell across London-Tilbury-Southend passenger and freight railway lines, during construction works on Channel Tunnel Rail Link.
F230000422	Vinci Construction Grand Projets	12/05/2003	Aveley Viaduct, Thurrock	HSW Act 1974 S3 (1)	18/05/2004	£15 000	£2 514	Piling rig fell across London-Tilbury-Southend passenger and freight railway lines, during construction works on Channel Tunnel Rail Link.
F220000083	Jason Robert Grindley	11/03/2003	Waterloo Road Sittingbourne	HSW Act 1974 S7	18/05/2004	£1 000	£1 000	Defendant failed to take reasonable care for the health and safety of himself and others at work.
F220000083	Jason Robert Grindley	11/03/2003	Waterloo Road Sittingbourne	CHSW Reg 1996 No.12 (8)	18/05/2004	£1 000	£0	Defendant allowed excavation work to be carried out without steps being taken to identify and prevent any risk of injury from any underground cable.
F220000055	First Engineering Ltd	14/11/2002	Finnieston Premises	HSW Act 1974 S2 (1)	28/09/2004	£200 000	£0	Employee killed during operations to lift a pack of 20 wooden railway sleepers from a vehicle using a lorry mounted crane.
F220000056	Jarvis Facilities Ltd	10/11/2002	Aldwarke Junction	HSW Act 1974 S3 (1)	05/07/2004	£400 000	£28 061	Empty coal train derailed as a result of a defect at a crossing at Aldwarke Junction. Defect not properly corrected before being returned to traffic.
F220000034	Edmund Nuttall Ltd	08/03/2002	Minor Railside Scotland	HSW Act 1974 S2 (1) & 3 (1)	16/12/2004	£13 000	£0	Employee injured as a result of riding with other employees and non-employees in a wagon not suited for carrying personnel.

HSE Case No.	Defendent	Date of offence	Location	Legislation breached	Date of hearing	Penalty imposed	Costs	Nature of incident
F220000035	Lindsay Plant Limited	08/03/2002	Minor Railside Scotland	HSW Act 1974 S3 (1)	16/12/2004	£10 000	£0	Employee injured as a result of riding with other employees and non-employees in a wagon not suited for carrying personnel.
F220000036	First Engineering Ltd	08/03/2002	Minor Railside Scotland	RSC Regs 2000 No. 10 (1)	16/12/2004	£3 600	£0	Employee injured as a result of riding with other employees and non-employees in a wagon not suited for carrying personnel.
F220000046	Amec Spie Rail (UK) Limited	09/10/2001	West Sutton Station	HSW Act 1974 S3 (1)	02/07/2004	£40 000	£17 500	Passenger train derailed at West Sutton due to steps not being taken to remedy various faults, despite reports and remedial works at various locations nearby.
F220000047	Network Rail Infrastructure Ltd	09/10/2001	West Sutton Station	HSW Act 1974 S3 (1)	02/07/2004	£30 000	£12 500	Passenger train derailed at West Sutton. Prior warnings of problem from high-speed track recording coach (HSTRC) outputs ignored. RT engineers visited site a week before incident.
F220000084	McGinley Recruitment Services Ltd	09/10/2000	Vauxhall	HSW Act 1974 S3 (1)	01/10/2004	£175 000	£24 000	Fatal accident at Vauxhall where a student, an agency worker with MRS working on Balfour Beatty contract, was struck by train while placing protection.
F220000085	Balfour Beatty Rail Infrastructure Services Ltd	09/10/2000	Vauxhall	HSW Act 1974 S3 (1)	01/10/2004	£150 000	£18 144	Fatal accident at Vauxhall where a student, an agency worker with MRS working on Balfour Beatty contract, was struck by train while placing protection.
F220000003	Jarvis Facilities Ltd	14/08/2000	Near St Michael's, Liverpool	HSW Act 1974 S3 (1)	03/11/2004	£200 000	£40 000	8-year-old girl was electrocuted when she came into contact with live conductor rail, while playing with her brother and a friend. Boundary fence was holed.
F220000004	Network Rail Infrastructure Ltd	14/08/2000	Near St Michael's, Liverpool	HSW Act 1974 S3 (1)	03/11/2004	£85 000	£20 000	8-year-old girl was electrocuted when she came into contact with live conductor rail, while playing with her brother and a friend. Boundary fence was holed.
F220000081	Thames Trains Ltd	06/10/1999	Ladbroke Grove Rail Accident	HSW Act 1974 S2(1) & 3(1)	05/04/2004	£2 000 000	£75 000	Serious omissions in driver training programme. Thames Trains' driver drove his train through signal SN109 when it was showing red. This caused a collision; 31 people died and many people suffered serious injuries.
TOTALS						£3 383 600	£252 390	

COMPLAINTS

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

Key fact

- During the period 1 April 2004 to 31 December 2004, HMRI responded to 518 complaints concerning conditions on the railway. This compares favourably with the 768 recorded for the previous twelve-month period 2003/04.

Summary

In the nine-month period, 518 complaints about conditions on the railway were recorded and dealt with by HMRI inspectors or by Railway Inspectorate Contact Officers (RICOs).

The majority of complaints again came from members of the public. 79 were from rail employees, and 56 from trade union or safety representatives.

TRAIN INCIDENTS

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

Key facts

- There were 5 train incident passenger fatalities in the nine-month period 1 April 2004 to 31 December 2004.
- 1001 train incidents occurred in the nine-month period 1 April to 31 December 2004, compared with 1259 in the previous twelve-month period.
- Train collisions totalled 44 (59 in the previous twelve-month period).
- Derailments in the nine-month period totalled 47 (62 in the previous twelve-month period 2003/04).
- Significant train incidents stood at 63 (63 in 2003/04).
- Damage to train windscreens totalled 281 (393 in 2003/04).

Summary

There were 20 passenger (including trams) derailments in the nine-month period 1 April 2004 to 31 December 2004, and 27 freight derailments.

Collisions

Two noteworthy low speed buffer stop collisions occurred at Liverpool Lime Street Station. There were a small number of minor injuries. Both incidents involved class 390 Virgin Pendolino trains. Initial investigations revealed brake system design flaws in low adhesion conditions. Investigations into the train braking performance are ongoing.

A stationary freight train waiting at a red signal at Norton Bridge was hit in the rear by a freight train, which had passed a non-TPWS protected signal at danger. The driver of the moving freight train jumped into the body of the locomotive and survived.

In November 2004 a First Great Western high-speed train travelling at 100 mph was derailed on all axles following an impact with a car at Ufton level crossing. There were 7 fatalities including both the train and car drivers, and 37 passengers taken to hospital. Further details can be found under 'Incident investigation' elsewhere in this report.

A steam locomotive on the Severn Valley Railway Heritage line collided with a van on a crossing at Highley. The van driver suffered serious injuries.

CASUALTIES IN TRAIN INCIDENTS 2004* BY TYPE OF INCIDENT																
Index	Totals	Railway employees				Passengers			Other members of the public			All totals				
		Total	Fatal	Major	Minor	Total	Fatal	Injured	Total	Fatal	Injured	Total	Fatal	Major	Minor	Injured
		25	1	5	19	71	5	66	13	4	9	109	10	5	19	75
	Total from collisions	5	0	1	4	28	0	28	0	0	0	33	0	1	4	28
	<i>Collisions between</i>															
1**	Passenger trains	0	0	0	0	24	0	24	0	0	0	24	0	0	0	24
2**	Passenger trains and freight trains or light locomotives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3**	Freight trains, light locomotives or other moving vehicles	1	0	1	0	0	0	0	0	0	0	1	0	1	0	0
4	Trains and vehicles standing foul of the line	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5**	Trains and buffer stops or vehicles standing at buffer stops	4	0	0	4	4	0	4	0	0	0	8	0	0	4	4
6	Trains and projections from other trains or vehicles on parallel lines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total from derailments	7	1	1	5	41	5	36	4	3	1	52	9	1	5	37
7**	Derailments of passenger trains	3	1	1	1	41	5	36	4	3	1	48	9	1	1	37
8**	Derailments of freight trains	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0
	Total from running into obstructions	5	0	0	5	1	0	1	9	1	8	15	1	0	5	9
9	Trains running into obstructions:															
	a) at level crossings	1	0	0	1	1	0	1	7	1	6	9	1	0	1	7
	b) and c) elsewhere	4	0	0	4	0	0	0	2	0	2	6	0	0	4	2
	Total fires in trains	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0
10	Fires in trains:															
	a) passenger trains	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0
	b) freight trains	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total from other incidents	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11a	Other incidents	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total from damage to train windows including drivers cab windcreens	7	0	3	4	1	0	1	0	0	0	8	0	3	4	1
11b	Damage to cab/carriage windows	7	0	3	4	1	0	1	0	0	0	8	0	3	4	1

* 2004 is the nine-month period from 1 April 2004 to 31 December 2004.
** Significant train incidents ie occurring on or affecting passenger lines
The injuries as a result of the train accident at Ufton AHB LC on the 6 November 2004 are recorded against the passenger train derailment category

Train incident fatalities 1975 – 2004*

Year	Passengers	Railway Staff	Other Persons	Total
1975	47	7	3	57
1976	0	8	10	18
1977	0	3	9	12
1978	13	3	6	22
1979	8	8	4	20
1980	0	4	3	7
1981	4	1	2	7
1982	0	8	3	11
1983	2	1	7	10
1984	18	6	6	30
1985	0	0	6	6
1986	8	5	14	27
1987	3	1	6	10
1988	34	2	4	40
1989	6	6	6	18
1990	0	1	3	4
1991	2	0	1	3
1991/92	2	2	7	11
1992/93	0	1	4	5
1993/94	0	0	6	6
1994/95	3	5	4	12
1995/96	1	1	5	7
1996/97	1	0	0	1
1997/98	7	0	3	10
1998/99	0	0	3	3
1999/00	29	2	2	33
2000/01	10	4	3	17
2001/02	0	0	5	5
2002/03	6	1	3	10
2003/04	0	2	8	10
2004*	5	1	4	10
Total	209	83	150	442

Note: figures for 1991 cover the period 1 January 1991 - 31 March 1991

* 2004 is the nine-month period from 1 April 2004 to 31 December 2004

Total number of significant train incidents on all railways 1999/00 – 2004*

	1999/00	2000/01	2001/02	2002/03	2003/04	Five year average	2004*
Collisions involving passenger trains	10	15	14	11	10	12	13
Trains running into buffers at stations	13	8	9	7	0	7	7
Derailments of passenger trains	22	29	40	31	22	29	20
Collisions and derailments of freight trains on or affecting passenger lines	52	46	29	26	31	37	23
Total	97	98	92	75	63	85	63

* 2004 is the nine-month period from 1 April 2004 to 31 December 2004

Total number of significant train incidents on Network Rail 1999/00 – 2004*

	1999/00	2000/01	2001/02	2002/03	2003/04	Five year average	2004*
Collisions involving passenger trains	7	12	10	9	9	9	8
Trains running into buffers at stations	10	5	8	5	0	6	7
Derailments of passenger trains	8	13	12	10	8	10	8
Collisions and derailments of freight trains on or affecting passenger lines	43	42	24	22	23	31	20
Total	68	72	54	46	40	56	43

* 2004 is the nine-month period from 1 April 2004 to 31 December 2004

Total number of significant train collisions on all railways 1999/00 – 2004*

	1999/00	2000/01	2001/02	2002/03	2003/04	Five year average	2004*
Between passenger trains	7	11	12	10	5	9	13
Between passenger trains and other trains	3	3	2	1	5	3	0
Between non-passenger trains	2	2	0	3	2	2	2
With buffer stops	13	9	9	7	0	8	7
Total	25	26	23	21	12	21	22

* 2004 is the nine-month period from 1 April 2004 to 31 December 2004

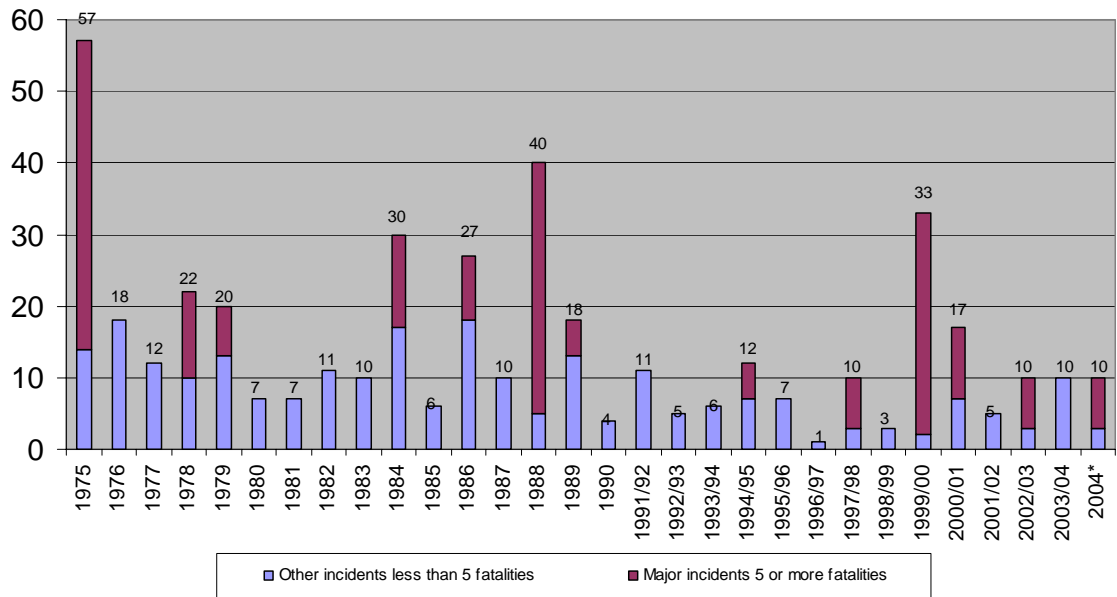
Significant train derailments all railways 1999/00 – 2004*

	1999/00	2000/01	2001/02	2002/03	2003/04	Five year average	2004*
Passenger trains	22	29	40	31	22	29	20
Non-passenger trains	50	43	29	23	29	35	21
Total	72	72	69	54	51	66	41
Basic causes:							
Staff error	23	20	26	17	14	20	12
Technical defects	40	37	33	24	30	33	20
Management and supervisory failure	2	3	1	4	1	2	1
Other causes	7	12	9	9	6	9	8

* 2004 is the nine-month period from 1 April 2004 to 31 December 2004

Train incident fatalities 1975 - 2004*

(*2004 is the nine-month period from 1 April 2004 to 31 December 2004)



INCIDENTS INVOLVING PASSENGERS, STAFF, AND MEMBERS OF THE PUBLIC

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

Key facts

- In the nine-month period from 1 April 2004 to 31 December 2004 a total of 19 passengers, railway staff and other members of the public were fatally injured, compared with 39 in the previous twelve-month period (2003/04).
- 19 passenger fatalities from all causes, compared with 12 in the previous reporting year.
- There were 5 passenger fatalities resulting from train incidents, compared with none in 2003/04.
- 4 railway staff fatalities, compared with 9 in 2003/04 .
- 5 deaths of other members of the public, compared with 18 in 2003/04.

