

# A Farewell to Trains

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## Introduction

No single issue has taken up as much of my time as that of safety on the railways. The first piece of paper in my in tray on Monday 4 October 1999 (the day I took up office as Chair of the HSC) was a note on the Inquiry into the Southall train crash. The very next day the Ladbroke Grove train crash shook the nation and public confidence in rail safety, moreso when it was learned that Signal SN109 had been passed at danger eight times before. It was followed a year later by the derailment at Hatfield, and in May 2002 by a further derailment at Potters Bar. These four incidents cost 49 rail passengers and staff lives and injured many more.

In my view all four crashes were preventable and exposed significant safety management failings. It was no understatement when Lord Cullen, in his Report on Ladbroke Grove, described Railtrack's "lamentable failure".

Railway safety has been the subject of three Public Inquiry reports, extensive legal argument, intense lobbying by the railway industry, extreme political scrutiny and deep anxiety and concern by groups representing the bereaved and victims of train crashes. It has literally been dramatic - David Hare's play *The Permanent Way* and Ken Loach's television film *The Navigators* both showed that railway safety is no dry technical subject.

So the HSC stewardship of rail safety has been at times frustrating, challenging but ultimately rewarding.

Frustrating because of the excessive delays surrounding the legal and Public Inquiry processes; much has improved since 1999 but legally Ladbroke Grove is still unfinished business and that casts an unnecessary shadow. Challenging because relations between HSC/E and the industry have not been easy: the industry did not like the independent regulator taking legal action, and their culture did not readily adapt to HSC/E's risk based approach, industry fragmentation after privatisation made communications difficult, and Ladbroke Grove raised awkward questions about HSE's prior role. But it has been rewarding. There have been many brickbats, including a sustained campaign of misinformation designed to denigrate HSC/E, but also many bouquets, above all that of improved rail health and safety.

As responsibility for regulating rail health and safety matters transfers to the Office of Rail Regulation (ORR) on 1 April 2006 all HSE rail staff can look with pride on their achievements. Both passengers and those who work on the railway are safer and so are those who work on the railway.

## **The Safety Record**

It is salutary to remember that in 1947 nearly 250 railway workers were killed. It is of course true that, along with industry more generally, safety on Britain's railways has been gradually improving since the end of World War II (see graph 1).

We have moved from the position during the 1950s where on average 82 passengers and 176 employees were killed each year to the 1970s, where the average was 43 passengers and 47 employees. During the 1990s, when regulatory responsibility for rail safety regulation moved to HSC/E, the average fell further to 24 passengers and 9 employees killed annually on Britain's railways – a marked improvement but still not low enough.

## **Reasons for HMRI's transfer from DoT to HSC/E**

Moving the responsibility to HSC/E clearly has helped drive improvements but there were other factors at work, including the reshaping of the industry and the way it was funded. It is useful to recall the reasons why, in December 1990, responsibility was transferred to HSC/E from the Department of Transport. Following the King's Cross fire in 1987 and Clapham Junction collision in 1988 the Railway Inspectorate was criticised for not applying modern risk assessment techniques to rail safety management, a lack of specialist support, and for not providing adequate attention to the protection of passengers and the workforce.

The move was seen as the answer as it coupled the Inspectorate with the Government's central health and safety regulator and, just as importantly, decoupled the inspectorate from the transport industry's sponsorship department. This was not an isolated approach as in November 1990 Lord Cullen's Report on the Public Inquiry into the Piper Alpha offshore platform fire had recommended that the offshore safety inspectorate should be transferred to HSC/E for similar reasons.

## **History of RI:**

- 1840 - 1919: Railways Department of the Board of Trade (following an accident in 1889 the Railways Inspectorate was given powers to force rail companies to invest in safety and in 1900 powers to investigate accidents to staff).
- 1919 -1941: Ministry of Transport
- 1941 -1945: Ministry of War Transport
- 1945 -1953: Ministry of Transport
- 1953 -1959: Ministry of Transport and Civil Aviation
- 1959 -1970: Ministry of Transport
- 1970 -1976: Department for the Environment (merger of Ministry of Transport and Ministry of Housing and Local Government)
- 1976 -1990: Department of Transport
- 1990 - 2006: HSC/E (RI subsequently renamed HMRI)
- April 2006: Transfer to ORR

## Privatisation

Between 1993 and 1996, the railway industry underwent an extremely significant shake-up as British Rail was privatised and broken up into over a hundred different companies. This created a vastly different industry, safety culture and approach to risk management.