Summary

During 2004, 19 people died in incidents on the railways, excluding trespassers and suicides.

Casualties in movement incidents 2004*

	FATAL					HOSPITAL TREATMENT					All totals					
	NR	LUL	Trams	Other	Total	NR	LUL	Trams	Other	Total						
Passenger Total	2	0	0	0	2	256	140	22	9	427	429					
Entering or alighting from trains	0	0	0	0	0	128	73	2	4	207	207					
Falling off platforms or being struck or run over by train	0	0	0	0	0	2	6	0	0	8	8					
Crossing the lines at stations	1	0	0	0	1	0	0	0	0	0	1					
Opening or closing of carriage doors	0	0	0	0	0	42	22	1	1	66	66					
Falling out of carriages during the running of trains	1	0	0	0	1	0	0	0	1	1	2					
Other incidents	0	0	0	0	0	84	39	19	3	145	145					
Other Members of the Public Total	1	0	0	0	1	0	0	9	1	10	11					
At level crossings	1	0	0	0	1	0	0	1	0	1	2					
On business at stations, on tramways etc	0	0	0	0	0	0	0	7	1	8	8					
Postal workers	0	0	0	0	0	0	0	1	0	1	1					
	FATAL					MAJOR INJURIES					OVER 3 DAY INJURIES					
	NR	LUL	Trams	Other	Total	NR	LUL	Trams	Other	Total	NR	LUL	Trams	Other	Total	All totals
Railway employee total	3	0	0	0	3	26	2	1	1	30	207	39	9	5	260	293
Shunting incidents																
Getting on or off or falling off, moving locomotive wagons	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	2
Coming into contact with vehicles or fixed lineside objects when riding on locomotives etc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Staff on train involved in a collision sidings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Being caught between vehicles while coupling or uncoupling	0	0	0	0	0	1	0	0	0	1	0	1	0	1	2	3
Struck or caught between vehicles when walking on the line	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Miscellaneous	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	2
Incidents during the running of trains																
Getting on or off or falling from locomotives, wagons etc	0	0	0	0	0	5	1	1	1	8	58	8	0	0	66	74
Coming into contact with fixed lineside objects when riding on trains etc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train staff while on board train	0	0	0	0	0	11	1	0	0	12	97	11	7	0	115	127
Miscellaneous	0	0	0	0	0	1	0	0	0	1	21	6	0	2	29	30
Incidents to staff working on or about the track:																
Struck by train etc when acting as lookout or handsignaller	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Struck by train etc when working on or about the track	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Struck by train etc when authorised to walk on the track	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Struck by flying objects or out-of-guage parts of a train	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Miscellaneous	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Other movement incident																0
Struck by train etc when required to cross the line of duty	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Struck by train etc when not required to walk on the track	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(inc failure to use an authorised route)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Through movement of vehicles at which workers were engaged	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Miscellaneous	0	0	0	0	0	5	0	0	0	5	26	13	2	2	43	48

*2004 is a 9-month period from 01 April 2004 to 31 December 2004

Casualties in non-movement incidents 2004*

	FATAL					HOSPITAL TREATMENT					All totals					
	NR	LUL	Trams	Other	Total	NR	LUL	Trams	Other	Total						
Passengers total	1	0	1	1	3	755	735	16	48	1554	1557					
Ascending or descending steps and escalators at stations	0	0	0	0	0	363	559	7	40	969	969					
Being struck by barrows, falling materials, falling over packages etc	0	0	0	1	1	25	9	0	1	35	36					
Falling from platform onto line	0	0	1	0	1	29	11	2	0	42	43					
Electric shock on electrified railways	0	0	0	0	0	1	0	0	0	1	1					
Slips, trips and falls	1	0	0	0	1	300	140	6	6	452	453					
Other incidents	0	0	0	0	0	37	16	1	1	55	55					
Other persons total	0	0	0	0	0	27	4	0	0	31	31					
On business/miscellaneous	0	0	0	0	0	17	4	0	0	21	21					
Pedestrians at level crossings	0	0	0	0	0	5	0	0	0	5	5					
Postal workers	0	0	0	0	0	5	0	0	0	5	5					
	FATAL					MAJOR INJURIES					OVER 3-DAY INJURIES					All totals
	NR	LUL	Trams	Other	Total	NR	LUL	Trams	Other	Total	NR	LUL	Trams	Other	Total	
Railway staff total	0	0	0	0	0	239	16	3	8	266	792	302	22	38	1154	1420
Contact with or being trapped by moving machinery	0	0	0	0	0	6	0	0	1	7	5	0	0	0	5	12
Struck by moving, including flying or falling object, other than rails	0	0	0	0	0	33	1	0	0	34	80	22	1	2	105	139
Struck by moving vehicle (other than rail vehicle)	0	0	0	0	0	3	0	0	0	3	9	0	0	1	10	13
Struck against something fixed or stationary	0	0	0	0	0	4	0	0	0	4	19	13	0	4	36	40
Injured while handling, lifting or carrying other than rails	0	0	0	0	0	10	0	0	1	11	100	24	4	5	133	144
Fall through height of more than 2 metres	0	0	0	0	0	4	1	0	0	5	6	1	0	0	7	12
Fall through height of 2 metres or less	0	0	0	0	0	19	2	0	1	22	38	20	2	0	60	82
Fall from a stationary rail vehicle	0	0	0	0	0	4	0	0	0	4	4	0	0	1	5	9
Slip, trip or fall on the same level	0	0	0	0	0	65	4	0	3	72	208	47	3	10	268	340
Trapped by something collapsing or overturning	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Burnt or scalded other than by chemical or electrical agents	0	0	0	0	0	4	0	0	0	4	7	1	0	0	8	12
Using power-driven hand tools	0	0	0	0	0	2	0	0	0	2	7	0	1	1	9	11
Using unpowered hand tools	0	0	0	0	0	4	0	0	1	5	22	8	1	4	35	40
Handling rails by manual or mechanical means	0	0	0	0	0	15	0	0	0	15	35	3	0	2	40	55
Electric shock or burns from plant or equipment	0	0	0	0	0	4	1	0	0	5	4	2	0	0	6	11
Electric shock or burns from live rail on electrified lines	0	0	0	0	0	1	0	0	0	1	1	1	0	0	2	3
Electric shock or burns from overhead electrification equipment	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	3
Harmed by lack of oxygen (eg drowning/asphyxiation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Injured in an explosion	0	0	0	0	0	0	0	0	1	1	1	1	0	0	2	3
Contact with or exposure to harmful substances	0	0	0	0	0	3	0	0	0	3	3	6	0	1	10	13
Assaulted while on duty	0	0	0	0	0	28	2	2	0	32	97	90	8	4	199	231
Miscellaneous	0	0	0	0	0	26	5	1	0	32	146	63	2	3	214	246

*2004 is a 9-month period from 01 April 2004 to 31 December 2004.

Casualties in all incidents by railway operator 2004*

	Fatal				Major injuries				Over-3-day injuries				Hospital				All totals				
	NR	LUL	Trams	Other	Total	NR	LUL	Trams	Other	Total	NR	LUL	Trams	Other	Total	NR		LUL	Trams	Other	Total
All Incidents																					
Total	17	0	1	1	19	269	18	4	10	301	1017	341	32	43	1433	1086	879	49	83	2097	3850
Passengers	8	0	1	1	10	0	0	0	0	0	0	0	0	0	0	1053	875	38	81	2047	2057
Railway staff**	4	0	0	0	4	269	18	4	10	301	1017	341	32	43	1433	0	0	0	0	0	1738
Other persons+	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	33	4	11	2	50	55
Train incidents																					
Total	0	0	0	0	10	4	0	0	1	5	18	0	1	0	19	48	0	2	25	75	109
Passengers	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	42	0	0	24	66	71
Railway staff**	1	0	0	0	1	4	0	0	1	5	18	0	1	0	19	0	0	0	0	0	25
Other persons+	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	6	0	2	1	9	13
Movement incidents																					
Total	6	0	0	0	6	26	2	1	1	30	207	39	9	5	260	256	140	31	10	437	733
Passengers	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	256	140	22	9	427	429
Railway staff**	3	0	0	0	3	26	2	1	1	30	207	39	9	5	260	0	0	0	0	0	293
Other persons+	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	9	1	10	11
Non-movement incidents																					
Total	1	0	1	1	3	239	16	3	8	266	792	302	22	38	1154	782	739	16	48	1585	3008
Passengers	1	0	1	1	3	0	0	0	0	0	0	0	0	0	0	755	735	16	48	1554	1557
Railway staff**	0	0	0	0	0	239	16	3	8	266	792	302	22	38	1154	0	0	0	0	0	1420
Other persons+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	4	0	0	31	31

* 2004 is the nine-month period from 1 April 2004 to 31 December 2004

** Railway staff includes contractors staff, but excludes Postal Workers who under RIDDOR 95 are regarded as Persons on Business (Other Persons category)

+ Excludes trespassers and suicides

Under RIDDOR 95 there is no distinction between a major or minor injury for a member of the public, the reporting trigger is that they are taken from the site of the accident to hospital for treatment.

The criteria of major and minor injury remains for railway employees and contractors

Casualties in all incidents 1992/93 - 2001/02

	2001/02				2000/01				1999/2000				1998/99				1997/98				1996/97			
	Fatal	Major injury	Minor injury	Public injury	Fatal	Major injury	Minor injury	Public injury	Fatal	Major injury	Minor injury	Public injury	Fatal	Major injury	Minor injury	Public injury	Fatal	Major injury	Minor injury	Public injury	Fatal	Major injury	Minor injury	Public injury
TOTAL ALL INCIDENTS	35	351	2023	2493	39	300	2135	2879	65	340	2065	2827	39	376	2070	2772	48	351	2088	2874	25	310	1842	2599
PASSENGER	13	0	0	2401	21	0	0	2795	47	0	0	2742	20	0	0	2671	26	0	0	2747	17	0	0	2449
RAILWAY STAFF*	5	351	2023	0	8	300	2135	0	5	340	2065	0	4	376	2070	0	3	351	2088	0	2	310	1842	0
OTHER PERSONS!	17	0	0	92	10	0	0	84	13	0	0	85	15	0	0	101	19	0	0	127	6	0	0	150
TRAIN INCIDENTS																								
TOTAL	5	6	17	29	17	6	36	193	33	3	20	309	3	2	29	53	10	2	37	205	1	9	52	194
PASSENGER	0	0	0	21	10	0	0	178	29	0	0	290	0	0	0	40	7	0	0	190	1	0	0	180
RAILWAY STAFF*	0	6	17	0	4	6	36	0	2	3	20	0	0	2	29	0	2	37	0	0	9	52	0	
OTHER PERSONS!	5	0	0	8	3	0	0	15	2	0	0	19	3	0	0	13	3	0	0	15	0	0	0	14
MOVEMENT INCIDENTS																								
TOTAL	25	26	293	590	17	25	296	628	27	37	289	582	29	35	246	681	32	34	215	634	20	31	222	575
PASSENGER	10	0	0	573	8	0	0	610	14	0	0	569	17	0	0	668	15	0	0	617	13	0	0	559
RAILWAY STAFF*	4	26	293	0	3	25	296	0	2	37	289	0	1	35	246	0	3	34	215	0	2	31	222	0
OTHER PERSONS!	11	0	0	17	6	0	0	18	11	0	0	13	11	0	0	13	14	0	0	17	5	0	0	16
NON MOVEMENT INCIDENTS																								
TOTAL	5	319	1713	1874	5	269	1803	2058	5	300	1756	1936	7	339	1795	2038	6	315	1836	2035	4	270	1568	1830
PASSENGER	3	0	0	1807	3	0	0	2007	4	0	0	1883	3	0	0	1963	4	0	0	1940	3	0	0	1710
RAILWAY STAFF*	1	319	1713	0	1	269	1803	0	1	300	1756	0	3	339	1795	0	0	315	1836	0	0	270	1568	0
OTHER PERSONS!	1	0	0	67	1	0	0	51	0	0	0	53	1	0	0	75	2	0	0	95	1	0	0	120

Fatal accident data for 2001/02 has been updated following returns from Coroners

* Railway staff includes contractors staff

! Excluding trespassers, suicides and attempted suicides

New regulations on the reporting of accidents (RIDDOR) came into force on the 1 April 1996

Casualties in train incidents by type of incident and railway operator 2004*

	Railway staff				Passengers			Other MoP			All totals
	Fatal	Major	Over-3-day	Total	Fatal	Hospital	Total	Fatal	Hospital	Total	
Totals	1	5	19	25	5	66	71	4	9	13	109
Collisions total	0	1	4	5	0	28	28	0	0	0	33
Network Rail	0	1	4	5	0	4	4	0	0	0	9
LUL	0	0	0	0	0	0	0	0	0	0	0
Trams	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	24	24	0	0	0	24
Derailments total	1	1	5	7	5	36	41	3	1	4	52
Network Rail	1	1	5	7	5	36	41	3	1	4	52
LUL	0	0	0	0	0	0	0	0	0	0	0
Trams	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Obstructions total	0	0	5	5	0	1	1	1	8	9	15
Network Rail	0	0	4	4	0	1	1	1	5	6	11
LUL	0	0	0	0	0	0	0	0	0	0	0
Trams	0	0	1	1	0	0	0	0	2	2	3
Other	0	0	0	0	0	0	0	0	1	1	1
Fires total	0	0	1	1	0	0	0	0	0	0	1
Network Rail	0	0	1	1	0	0	0	0	0	0	1
LUL	0	0	0	0	0	0	0	0	0	0	0
Trams	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Missiles total	0	3	4	7	0	1	1	0	0	0	8
Network Rail	0	2	4	6	0	1	1	0	0	0	7
LUL	0	0	0	0	0	0	0	0	0	0	0
Trams	0	0	0	0	0	0	0	0	0	0	0
Other	0	1	0	1	0	0	0	0	0	0	1

* 2004 is the nine-month period from 1 April 2004 to 31 December 2004

TRAIN INCIDENTS 2004* - ANALYSIS BY PRIMARY CAUSE

	Total	Collisions	Derailments	Running into obstructions	Fires in trains	Other accidents	Damage to train windows inc drivers windscreen
Total	1001	44	47	406	223	0	281
Management & supervisory failures total	37	0	3	32	1	0	1
Management & supervisory failures total	37	0	3	32	1	0	1
Staff error total	59	23	13	17	4	0	2
<i>Train crews (including guards)</i>							
a) passing signals at Danger	5	0	4	1	0	0	0
b) other irregularities or want of care							
i) drivers	24	16	5	2	1	0	0
ii) guards	1	1	0	0	0	0	0
iii) drivers and guards	1	1	0	0	0	0	0
<i>Signalmen:</i>							
a) irregular block working	2	1	1	0	0	0	0
b) other irregularities or want of care	3	0	2	1	0	0	0
<i>Other staff</i>							
a) in traffic departments	4	1	1	2	0	0	0
b) in other departments	11	1	0	10	0	0	0
Train crews and signalmen	0	0	0	0	0	0	0
Train crews and other staff	3	0	0	0	3	0	0
Signalmen and other staff	0	0	0	0	0	0	0
Faulty loading	5	2	0	1	0	0	2
Technical defects total	126	6	22	27	68	0	3
Locomotive and multiple units	50	4	1	10	35	0	0
Vehicles	32	2	3	0	27	0	0
Track	33	0	18	12	0	0	3
Signalling apparatus	1	0	0	1	0	0	0
Overhead line equipment	4	0	0	4	0	0	0
Other structures	0	0	0	0	0	0	0
Combined defects	0	0	0	0	0	0	0
Traction and braking shocks	6	0	0	0	6	0	0
Other causes total	779	15	9	330	150	0	275
Snow landslides floods etc	34	0	1	32	1	0	0
Animals on the line	67	0	0	50	2	0	15
<i>Irresponsibility of the public</i>							
a) irregular opening of doors	0	0	0	0	0	0	0
b) at level crossings	15	0	1	13	1	0	0
c) malicious	475	8	5	95	130	0	237
d) other	7	0	0	3	4	0	0
e) road vehicles on tramways	118	0	0	118		0	0
Miscellaneous and cause not determined	52	2	1	19	8	0	22
Determination of cause outstanding	11	5	1	0	4	0	1

TRAIN PROTECTION STRATEGY – TPWS AND SPADS

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

Key facts

- 294 SPADs in the nine-month period from 1 April to 31 December 2004, compared with 378 in the previous twelve-month period (2003/04).
- 123 SPADs categorised as serious (Category A), compared with 147 in 2003/04.
- The estimated SPAD risk reduced to 39% of the risk benchmark set in March 2001.
- TPWS has continued to deliver safety benefits with associated reduction in risks from SPADs and numbers of buffer stop collisions.
- Network Rail is fitting TPWS Plus (TPWS+) at about 400 key locations, to increase protection for trains travelling up to 100 mph.

Summary

The estimated level of risk generated by SPADs reduced to 39% of the benchmark established in March 2001. HSE undertook work within its Rail Delivery Programme to produce a train protection strategy, applicable to its activities across the rail industry. This work will continue in 2005 with stakeholder consultation prior to publication. The strategy will look beyond AWS, TPWS, ATP and other current train protection systems and arrangements, and include work associated with the adoption of the European Rail Traffic Management System (ERTMS) within Great Britain.

The reduction in SPAD consequences and buffer stop collisions associated with the initial TPWS fitment (completed in December 2003) has continued. The failure to eliminate 'reset and continue' incidents means that the full benefits of TPWS have yet to be realised.

HSE did not receive or grant any exemptions from the train protection requirements of the Railway Safety Regulations 1999 during the reporting period.

HSC/HSE have continued to monitor delivery of the work of the National ERTMS programme led by the Strategic Rail Authority, including the planned ERTMS trial on the Cambrian Line.

TPWS

In 2004 Network Rail began to enhance the protection afforded by the completion of standard TPWS fitment in accordance with the Railway Safety Regulations, through the installation of TPWS+ at about 400 locations where risk assessment indicated it was appropriate and reasonably practicable. TPWS+ increases protection afforded to trains travelling up to 100 mph.

HSE agreed the programme for over 400 signals to be fitted with TPWS+. Network Rail is on course to complete the programme in Summer 2005.

HSE has monitored, in partnership with industry, compliance with conditions placed on exemptions from the requirements of Regulation 3(1) of the Railway Safety Regulations 1999, granted to Network Rail in 2003.

HSE continue to participate in discussions about future deployment of TPWS equipment, including installation at temporary speed restrictions and plain line signals. The legal requirements for train protection systems have supported and informed discussions.

Effectiveness of TPWS

The evidence that TPWS is proving effective in reducing the consequences of SPADs at fitted signals has continued to build.

However, 'reset and continue' incidents, in which the driver fails to contact the signaller after a TPWS brake activation and subsequently resets the system and continues the journey, have persisted. The industry remains focused on reducing the likelihood of such incidents, and HSE has participated in work to understand the causes of this behaviour and to consider actions needed to reduce such events. Network Rail and the train operators have acted to improve driver awareness of the associated risks including coverage of the issue in driver management arrangements through increased use of existing on-train data recording.

Amendments to the 'Rule Book' procedures, under which drivers must report to signallers following TPWS activations, were published in December 2004, in advance of coming into force in February 2005.

Consideration is also being given to technical changes, on both track and trains, which may reduce the likelihood of drivers 'resetting and continuing'. The appropriateness of a blanket requirement for TPWS provision to reduce the risk of derailment as a result of overspeeding at permanent speed restrictions remains under review.

SPADs

The industry has set itself a safety plan target to achieve an 80% reduction in SPAD risk by 2009, based on the benchmark established in March 2001. A 61% reduction was achieved by the end of 2004, and further reductions will result from future developments of TPWS and other industry SPAD reduction initiatives. The continued withdrawal of slam-door rolling stock will also contribute to the reduction of overall SPAD risk, through the improved crashworthiness of modern rolling stock.

The National SPAD Focus Group, sponsored by RSSB and attended by senior managers from the railway industry and HMRI, monitors progress towards the target and is a forum for developing industry-wide good practice. Local SPADRAM (SPAD Reduction and Mitigation) groups also continue to make a significant contribution. HMRI maintains regular liaison with SPADRAM leaders, who are also on the National SPAD Focus Group.

Now that the main programme of TPWS fitment is complete, the reasonable practicability of substantial further risk reduction by means of equipment installation is nearing exhaustion. Continuing reduction will therefore largely reflect other efforts made by the industry, most notably by improving the professional performance of drivers, signallers, engineering possession staff and their immediate managers.

The level of SPADs categorised as 'serious' remains a concern, especially as it shows an increase over the same months in the previous year. HSE accepts, however, that a large proportion of these SPADs, although currently categorised as 'serious', present little or no risk of collision or derailment because of the circumstances in which they took place eg location, low speed, very short overrun, or the presence of trap points. A new system for the risk ranking of SPADs to take a more realistic account of these circumstantial factors has been developed by RSSB. This system will be introduced during 2005, and included in HMRI's [monthly SPAD reports](#).

LEVEL CROSSINGS

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

Key facts

- 5 passengers plus the train driver killed in a derailment initiated by the train striking a stationary car on Ufton AHB level crossing
- 3 occupants of road vehicles killed when their vehicles were in collision with trains
- 1 cyclist and 1 pedestrian struck and killed by trains
- 7833 level crossings on the Network Rail national network.

Summary

Between 1 April and 31 December 2004 there were 26 train incidents at level crossings. This total does not include a number of incidents where trains were damaged after striking objects placed on the line at level crossings – these incidents are included in the category ‘trains running into other obstacles’. Incidents of trains striking animals on level crossings are also excluded. These are included under ‘trains running into animals’.


On 6 November 2004 five train passengers, a train driver and a car driver were killed when a high-speed train travelling from London to Plymouth became derailed as a result of striking a stationary car on Ufton AHB (automatic half barrier) level crossing near Aldermaston in Berkshire. This was the first level crossing incident leading to train passenger fatalities since the collision between a train and van at Lockington AOCR (automatic open crossing, remotely monitored) in Yorkshire in July 1986, in which eight passengers on the train and one in the van died.

In total there were 11 people killed in incidents at level crossings in the 9 months of this report. Of these 5 were members of the public, 5 were train passengers and 1 was a railway employee. There were 3 occupants of road vehicles, 1 cyclist and 1 pedestrian struck and killed while using crossings.


General

The table below contains the number of crossings on Network Rail Controlled Infrastructure (NRCI), with a further table showing a breakdown by Network Rail Route. The number of crossings in some categories varies from those previously recorded. These variations can arise as a result of the closure of some footpath and private vehicular crossings, the conversion from one type of crossing protection to another, or a change in the status of some crossings, for example from 'user worked vehicular crossing' to 'footpath crossing'.

Number of level crossings on NRCI 1998/99 - 2004

		Protected								Unprotected			
		Manual			Automatic					Manual			
Year	Total	MG	MCB	MCB with ccTV	AHB	ABCL	AOCR	AOCL	UWC with MWL	UWC	UWC with 	OC	FP
1998/99	8323	278	270	336	462	41	1	141	134	2555	1397	60	2650
1999/00	8228	268	274	338	465	43	1	140	135	2507	1381	60	2616
2000/01	8106	268	262	341	468	44	1	140	137	2425	1385	60	2575
2001/02	8128	265	255	345	477	43	1	140	150	2377	1415	60	2600
2002/03	8188	264	242	358	470	45	1	140	155	2290	1617	60	2546
2003/04	7937	259	255	361	462	49	1	134	172	1979	1677	60	2528
2004	7833	245	249	364	457	49	1	131	162	2003	1613	62	2497

Level crossings on NRCI by route as at 31 December 2004

		Protected								Unprotected			
		Manual			Automatic					Manual			
Route	Total	MG	MCB	MCB with ccTV	AHB	ABCL	AOCR	AOCL	UWC with MWL	UWC	UWC with 	OC	FP
Anglia	939	45	19	51	95	17	0	18	35	215	181	2	261
Kent	318	9	10	13	21	2	0	3	3	83	23	11	140
Lon NE	2401	127	98	140	189	11	0	32	77	654	410	18	645
Lon NW	1085	28	38	47	23	2	0	9	11	373	158	6	390
Scotland	684	6	16	15	28	3	1	27	10	204	297	2	75
Sussex	217	2	7	33	25	0	0	0	0	33	24	0	93
Wessex	313	3	8	41	31	0	0	4	6	31	40	0	149
Western	1876	25	53	24	45	14	0	38	20	410	480	23	744
Total	7833	245	249	364	457	49	1	131	162	2003	1613	62	2497

Notes:

ABCL automatic barrier crossings, locally monitored.

AHB automatic half barrier.

AOCL automatic open crossing, locally monitored.

AOCR automatic open crossing, remotely monitored.

CCTV closed circuit television.

FP footpath crossing.

MCB manually controlled barriers operated by a railway employee including those operated by train crew.

MG manual gates operated by a railway employee including those operated by train crew.

MWL miniature warning lights.

OC open crossing.

UWC user-worked crossing with either gates or lifting barriers not operated by a railway employee.

Protected' is defined as having gates or barriers operated by railway employees or as having road traffic signals or miniature red/green lights giving a positive warning of approaching trains.

Fatal incidents involving vehicles at level crossings

During the period of this report there were 10 fatalities in incidents involving road vehicles of all descriptions.

On 5 June 2004, at Pevensey Sluice AHB level crossing in East Sussex, a cyclist collided with a train and received fatal injuries.

On 6 November 2004 at Ufton automatic half barrier crossing near Aldermaston in Berkshire five train passengers, the train driver and a motorist were killed when a high speed train struck a car parked on the crossing and subsequently derailed catastrophically on facing points. HMRI have presented a report to HM Coroner.

On 6 December 2004, at User worked Crossing No. 122, Pumphouse, at Helpringham Fen in Lincolnshire, two occupants of a van received fatal injuries when the van was struck by a train. HMRI have presented a report to HM Coroner.