HSC/E were challenged with developing a regulatory framework that would influence the way the newly shaped industry controlled these new risks. HMRI's document - *'Ensuring Safety on Britain's railways'*, was fundamental in examining the health and safety implications of privatisation. Ahead of privatisation HSC/E proposed a raft of new legislation designed to ensure safety would not be compromised by the structural changes arising from rail privatisation.

### Safety case regime

The keystone of this was the establishment of the Railway (Safety Case) Regulations, 1994. Under these regulations each operator was required to hold an assessed and approved safety case, which explained how they planned to manage the risks from their operations. Perhaps just as important they were also required to explain how they planned to manage the new interfaces with all the other new operators.

### Permissioning regime: Approvals

Another important plank in the development of an enhanced regulatory safety regime was the Railways and Other Transport Systems (Approved Works, Plant and Equipment) Regulations 1994 or 'ROTS' as they became widely known. ROTS ensured that all new rolling stock and infrastructure that posed a significant risk were assessed and approved by HMRI before it could be brought into use. ROTS rationalised earlier legislation, such as the Transport and Works Act 1992 and the Road and Rail Traffic Act 1933.

### Railway Safety Regulations 1999: Mark I rolling stock and train protection and warning system (TPWS)

Perhaps the most significant piece of post-privatisation legislation was the Railway Safety Regulations 1999. These proved very controversial at the time, but there are few who would now challenge whether a form of automatic train protection should be installed to help prevent trains passing red signals and mitigate the risks when this does occur, or whether Mark I 'slam-door' trains, which performed so badly during collisions, should be removed from the mainline network. These were innovative regulations that have been proven to strike the right balance between absolute safety and common sense and have undoubtedly made a significant and positive impact. I believe the rail industry would agree that the introduction of the Train Protection and Warning System was one of the most significant improvements in railway safety. Network Rail is right to be proud of this achievement but it should not be forgotten that this improvement would not have happened without the underpinning regulations proposed by HSC and monitored by HSE.

## **Southall, Ladbroke Grove, Hatfield and Potters Bar**

Between September 1997 and May 2002 four serious and preventable railway incidents set the script not just for David Hare's play but for HSC/E's relations with the rail industry and with Government, ultimately leading to the Rail Review of 2004 and the transfer of rail health and safety to ORR.

Official reports have set out the detailed reasons behind these incidents but some general principles can be stated. It would be facile and wrong to solely blame privatisation but one of the consequences of privatisation was an increase in passenger and freight traffic which put great strains on 'a stretched, ageing and fragile' – in the words of Network Rail - infrastructure which had suffered years of under investment.

Fragmentation was a further consequence, particularly following Railtrack's move to the private sector and its decision to contract out much of its maintenance work. It proved to be a disastrous decision with Railtrack losing control over its main asset and also losing control over its costs.

In their different ways, the four major incidents show the tensions caused by the interfaces between Railtrack and the train operating companies (TOCs), between the TOCs and the train maintenance companies, and between Railtrack and the contractors maintaining the track.

These are not impossible interfaces to manage and analogous situations are managed well in much of the private sector. The big difference of course was that the privatised rail industry became even more reliant on public funds than the old British Rail, and the political dimension added yet more complexity. The runaway costs on the West Coast Mainline renewal and Railtrack's imposition of speed restrictions after Hatfield meant that Ministers could not stand idly by as the industry appeared to eat up more and more public money with a seemingly deteriorating service.

The Southall Public Inquiry (Chaired by Professor Uff), the Ladbroke Grove Public Inquiry (Chaired by Lord Cullen) and the Joint Inquiry into Train Protection Systems (jointly Chaired by both men), resulted in a total of 295 recommendations, which, by their implementation, have been a major driver in a range of improvements in the rail industry. They were also responsible for the creation of the Rail Safety and Standards Board (RSSB) and the Rail Accident Investigation Branch (RAIB). HSC published regular progress reports on the implementation of the recommendations and all but four have now been completed.

The Hatfield and Potters Bar crashes were also subject to special investigations and the recommendations from these are being followed through.

Perhaps one major theme of the above inquiries and investigations and also the recommendations of the 2004 Rail Review, is the key role of the Infrastructure Controller.

Network Rail are now beginning to show the health and safety leadership role that is properly its responsibility, and no better example can be given than the decision by Network Rail to bring maintenance contracts in-house, using better project planning and getting a better understanding of its infrastructure. As a result costs are being managed better and a more strategic approach is in place for dealing with infrastructure maintenance.