Non-fatal incidents involving road vehicles

In the nine-month period of this report, seven vehicular collisions occurred at AOCL level crossings, three of which were on the Newquay line in Cornwall.

One serious incident occurred on the Severn Valley Railway, when a school special steam hauled train collided with a van at Coombys Farm user worked crossing. The van driver suffered serious injuries.

Network Rail policy and strategy on level crossings

Network Rail's strategy on level crossings continues to be to reduce the associated risks through the reduction in the number of level crossings; effective operation and maintenance; a programme of risk assessment to identify reasonably practicable measures for further risk reduction; and ongoing communication with users and other stakeholders to promote the safe use of level crossings. Network Rail's overriding principle is to ensure no new permanent crossings are introduced, other than in exceptional circumstances, and that it pursues a programme of closure of existing crossings where feasible.

HSE Rail's policy on level crossings

In the 2003/04 Annual Report on Railway Safety, published before the tragic Ufton Nervet incident, level crossings were highlighted as presenting the greatest potential risk of catastrophic incident on the national rail network. HSE continues to be committed to reducing the risks associated with level crossings and wishes to see further action taken to reduce the catastrophic risk precursors at crossings. Our policy for reducing risks at level crossings, developed with stakeholders, has the following main aims:

- to seek the closure or upgrade of level crossings where this is reasonably practicable and to not support the construction of new level crossings other than in exceptional circumstances;
- to ensure that the railway industry itself is doing everything that is reasonably practicable to ensure that all those affected by level crossings are not exposed to unacceptable risks to their health and safety;
- to work with other Government Departments, other agencies, and stakeholders, including the National Level Crossing Safety Group to improve the standards of safety afforded to level crossing users.

Level crossings were the subject of a project under the HSE Rail Delivery Programme aiming to bring about a reduction in level crossing incidents through five priority workstreams for delivery by the end of 2004/05. The project included:

- a database of all level crossings;
- a series of internal guidance notes;
- a database on human factor issues;
- an analysis of risk assessment models and a selection of level crossing type;
- an analysis of fatal incidents with a view to reducing risk at level crossings.

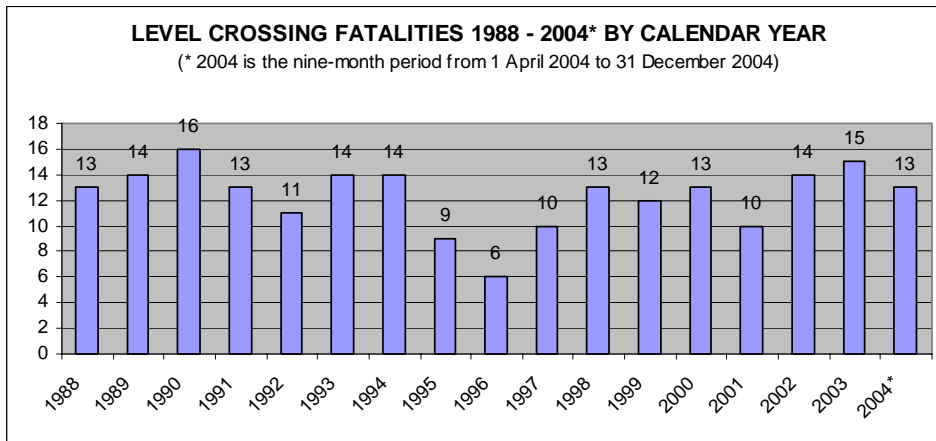
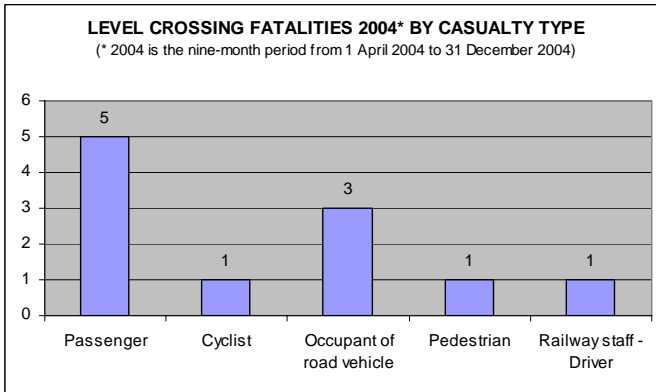
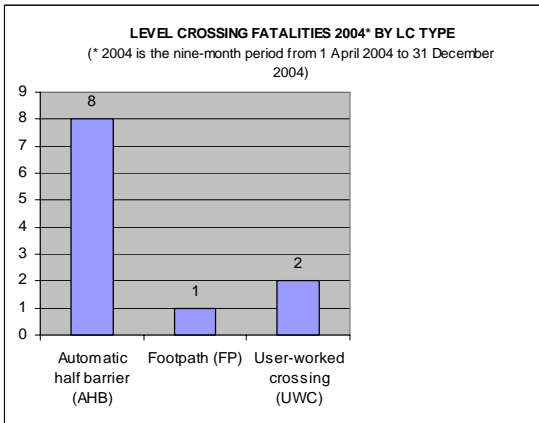
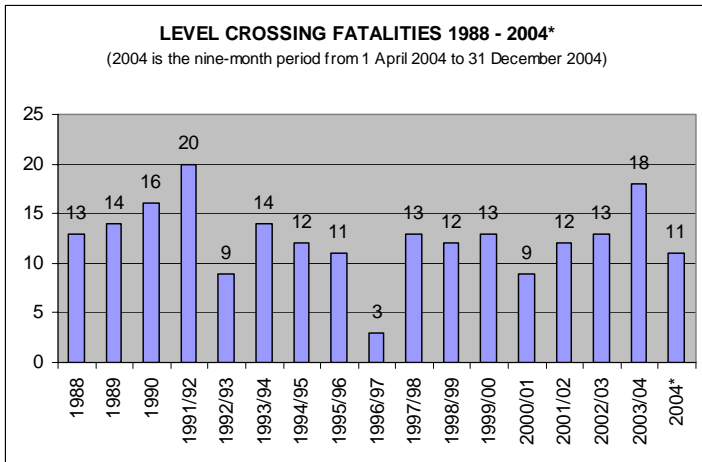
It is intended to place various reports from the project onto the HSE website during the early part of 2005/06 to support the HSE Rail Policy and Strategy document, launched in May 2004.

Enforcement action relating to level crossings

No enforcement notices were served in relation to level crossings between 1 April and 31 December 2004. This compares with nine served in the previous twelve-month period (2003/04).

Scotland

The 2003/04 Annual Report on Railway Safety included comment on HSE's work in respect of level crossing closures in Scotland and the debate about public access over 'private level crossings' in Scotland. This work has continued and is ongoing.



ROUTE CRIME (trespass and vandalism)

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

Key facts

- 194 members of the public died as a result of trespass and suicide, of whom 82 were confirmed or suspected suicides;
- 2 children under the age of 16 died while trespassing, the lowest figure on record;
- 475 (38%) of the 1259 reportable train incidents in 2004 were due to acts of vandalism;
- 8 collisions caused by vandalism (open door collisions due to malicious action);
- 130 cases of fires started deliberately ([insert link to fire section](#));
- 95 instances of trains running into obstructions on the track; and
- 237 incidents of missile (stone throwing) damage to trains.

Summary

In the nine-month period from 1 April to 31 December 2004 there were 54 fewer trespass and suicide fatalities than in the previous twelve-month period (2003/04). The 2004 report figures indicate a relative decrease from the previous year in the numbers of confirmed or suspected suicides, and a slight increase in the trespass figures.

The number of child deaths caused by trespassing on the railways reached its lowest level for over 10 years, with 2 children killed during this report period.

Child trespass

In the 2004 report period, 2 children under 16 years of age died while trespassing on the railway, down from 5 child deaths in the previous year. Both the children were 12 years old. One was electrocuted by the conductor rail, the other was struck by a train while crossing the railway line.

Adult trespass and suicide

- Figures for the 2004 report year indicate a relative increase in the numbers of suicide/suspected suicide deaths (82 over the nine-month period) compared with 101 in the previous twelve-month period (2003/04).
- Excluding confirmed and suspected suicides, there was a slight decrease in the number of adult deaths caused by railway trespass, down from 146 in 2003/04 to 112 in the 2004 reporting period. This continues the steady downward trend in trespass deaths over the last four years, reflecting continued efforts by the industry and the British Transport Police (BTP) to reduce the opportunities for all kinds of railway crime, including trespass. However, the overall numbers of trespass and suicide deaths are still higher than those recorded in the early 1990's, so further effort is required to sustain and build on the recent improvements.

Incidents due to vandalism

Train incidents due to vandalism fell during the 2004 reporting period, continuing the downward trend over the last seven years.

Despite this continued improvement, vandalism still accounts for about half of all reportable train incidents. These incidents are of concern because they can lead to damage, injury or even train derailment as a result of vandals deliberately obstructing the track.

Reductions in vandalism incidents contribute to achieving HSE's target on reducing 'catastrophic train accident precursors'.

Action to combat route crime

HMRI has continued to work closely with the industry in tackling route crime through its membership of the National Railway Crime Group (NRCG), the cross-industry body set up to steer the industry's efforts to reduce railway crime by working in partnership.

Through delivery of its 2004/05 annual plan, the NRCG has strengthened links between national and local route crime groups, to promote more consistent and targeted action to reduce route crime risks. It has also ensured better co-ordination between work on route crime and other public behaviour issues, and has further developed its education strategy. This has included improvements in the wide range of learning materials on the industry's Trackoff website (<http://www.trackoff.org/>), which has now gained government approval for use in schools.

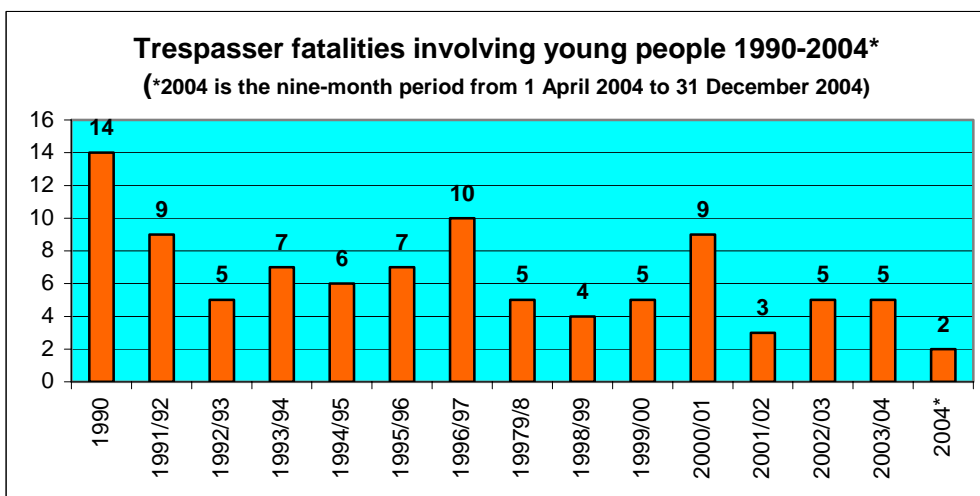
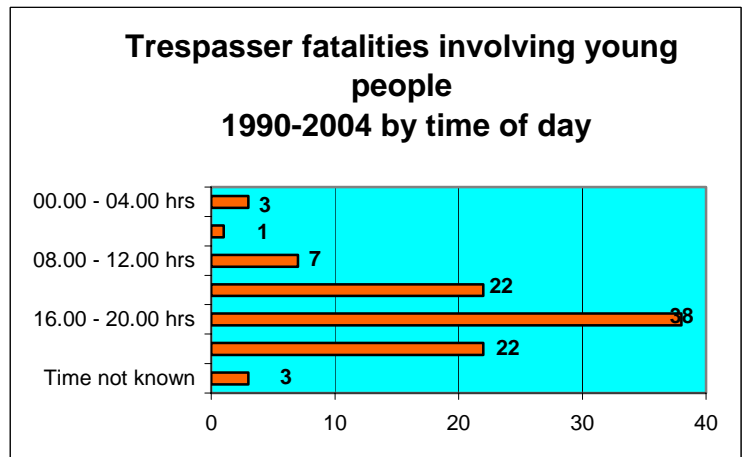
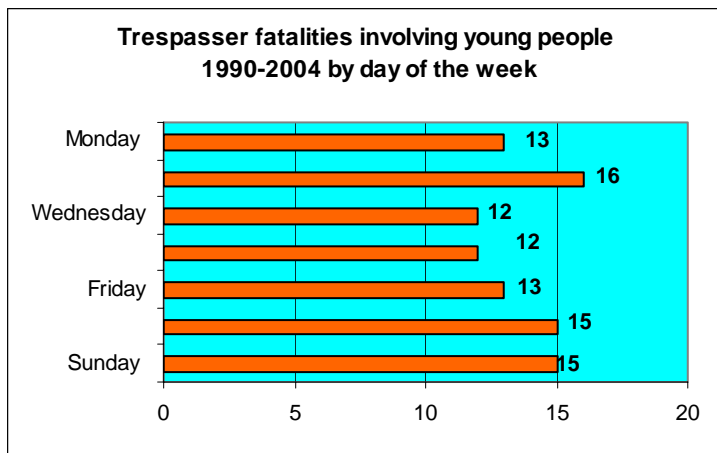
Through its work programmes during 2004, HMRI continued to carry out targeted inspections of Network Rail to ensure proper management of lineside fencing and to make sure that the lineside was free from unsecured railway materials which might be used by vandals. During the year, HMRI began work on drawing up its route crime strategy, including operational interventions and liaison with industry stakeholders. The route crime strategy should be available during 2005, following consultation with the industry.

In November 2004, Network Rail Infrastructure Limited and Jarvis Facilities Limited were fined a total of £285 000 in a prosecution brought by HSE following the death of Heather Foster in August 2000. Eight-year-old Heather died following contact with the electrified third rail of railway track near her home in Merseyside. Access to the electrified track was possible where inadequacies existed in the standard of maintaining lineside fencing. Near to the site of the incident was a children's den, with a well-trodden path leading to it among scrub vegetation and trees.

Casualties to trespassers, suicides and attempted suicides 2004											
	Fatal				Total	Hospital					All totals
	NR	LUL	Trams	Other		NR	LUL	Trams	Other	Total	
Total all accidents	177 (2)	16 (0)	0 (0)	2 (0)	194 (2)	75 (5)	22 (0)	5 (0)	1 (0)	103 (6)	298 (8)
Movement accidents											
Fall from platform and struck by train	22 (0)	11 (0)	0 (0)	0 (0)	33 (0)	4 (0)	1 (0)	1 (1)	0 (0)	6 (1)	39 (1)
Walking on the line and struck by train	100 (2)	3 (0)	0 (0)	0 (0)	103 (2)	8 (1)	6 (0)	2 (0)	0 (0)	16 (1)	119 (3)
Fall from a train in motion (includes train surfing)	0 (0)	0 (0)	0 (0)	2 (0)	2 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (0)
Other movement accident	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Suicide and attempted suicide	42 (0)	0 (0)	0 (0)	0 (0)	41 (0)	12 (0)	11 (0)	1 (0)	1 (0)	25 (0)	67 (0)
Total movement accidents	164 (2)	14 (0)	0 (0)	1 (0)	179 (2)	24 (1)	18 (0)	4 (1)	1 (0)	47 (2)	227 (4)
Non movement accidents											
Fall to line from bridge etc	3 (0)	0 (0)	0 (0)	0 (0)	3 (0)	20 (1)	1 (0)	1 (0)	0 (0)	22 (1)	25 (1)
Contact with OLE	1 (0)	0 (0)	0 (0)	0 (0)	1 (0)	4 (2)	0 (0)	0 (0)	0 (0)	4 (2)	5 (2)
Contact with live rail	4 (0)	1 (0)	0 (0)	0 (0)	5 (0)	2 (1)	0 (0)	0 (0)	0 (0)	2 (1)	7 (1)
Other non movement accident	4 (0)	1 (0)	0 (0)	0 (0)	5 (0)	13 (0)	1 (0)	0 (0)	0 (0)	14 (0)	19 (0)
Suicide and attempted suicide	1 (0)	0 (0)	0 (0)	0 (0)	1 (0)	12 (0)	2 (0)	0 (0)	0 (0)	14 (0)	15 (0)
Total non movement accidents	13 (0)	2 (0)	0 (0)	0 (0)	15 (0)	51 (4)	4 (0)	1 (0)	0 (0)	56 (4)	71 (4)
2004 data covers the period 1 April 2004 to 31 December 2004											
Fatality data is provisional and subject to change due to outstanding findings of Coroners inquests.											

Fatalities to trespassers and suicides 1996/97 to 2004									
	2004	2003/04	2002/03	2001/02	2000/01	1999/00	1998/99	1997/98	1996/97
Trespassers	151 (2)	146 (5)	139 (5)	144 (3)	168 (9)	141 (5)	132 (4)	108 (5)	133 (10)
Suicides	43 (0)	101 (0)	118 (0)	127 (0)	132 (1)	133 (1)	115 (1)	157 (0)	119 (0)
Total	194 (2)	247 (5)	257 (5)	271 (3)	300 (10)	274 (6)	247 (5)	265 (5)	252 (10)
Figures in brackets refer to injuries to child trespassers aged under 16									
2004 data covers the period 1 April 2004 to 31 December 2004									
Fatality data is provisional and subject to change due to outstanding findings of Coroners inquests.									
Of the 151 trespasser fatalities in 2004, 98 are suspected suicides									





FIRES

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

Key facts

- There were a total of 223 reportable train fires in the nine-month period from 1 April to 31 December 2004, compared with 297 in the previous twelve-month period (2003/04).
- 215 reportable train fires were on passenger trains.
- Eight reportable train fires were on freight trains.
- 130 train fires were due to arson, compared with 159 in 2003/04.
- There were 69 reportable lineside and station fires.

Summary

In the nine-month period from 1 April 2004 to 31 December 2004, there were 223 reportable train fires, compared with a total of 297 in the previous 12 months. The 2004 report figures indicate a relative decrease in the number of reportable lineside and station fires, with a slight increase in the proportion of the train fires due to arson.

Lineside and station fires

Between 1 April and 31 December 2004, there were 69 reportable lineside and station fires. This compares with 119 during the previous 12 months.

It should be noted that while these fires were incidents that affected the operation of the railway, many of them occurred outside the railway boundary. They are reportable events because they led to the railway being disrupted or closed as a precaution.

Of the station and lineside fires, 43 occurred on Network Rail managed infrastructure/stations, and 24 on LUL.

Train fires

The 2004 report year figures indicate no change in the total numbers of reportable train fires (223 in the nine-month period) compared with 297 in 2003/04.

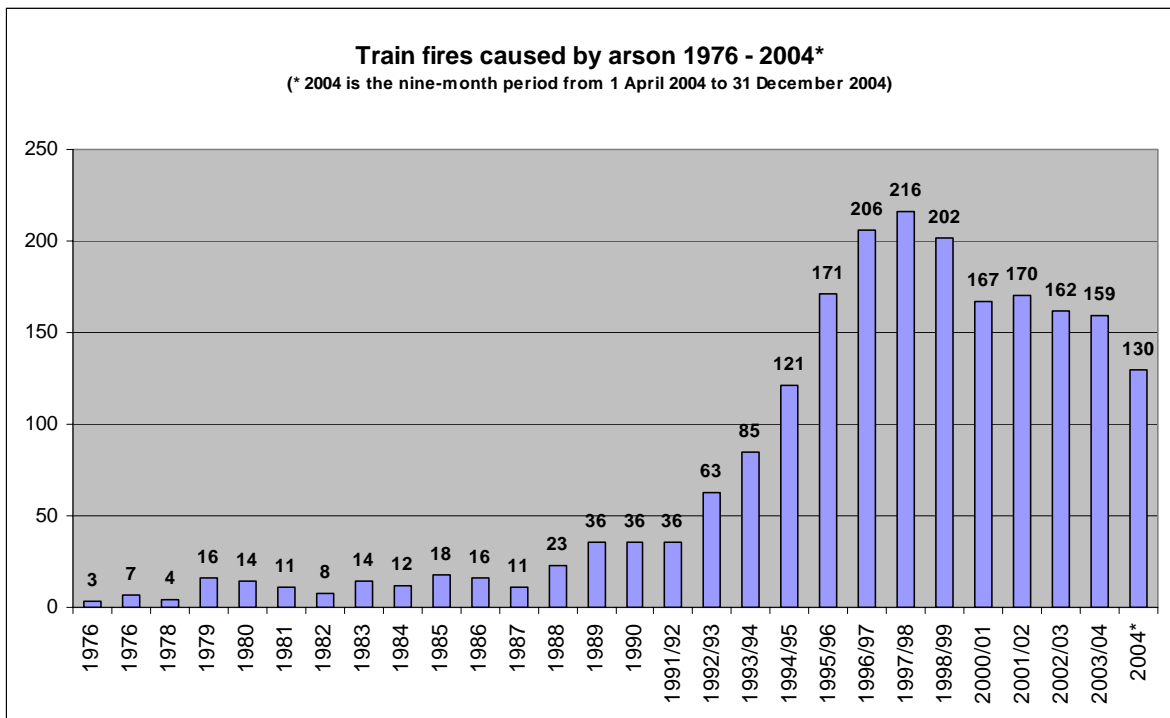
As in previous years, the majority of train fires were due to arson (58%). Most of these arson incidents continued to occur in the South of England, where it is anticipated that the ongoing introduction of new trains, with features such as on-board internal CCTV and better internal layouts, will contribute to further reductions in the incidence of vandalism, including arson.

There were 68 train fires caused by technical defects on trains such as traction motor failures, dragging brakes and heater fires. A number of these fires continue to occur on modern diesel units. Although most are relatively minor and are contained within the engine area, there remains a risk of them spreading. This happened in October 2004, when the rear coach of a class 143 diesel passenger train caught fire on the approach to Nailsea and Backwell station, near Bristol. The 21 passengers and 2 train-crew were safely evacuated. Two passengers were treated on-site for the effects of smoke inhalation. The fire was caused by a combination of oil, diesel fuel and dirt build-up on the engine and underframe, ignited by arcing from starter motor cables on which the insulation was damaged. Immediately following this fire, the train operator (Wessex Trains) took steps with Arriva Trains Wales, who maintained the vehicles, to improve the standard and frequency of underframe cleaning. Modifications were also carried out across this class of diesel train to provide additional fire-proofing and abrasion resistance for starter motor cables.

The Nailsea passenger train fire is subject to a formal inquiry by RSSB, from which a report will be produced. HMRI will continue to monitor such incidents and ensure that train operators and maintenance companies take appropriate action to adequately control the fire risk.

Several instances of fires on Virgin's Voyager rolling stock have been reported due to oil leaks from fractured hydraulic pipe work igniting on exhaust manifolds.

Virgin class 390 Pendolinos, which have been lengthened by an additional car to nine car sets, experienced several instances of dragging brakes. This gives the impression of a fire as the resultant smoke passes into the passenger carriage.



FAILURES OF ROLLING STOCK AND INFRASTRUCTURE

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

Key facts

- 207 rail breaks were reported on Network Rail infrastructure between 1 April 2004 and 31 December 2004, a substantial improvement on the figure of 334 in 2003/04.
- 32 track buckles reported on Network Rail infrastructure during the 9-month period, again this compares favourably with the figure of 137 for 2003/04.
- 2103 reported bridge strikes on Network Rail Infrastructure between 1 April 2004 and 31 December 2004, compared with 2113 in 2003/04.

Rolling stock failures

Sustained third rail power failures, particularly in summer months, resulted in Parliamentary questions and correspondence on the subject of train overheating and passenger discomfort on new rolling stock. The new stock has a reduced ability to cool carriages during power failures, and most have non-ventilating windows.

Two train operating companies (TOCs) operating new Electrostar electric trains in 'selective door operation mode' experienced sustained, multiple failures of the system due to incorrect configuration of the equipment supplied. At many locations this caused lengthy passenger access and egress delays.

Reports of several diesel multiple units becoming uncoupled in service are being investigated by HMRI.

London Underground's Northern Line Tube rolling stock continues to experience problematic radio system performance. This has resulted in multiple train cancellations and passenger congestion.

South West Trains' new Siemens Desiro electric multiple units have suffered reliability problems. This is concerning as the units were exhaustively tested at purpose-built facilities in Germany prior to delivery to Great Britain. The AWS receivers have been re-mounted following many instances of 'Code 5 failure to read signal aspect' deficiencies. Following reports from some train crew that they were experiencing difficulty in carrying out their duties safely, the units are also receiving enhancements to the design of the cab.

Road Rail Vehicles are the subject of technical investigations into braking and other systems following a number of incidents.

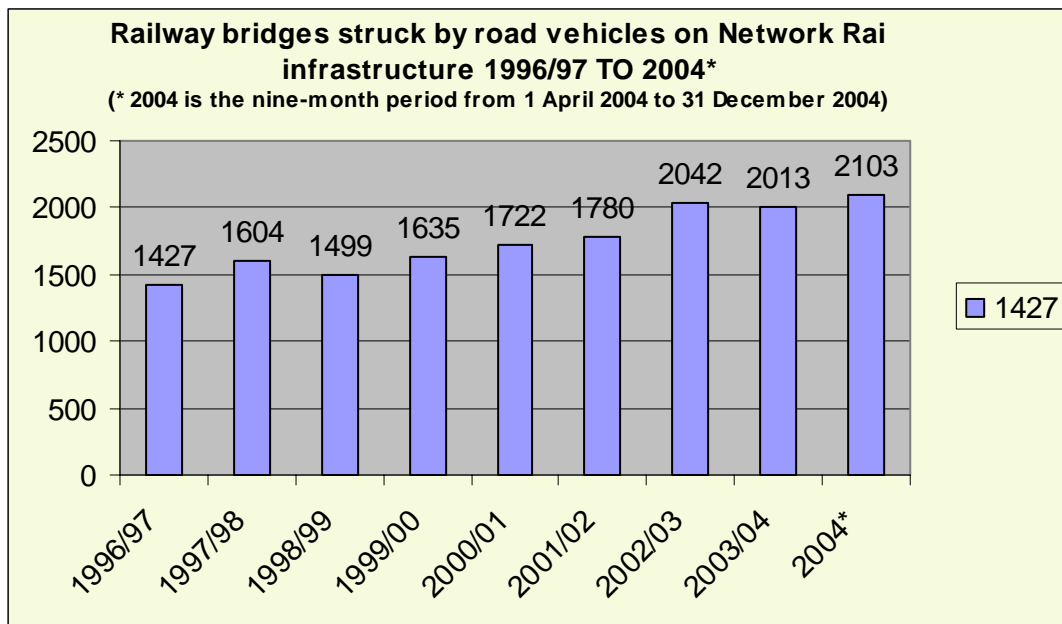
Slam-door rolling stock

An exemption to Railway Safety Regulations (RSR) 4 and 5 was granted to the three TOCs in the Southern Zone and Network Rail in October 2004. This was granted against an industry plan to withdraw Mark 1 rolling stock by 30 November 2005. HMRI is monitoring delivery against this plan.

Applications from 14 minor railway operators were granted exemptions from RSR5 valid until 31 March 2005.

Bridge strikes

There were 2103 reported bridge strikes between 1 April 2004 and 31 December 2004. This represents an increase over the 2013 reports for the previous 12-month report period to the end of March 2004. It also continues an increasing number of reports over recent years as shown in the following table:



2004 is the nine-month period from 1 April 2004 to 31 December 2004

Rail over road (underline) bridge strikes make up approximately 93% of all reports with the remaining strikes on road over rail bridges, a distribution consistent with previous years.

15 of the 2103 bridge strikes were considered serious, and 53 potentially serious.

The seriousness of a bridge strike depends on many factors, including the type of bridge and the size and location of the impact. As would be expected, impacts from heavy goods vehicles are associated with greater potential for serious damage.

The Department for Transport Bridge Strike Prevention Group is supported by HMRI and brings together representatives of bridge owners (including Network Rail and London Underground), local authorities, the Highways Agency, Road Haulage Association, Freight Transport Association, Transport and General Workers Union, the Police and other interested stakeholders. The group recognises the serious potential of bridge strikes and is working on a number of strategies to prevent them.

A distribution of bridge strikes on Network Rail Infrastructure for 1 April 2004 to 31 December 2004 is provided below. 'Not entered' refers to those incidents for which details of seriousness were not provided.

Railway bridges struck by road vehicles 2004*					
Underline - 2004*	Unspecified	Not serious	Potentially serious	Serious	Total
Western		344	5	1	350
Midland		76	4		80
London North Eastern	22	384	4	4	414
London North West	42	307	15	1	365
Scotland		144	3		147
South East		596	6	2	604
Total underline	64	1851	37	8	1960
Overline - 2004*	Unspecified	Not serious	Potentially serious	Serious	Total
Western		24	3		27
Midland		2			2
London North Eastern		20	2	1	23
London North West	4	8	3		15
Scotland	2	32	5	2	41
South East		28	3	4	35
Total overline	6	114	16	7	143
*2004 is the nine-month period from 1 April 2004 to 31 December 2004					

Source: Rail Safety & Standards Board

Road/rail interface

The risk ranking process detailed in the Department for Transport's *Managing the accidental obstruction of the railway by road vehicles* (2003) continues to be employed by the railway industry and highway authorities, with HSE support. As a consequence, work has continued towards the aim stated in 2003 of improving all sites identified as posing a risk by March 2007.

Rail breaks and track buckles

Both these indicators of track safety showed a reduction in the number of incidents recorded, representing an improvement in safety.

Rail Breaks

The following table provides data on all rail breaks during 2004 compared with previous years:

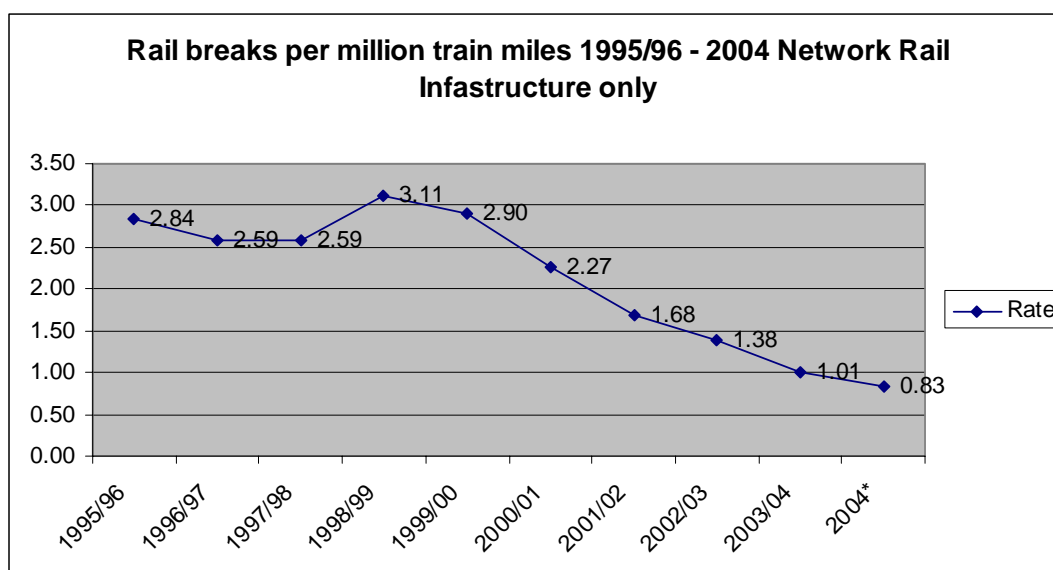
Broken rails all railways 1995/96 – 2004

Year	Network Rail	LUL	Other Railways	Total
1995/96	752	30	10	792
1996/97	709	27	3	739
1997/98	755	43	2	800
1998/99	952	33	3	988
1999/00	919	29	1	949
2000/01	706	18	5	729
2001/02	536	25	0	561
2002/03	444	29	1	474
2003/04	334	34	0	368
2004*	207	37	5	249

*2004 is the nine-month period from 01 April 2004 to 31 December 2004.

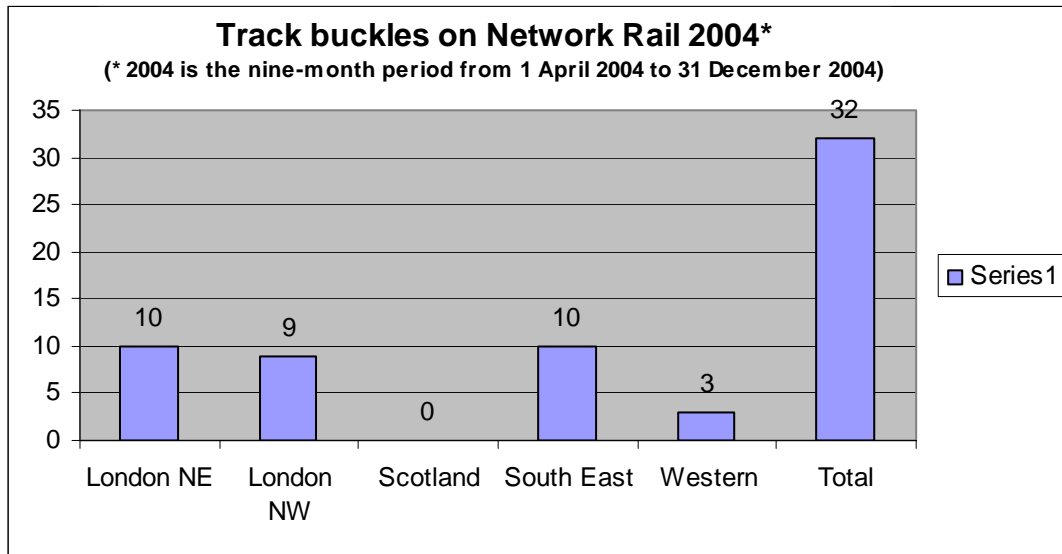
The major improvements in the reduction of rail breaks on the Network Rail Infrastructure are apparent. The figures achieved are the lowest since the 1960's. Not only are the numbers of rail breaks reduced but also there has been a proportionately greater improvement made to reduce the numbers of rail breaks associated with higher risk (Source: RSSB).

The following chart shows the reducing number of rail breaks expressed as a proportion of train miles on the Network Rail infrastructure:



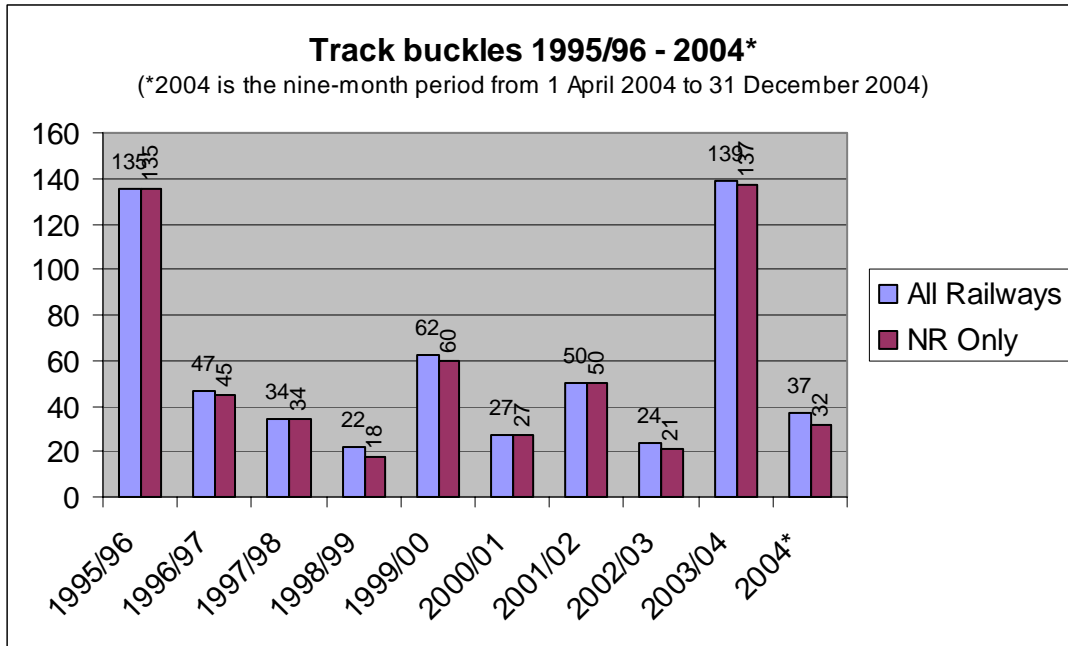
*2004 is the nine-month period from 01 April 2004 to 31 December 2004.

Track buckles



32 Track buckles were reported on Network Rail infrastructure between 1 April 2004 and 31 December 2004. Their distribution is shown in the following table:

This represents a significant reduction from the 137 buckles recorded during the hot summer of 2003/04. As shown in the following table the number of track buckles reported in 2004 is largely consistent with the number of buckles experienced over the previous ten years.



HMRI Inspectors carried out inspection work during 2004, looking at how Network Rail manage its infrastructure to reduce the likelihood of buckled rails occurring and their preparedness to minimise the risk from track buckles when they occur.

TRAIN INCIDENTS AND FAILURES OF ROLLING STOCK AND PERMANENT WAY 2004*							
INDEX	CATEGORY	All Railways					
		2003/04	2004*	NR	LUL	TRAMS	OTHER
	Train incidents total	1259	1001	805	36	143	17
	Collisions between						
1**	Passenger trains or parts thereof	5	13	8	0	2	3
2**	Passenger trains and freight trains or light locomotives	5	0	0	0	0	0
3**	Freight locomotives or other moving vehicles	4 (2)	2 (0)	2 (0)	0 (0)	0 (0)	0 (0)
4	Trains and vehicles standing foul of the line	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
5**	Trains and buffer stops or vehicles standing at buffer stops	0 (0)	7 (0)	7 (0)	0 (0)	0 (0)	0 (0)
6***	Trains and projections from other trains or vehicles on parallel lines	45 (40)	22 (14)	22 (14)	0 (0)	0 (0)	0 (0)
	Total collisions	59	44	39	0	2	3
	Derailments						
7*8	Of passenger trains	22	20	8	1	3	8
8**	Of freight trains	40 (11)	27 (6)	23 (5)	3 (1)	0 (0)	1 (0)
	Total derailments	62 (11)	47 (6)	31 (5)	4 (1)	3 (0)	9 (0)
9	Trains running into						
	a) gates or vehicles or animals at level crossings	29	23	21	0	0	2
	b) animals on the line	76	67	67	0	0	0
	c) other obstacles	343	316	168	13	134 (116)	1
	Total running into obstruction	448	406	256	13	134 (116)	3
10	Fires in trains						
	a) passenger trains	279	215	197	18	0	0
	b) freight trains	18	8	8	0	0	0
	Total fires on trains	297	223	205	18	0	0
11A	Other incidents	0	0	0	0	0	0
	Total other incidents	0	0	0	0	0	0
11B	Missile damage to train windows including drivers windscreen	393	281	274	1	4	2
	Total missile damage to train windows including drivers windscreen	393	281	274	1	4	2
	Failures of rolling stock and permanent way etc total	1377	1038	908	94	12	24
12	Failures of locomotives and multiple unit trains						
	a) diesel	140	109	109	0	0	0
	b) electric	104	89	73	8	2	6
	c) steam	0	1	0	0	0	1
13	General failures of rolling stock	38	33	32	1	0	0
14	Failure of wheels or tyres	21	7	7	0	0	0
15	Failure of axles (includes bearing failures)	6	5	4	0	0	1
16	Failure of coupling apparatus						
	a) passenger trains	13	10	9	1	0	0
	b) freight trains	0	1	1	0	0	0
	Total rolling stock failures	322	255	235	10	2	8
17	Failure of structures						
	a) tunnels, bridges, viaducts, culverts etc	25	21	18	0	1	2
	b) damage to bridges by motor vehicles & ships	56	77	68	3	0	6
18	Failure of track						
	a) broken rails	368	249	207	37	0	5
	b) track buckles	139	36	32	4	0	0
19	Flooding of permanent way, landslips, obstructions of the permanent way etc	277	279	256	16	4	3
20	Fires at passenger stations, signal boxes, lineside	118	69	43	24	2	0
21	Failures of overhead line equipment	14	10	7	0	3	0
22	Miscellaneous failures	58	42	42	0	0	0
	Total failures of permanent way and structures	1055	783	673	84	10	16

* 2004 is the nine-month period from 1 April 2004 to 31 December 2004

** Incidents considered significant occurring on or affecting passenger lines.

The figures in brackets denote the number of incidents that occurred on freight only lines or lines in an engineering possession.

*** Collisions involving open doors are denoted in brackets.

The figures in brackets under Trams are the numbers of collisions involving a tram and a road vehicle reported on a monthly basis.

Table - *train incidents and failures, numbers employed, operating stats.*

HEALTH AND SAFETY OF RAIL EMPLOYEES

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

Key facts

- During the 9-month period 1 April 2004 and 31 December 2004, there were 3 track worker fatalities, compared with 6 fatalities in the previous 12-month period (2003/04).
- There were 231 assaults on staff on the rail network during the period 1 April 2004 to 31 December 2004 notifiable under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR).
- HMRI has continued to work with the rail industry, and other sectors, in tackling staff assaults.
- Areas of work suggested by employee health and safety representatives continue to be incorporated into the planned work for HMRI inspectors.

Summary

In the 9-month period 1 April 2004 to 31 December 2004, there were 3 fatalities to track workers. Two track workers were killed in a single incident at Hednesford, when they were struck by moving on-track plant. One worker was killed when he was struck by a road rail vehicle; this fatality is being treated as a suspected suicide.

HMRI has continued to work with the rail industry, and other sectors, in tackling staff assaults, through participation in the RSSB-led Rail Personal Security Group and the HSE-led Partnership on Work Related Violence.

Track worker safety

The 9-month period covered by this report saw a decrease in the number of fatalities (3) to track workers, compared to 2003/04 when 6 track workers were killed.

On-track plant, including road-rail vehicles, continue to be involved in serious incidents, especially during track possessions. The industry, as well as HMRI, has recognised the seriousness of this problem and has started taking steps to minimise the risk of similar incidents occurring in the future.

HMRI has included in its current Network Rail Delivery Plan an assignment on the Management of On-Track Plant and Trains. The aim of this assignment is to reduce the number of injuries and near misses that occur each year within possession worksites by ensuring safe operations, safe systems of work and competence standards are applied and maintained.

As in 2003/04, there were no [RIMINI](#)-preventable fatalities (ie fatalities resulting from a worker being struck by a moving train) to track workers during the period covered by this report.

HMRI's field inspectors carried out two assignments relevant to track worker safety as part of the organisation's Network Rail Intervention Plan. One assignment analysed the standard of safety critical communications between signallers and track workers. The second assignment involved inspection of the practical implementation of RIMINI by track workers on site. Both assignments have resulted in recommendations to be taken forward with the industry.

Assaults on staff

There were 231 RIDDOR-reportable assaults on staff on the rail network during the period 1 April 2004 to 31 December 2004. This compares with 263 during the 12-month period April 2003 to March 2004.

HMRI has continued to work with the rail industry in tackling work related violence (WRV). This has included participation in the RSSB-led Rail Personal Security Group (RPSG).

A media campaign was launched by RPSG in November 2004: the 12-month campaign aims to discourage rail users from assaulting or abusing railway staff.

RPSG also recently produced a strategic framework that identifies staff training as a priority issue for 2005. HMRI will be collaborating with members of RPSG on the production of a scenario-based staff training video/DVD. It is intended that this will be made available to all rail businesses for use as a vehicle for facilitated discussion with staff at increased risk of WRV.

HMRI also continues to collaborate with other industry sectors in relation to issues of WRV, through membership of and active participation in the recently revamped HSE-led 'Partnership on Work Related Violence' (formerly known as the Interdepartmental Committee on Violence to Staff). The objective of this group is to reduce WRV through the development, promotion and dissemination of information and good practice between key commercial sectors. HMRI will contribute to this objective by leading the newly formed 'Public Transport Sector Group'.

2004 also saw the publication of internal guidance for field inspectors dealing with incidents of WRV.

Depots

During the period covered by this report, depot inspections were carried out by HMRI as a follow-up to Railway Safety Case work, and reactive issues identified by field team inspectors.

Inspections in depots covered a wide range of topics including welfare, noise, competence of safety critical staff, and engineering issues for rolling stock. No matters of evident concern were found during the inspections.

One person survived a 25 000 volt electric shock: after correctly isolating the power supply to the road on which he was to work, he then started working on a train which was on an adjacent road. The correct isolation procedure was followed, but it remains unclear as to why the person started to work on the wrong train.

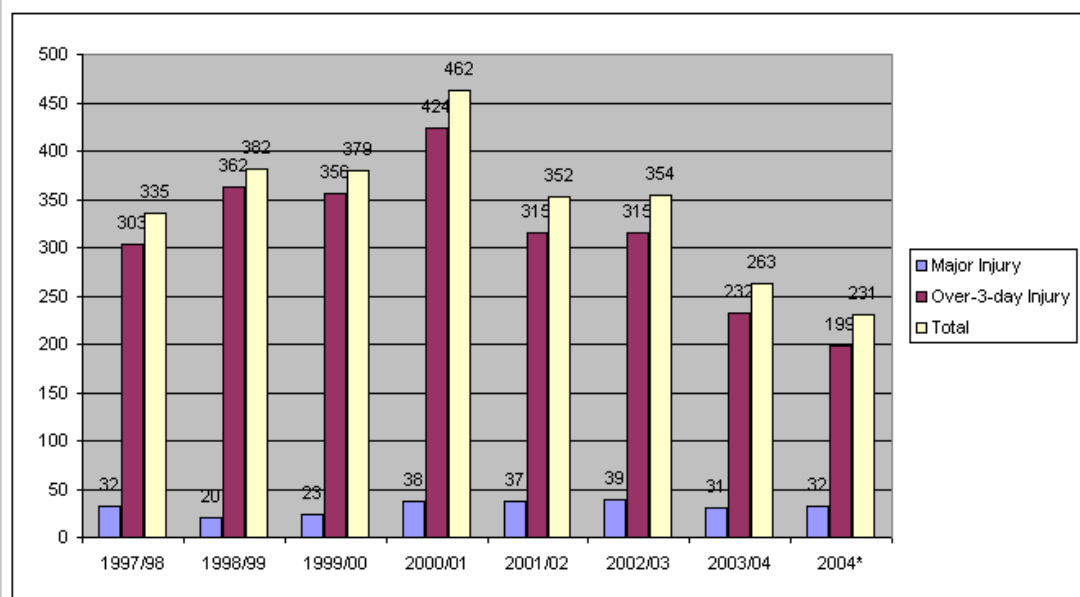
Employee representatives

Meetings and seminars were held in various regions and were successful in enabling HMRI and the representatives to exchange information on current issues, identify future areas of work and answer questions.

HMRI field inspectors continue to hold liaison meetings with district secretaries from the various unions. This enables local issues to be raised with HMRI inspectors, and advice to be sought in an open and proactive manner.

Meetings were also held with local safety representatives who continue to raise matters of evident concern in their area. This enables a positive relationship to develop between safety representatives and local HMRI field inspectors.

Assaults on employees by members of public 1997/98 - 2004*

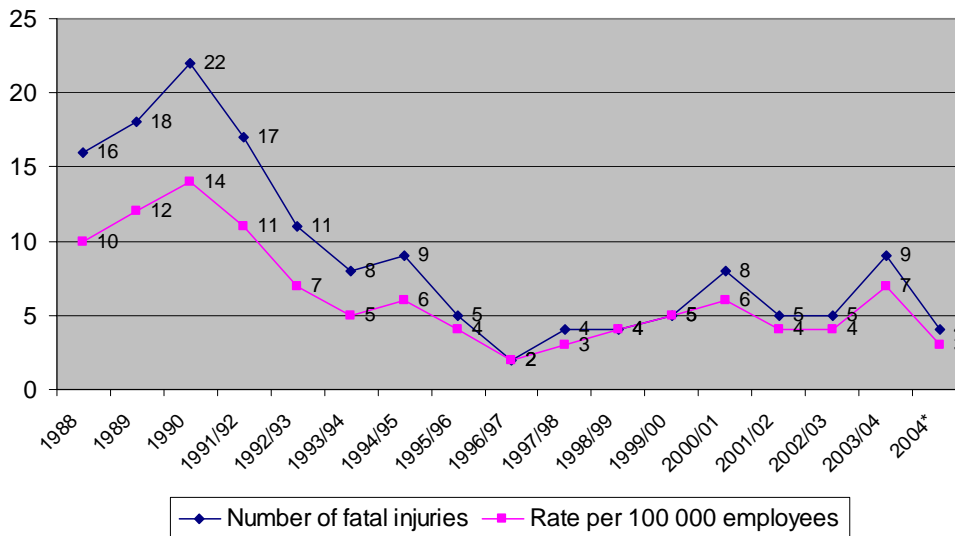


*2004 is the nine-month period from 1 April 2004 and 31 December 2004

Due to the Coroner's findings, the fatality recorded in 2002/03 has been removed, as death was due to natural causes..

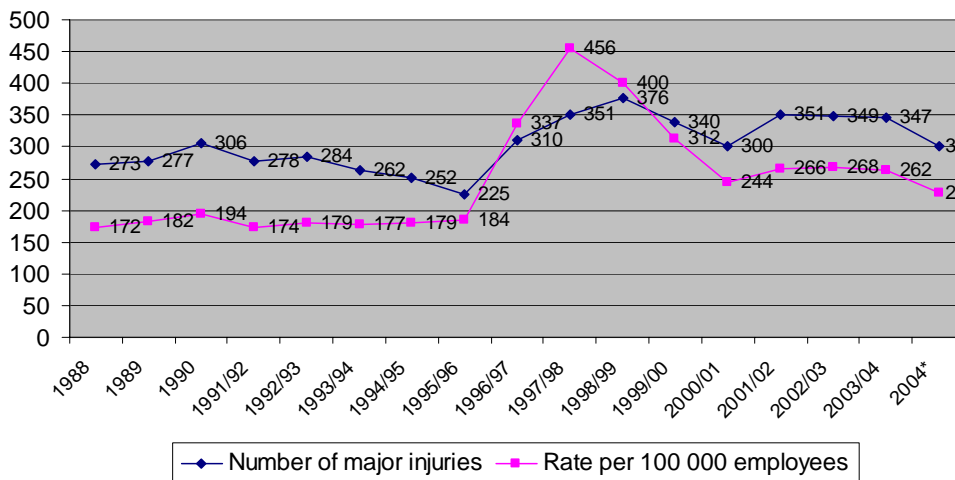
Fatal injuries to railway employees and contractors 1988 - 2004*

(*2004 is the nine-month period 1 April 2004 to 31 December 2004)



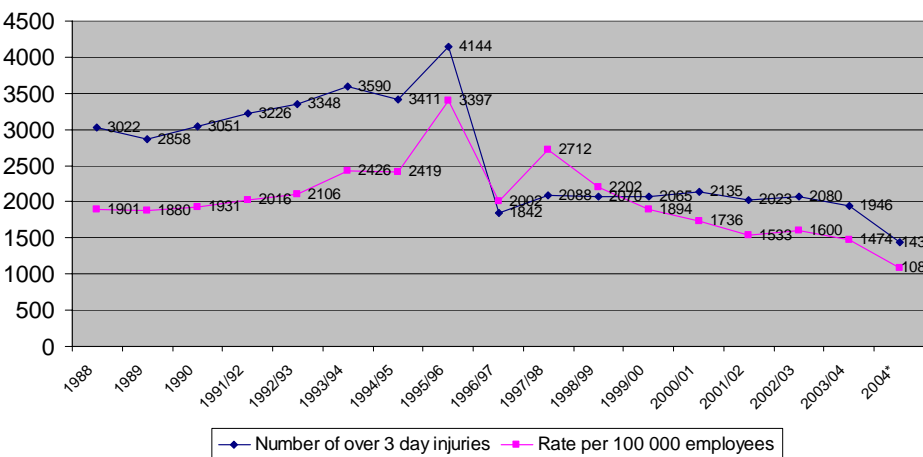
Major injuries to railway employees and contractors 1988 - 2004*

(*2004 is the nine-month period 1 April 2004 to 31 December 2004)



Over-3-day injuries to railway employees and contractors 1988 - 2004*

(*2004 is the nine-month period 1 April 2004 to 31 December 2004)



UNDERGROUND RAILWAYS

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

Key facts

- 16 people fatally injured on London Underground Ltd (LUL) infrastructure in the 9-month period to 31 December 2004, compared with 22 in 2003/04.
- There were no employee fatalities on underground railways in the 9-month period to 31 December 2004.
- Broken rails on LUL infrastructure increased from 20 in 2003/04 to 37 in the 9-month period to 31 December 2004.
- There were 2 significant derailments on LUL, at Hammersmith and White City.
- Strathclyde Passenger Transport (SPT) Glasgow Subway's new 'contactless trainstops' system was formally approved in December 2004.

London Underground Limited (LUL)

Public Private Partnership (PPP)

The derailments at Hammersmith and White City have implications relating to LUL's assurance that the private sector maintenance companies are carrying out their roles to appropriate standards, and give appropriate assurance under the PPP regime. HMRI has a programme of work looking at this issue.

This year has seen increased maintenance and renewals work being carried out by the private sector maintenance companies. Worker safety issues will therefore be one of HMRI's priorities for 2005.

Planned inspection activity

HMRI has continued to deliver its intervention plan for LUL. The plan, in its final year of a three-year programme, included the following:

- Platform/train interface – one of LUL's most significant risks. The intervention considered the suitability of platform equipment and this work is continuing.
- Maintenance of track and signals – essential to running a safe railway. HMRI's work included consideration of track design and modifications issues arising from the White City derailment, and the competence of train control systems' maintenance staff and the quality of their work.
- Electrical safety – LUL's compliance with legal requirements in relation to traction current. This work continues.
- Emergency planning – how LUL anticipates and responds to emergencies and other incidents. The intervention assessed equipment and training, and will continue.
- Maintenance of safety-critical assets – how the infracos maintain lifts and escalators in a safe condition. The intervention also considered LUL's procedures for dealing with lift failures.
- Management of contractors – assessing how the infracos ensure that contractors' work is planned and carried out in a safe and healthy manner and to the appropriate standard of integrity.
- Route crime (trespass and vandalism) – liaison with LUL and British Transport Police to assess lineside fencing and removal of trackside debris and materials.
- Slips, trips and falls – the biggest cause of accidents to members of the public. Visits were made, usually and deliberately in wet weather, looking at precautions and conditions at busy stations.

Investigations

HMRI inspectors have investigated a range of complaints from LUL employees, contractors and the public on a variety of issues. These have

included drivers maintaining route knowledge, lineside debris, track maintenance, station hazards and depot safety issues.

Inspectors have also investigated a number of incidents involving members of the public, employees and contractors. These included the Hammersmith and White City derailments, construction work impinging on the railway at Wood Lane (currently under investigation), three track worker safety incidents and two passenger/train incidents, one of them a fatal accident to a passenger at Acton Town.

Enforcement action

Tube Lines Ltd, a company responsible for maintenance on LUL infrastructure, was prosecuted following an accident to an escalator cleaner at Oxford Circus in 2002.

A prohibition notice was served on LUL regarding train despatch procedures at certain stations on the Piccadilly Line.

Two prohibition notices were served on LUL in relation to control of passenger flows at Kings Cross St Pancras, arising from the construction work being carried out in the area.

Metronet Rail SSL Ltd was served with an improvement notice relating to ensuring assets are safe for trains following construction/installation work.

All of the notices were complied with.

Broken rails on LUL

For the 9-month period 1 April to 31 December 2004 there were 37 broken rails on LUL infrastructure, compared with 34 in the previous 12-month period (2003/04). HMRI has carried out work looking at types of breaks and detection methods, as well as prevention and replacement strategies. Work continues on this topic.

Significant investigations

On 11 May 2004 the seventh car of a westbound Central Line train derailed on the approach to White City station. There were approximately 150 people on board, but no reported injuries. The train derailed while travelling over a newly-installed switch. The switch was of the type identified following the 2003 Camden Town derailment investigation as having a greater potential to cause derailments. The investigation concluded that although there were issues on the standard of track maintenance and switch design in the area, the derailment was caused by a rare combination of factors associated with automatic train operation and a temporary speed restriction in place at the time.

The second derailment was on 25 June 2004. A westbound Piccadilly Line train carrying approximately 300 passengers came to a halt near Hammersmith station. The train was worked into the station and while being taken out of service it derailed. There were no reported injuries. It was established that the cause of the train failure and derailment was a failed mounting bracket on the underside of the train causing a compressor to fall onto the track. The HMRI investigation continues.

Strathclyde Passenger Transport (SPT) Glasgow Subway

In May 2004, HMRI gave SPT consent to test the new 'contactless trainstops' (electronic devices which halt a train which has passed a stop signal). Trackside and on-train equipment for the new system had been installed progressively between 2002 and 2004. The trials were to permit data gathering and reliability testing to be undertaken, and to develop a strategy to migrate to the new system from the existing mechanical trainstops. Migration, which began in the autumn of 2004, is now complete and the new system was formally approved by HMRI in December 2004.

Upgrading of the tunnel lighting and power cables continued in 2004. In conjunction with this work, a new 'Pressline' system is being installed. This will enable the traction current in the tunnel to be discharged from the train cab in the event of an emergency while retaining operation of the tunnel lighting. When commissioned, this system will replace the present Tunnel Emergency Telephone (TET) system. Consent to test the new system was given by HMRI in March 2005.

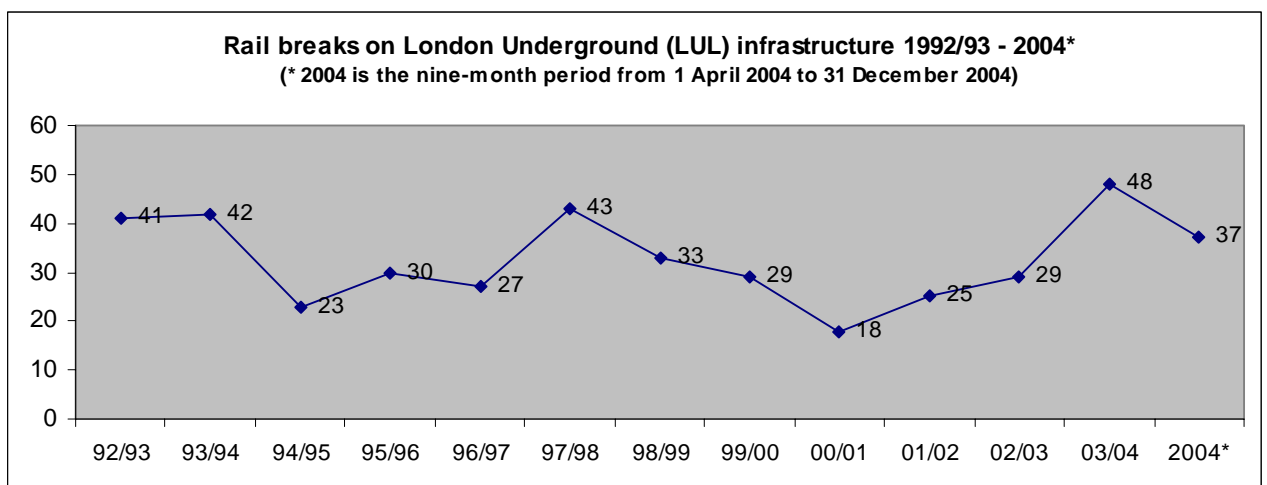
At the non-active side of Buchanan Street Station's island platform, a platform edge screen has been erected. This has yet to be approved by HMRI.

During 2004 a small number of RIDDOR-reportable incidents were notified to HMRI, and some of these were investigated by local field inspectors.

Fatalities on London Underground (LUL) 1996/97 – 2004p

Category	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004p
Staff	0	0	1	0	0	0	0	0	0
Passenger	7	5	1	7	3	4	5	2	0
Trespasser	19	6	1	10	14	14	16	18	16
Suicide	4	20	17	8	5	9	6	2	0
Total	30	31	20	25	22	27	27	22	16

Note: of the 16 trespasser fatalities recorded for 2004, 13 are suspected suicides.
2004p: data are provisional and cover the nine-month period 1 April to 31 December 2004.



LIGHT RAPID TRANSIT

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

Key facts

- Docklands Airport extension under construction.
- Technical modifications made to the Croydon Tramlink system.
- Revised Railway Safety Principles and Guidance (RSPG) Section G (guidance for tramways) now available online.

Summary

The revision of HSE's guidance for tramways, RSPG section G, reached its conclusion and is now posted on the HSE website along with other [RSPG guidance](#).

HSE wishes to thank all those from the industry who contributed to the document and in particular the Confederation of Passenger Transport who represent the system operators. HMRI will continue to work with the industry to assist in the development of standards and participate in the various industry initiatives to produce tramway specific standards.

There has been continuing liaison with schemes that are at the tender procurement stage, conducting advance works or are currently operating.

Advice, scrutiny and inspection

HMRI continues to provide advice to the promoters of the South Hampshire Rapid Transit scheme.

Advice has also been given to other schemes in development, in particular those lessons learned from the five operational second-generation tramways. HMRI has given advice to the promoters of tram systems in London, Liverpool, Newcastle Upon Tyne and Edinburgh.

A number of proposed people-mover systems have received scrutiny over the year and HMRI will continue to provide guidance and advice to the growing number of 'ultra light' systems that are at the early stages of development.

A joint HMRI and industry research initiative on tramcar derailments and wheel/rail interface issues has been ongoing throughout the year and the initial findings will be published during 2005.

HMRI has expressed concern over permanent way inspection and maintenance regimes on two tramways. The tramway operators are actively progressing the development of standardised procedures.

Docklands Light Railway

HMRI has worked closely with Docklands Light Railway Ltd, Serco Docklands and AMEC on the statutory approvals for the Docklands Airport extension that is currently under construction.

Manchester Metrolink

HMRI has given advice and progressed approvals for a number of advance works schemes relating to Phase 3 Manchester Metrolink extensions.

Croydon Tramlink

HMRI has supported a number of technical modifications to the Croydon Tramlink system that achieve operational improvements.

Midland Metro

Two extensions to the Midland Metro through Birmingham City centre and to Merry Hill have received scrutiny of their outline design by HMRI. Ongoing

discussions are being held concerning several other extensions to the network.

Tramway incidents 1998/99 - 2004*							
	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004*
Blackpool Transport Services	43 (24)	34 (30)	39 (28)	72 (47)	44 (34)	12 (10)	9 (8)
Croydon Tramway	-	18 (13)	44 (38)	36 (22)	29 (19)	28 (28)	17 (15)
Midland Metro	-	11 (10)	15 (7)	12 (8)	28 (18)	22 (11)	17 (5)
Nottingham Tram Consortium						12 (8)	27 (26)
Serco Manchester Metrolink	30 (29)	47 (24)	33 (31)	24 (22)	16 (9)	26 (17)	29 (20)
South Yorkshire Supertram	58 (55)	53 (52)	47 (44)	57 (48)	49 (40)	60 (56)	44 (42)
Total	131 (108)	163 (129)	178 (148)	201 (148)	166 (120)	160 (130)	143 (116)
The figures in brackets refer to incidents where trams have collided with road vehicles, these incidents are reported in the form of monthly bulk returns.							
2004 covers the nine-month period only 1 April 2004 to 31 December 2004							

MINOR RAILWAYS

Due to European regulations on the reporting of rail transport statistics, the Annual Report on Railway Safety now covers calendar years, rather than financial years. This transitional report deals with the nine-month period from 1 April 2004 to 31 December 2004. Statistical comparisons with previous reports may not be particularly useful, although dividing a nine-month figure by three and multiplying by four will provide a very broad comparative indicator with previous reports.

Key facts

- A woman was killed when part of a tree fell on her during very high winds at Corfe Castle Station.
- 35 incidents on minor railways reported under RIDDOR.

Summary

There were 35 incidents reported under RIDDOR in the nine-month period from 1 April 2004 to 31 December 2004, with 11 being in the category of 'slips, trips and falls'.

Incidents

A woman was killed when a bough, torn from a healthy tree by exceptionally high winds, fell on her at Corfe Castle Station.

A car was struck by an approaching train on the North Yorkshire Moors Railway line at the user worked level crossing at Trout Farm, Pickering.

At a level crossing on the Dean Forest Railway in Lydney, a lorry ripped off a barrier and continued on its way without stopping.

Another lorry struck an underline bridge on the West Somerset Railway, causing temporary closure of the line.

On the Tanfield Railway, at Andrews House station, an out-of-control car broke through the railway fence and landed on the railway.

A van was driven in front of a train at a user worked crossing near Highley. No blame was levelled at the railway but the line was closed for over eight hours while emergency services attended and investigated the circumstances of the incident.

A collision occurred between two tramcars on the single line at Beamish. There were no injuries to passengers or crew.

Ten passengers were injured on the Kirklees Light Railway when a relief engine collided with a failed train it had been sent to assist.

Two reports were received of signals passed at danger (SPADs), one from the Great Central Railway at Loughborough and the other from the Kent & East Sussex Railway.

Fortunately no injury was sustained when a 17-month-old child fell from a train door on the Bure Valley Railway. The train was travelling at about 7 mph, with no fault found with the door fastening.

Derailments

There were five derailments of trains or tramcars.

The main line of the Talylyn Railway was obstructed when an empty coaching stock train was derailed at Pendre.

On the Romney, Hythe & Dymchurch Railway a passenger train locomotive was derailed by an obstruction on the line.

A track fault at Hebron derailed a passenger train on the Snowdon Mountain Railway.

ABBREVIATIONS 2004

ABCL	automatic barrier crossing, locally monitored
AHB	automatic half barrier
AOCL	automatic open crossing, locally monitored
AOCR	automatic open crossing, remotely monitored
ATO	automatic train operation
ATOC	Association of Train Operating Companies
ATP	automatic train protection
AWS	automatic warning system
BTP	British Transport Police
CCTV	closed circuit television
CPS	Crown Prosecution Service
CTSA	Channel Tunnel Safety Authority
DfT	Department for Transport
DLR	Docklands Light Railway (Serco Docklands)
DMU	diesel multiple unit
ERTMS	European rail traffic management system
EWS	English, Welsh and Scottish Railway
FP	footpath (level crossing)
HGV	heavy goods vehicle
HMRI	Her Majesty's Railway Inspectorate
HSC	Health and Safety Commission
HSE	Health and Safety Executive
HSTRC	high-speed track recording coach
HSW Act	Health and Safety at Work etc Act 1974
IMC	infrastructure maintenance company
IN	improvement notice
LC	level crossing
LRT	light rapid transit
LUL	London Underground Limited
MCB	manually controlled barrier (operated by a railway employee)
MG	manual gate (operated by a railway employee including those operated by trainmen)
MWL	miniature warning light
NR	Network Rail
OC	open crossing
OLE	overhead line equipment
PN	prohibition notice

PPP	public private partnership
RAIB	Rail Accident Investigation Branch
RICO	Railway Inspectorate contact officer
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995
RIMINI	risk minimisation
RSC	railway safety case
RSCWR	Railway (Safety Critical Work) Regulations 1994
RSPG	railway safety principles and guidance
RSR	Railway Safety Regulations 1999
RSSB	Railway Safety and Standards Board
SC	South Central
SE	South East
SPAD	signal passed at danger
SPT	Strathclyde Glasgow Passenger Transport
SRA	Strategic Rail Authority
TET	tunnel emergency telephone
TOC	train operating company
TPWS	train protection and warning system
UWC	user-worked crossing with either gates or lifting barriers not manned by a railway employee