## **Lessons learned and challenges for the future**

Although HSC/E can look back over its stewardship of rail safety with pride it would be misleading to pretend that there were no lessons to be learned. Perhaps the main lesson is that communications and relations could have been better. Now is not the time to ascribe blame for this state of affairs but it is clear that HSC/E's risk based system was not understood by many in the rail industry.

At one level this was shown in the spate of stories in some quarters of the press about HSE activities all of which were false and I mean, quite literally, fictions. Some comments about HSE inspectors (e.g. drain sniffers and chip shop inspectors) were not just misleading but downright offensive. At one level it is easy to dismiss such ill informed comment. But at another level the poor quality of the debate about reasonable practicability at the highest levels of the industry showed the scale of the communications gap. It was worrying that many of the stories were believed by industry leaders and others.

To us, the independent regulator, it is crystal clear that is neither economically viable nor technically achievable to eliminate all risks. Over recent years, HSC/E and I have faced much criticism for 'gold-plating' health and safety standards, creating a sense of risk aversion among managers and increasing costs unnecessarily. This is not the case and should never be the case. Many of the stories about 'what HSE wants', result from the poor application of risk assessment techniques by dutyholders. ORR will need to ensure that in seeking continuous improvements in rail health and safety, dutyholders understand the fundamentals and principles of risk assessment and what 'reasonably practicable' means in practice.

A further area marked by lack of understanding was HSC/E's role as an independent regulator and in particular HSE's role as an enforcement body. Although there was no evidence to suggest that HSE took a disproportionate approach towards rail against other similar industries, there was a genuine perception in the rail industry that individual workers and managers might be prosecuted for carrying out their normal business and following their professional judgements. HSE took great pains to correct this, for example in a letter (dated 8 December 2000) from HSE to Railtrack which stated:

*‘The primary responsibility rests with Railtrack plc and so long as contractors and staff undertake the work required of them as mandated in clear instructions, and are clear about the need for upward referral where necessary, it is unlikely that any residual legal liability for the consequences of a decision to raise a specific speed restriction will rest with them.’*

Undoubtedly a complicating factor in HSE- rail relations was the pressure for manslaughter charges against both individuals and corporate bodies, a matter in which the British Transport Police (BTP) and the Crown Prosecution Service (CPS) were in the lead.

A key challenge for ORR will be to establish itself as an independent and proportionate regulator. It has a clear basis to do so in terms of its enforcement policy statement and in the spirit of the Government’s agenda about better and joined up regulation, HSE and ORR will continually need to work closely together.

A further challenge for any independent regulator is to maintain the trust and respect of the industry it regulates but also the wider public. This does not mean that the regulator has to be blown like a reed by the often fickle winds of public opinion, but it does mean that the regulator has to engage a wide range of stakeholders and be ready to fully explain some difficult decisions.

HSC can claim some success in this respect on the issue of the European Rail Traffic Management System (ERTMS) – a form of Automatic Train Control. It became clear that the timetable for the introduction of ERTMS recommended by the Joint Inquiry Report would not be met and in February 2003, HSC acknowledged that the technology was not sufficiently developed to mandate use of health and safety law. Through a detailed process of engagement with stakeholders and the public HSC announced acceptance of a slower and more reasonable timetable.

## **Other rail systems**

So far I have concentrated on what is known as the heavy rail sector but I do not want to ignore the great strides made in improving safety in the light rail and metropolitan systems, like the London Underground. These improvements have been largely down to the hard work undertaken by both HSE's HM Railway Inspectorate and rail policy function – known within HSE as 'HSE Rail' - and the industry. London Underground's Ltd (LUL) response to the Kings Cross fire (in which 27 people were killed) is a text book example of an industry following the main principles of the Robens Report which underlies our approach: namely that those who create the risks are best placed to manage them.

Specifically I think it is worth mentioning the significant effort in delivering assessment of the London Underground Safety Case. This was completed in a very short time and under intense media and political scrutiny, especially in the context of it being a Public-Private Partnership between London Underground and private renewal and maintenance companies.

It is worth pointing out that LUL carries more passengers each day than the rest of the rail network put together. Moreover, working relations between HSC/E and the LUL managers and staff have been and are good. There are challenges from both parties but a mature acknowledgement and acceptance of our different roles, and shared goal that LUL maintains and operates an efficient and therefore safe transport system.

## **Passing the baton to ORR**

As the health and safety baton is passed to ORR, I am confident that the health and safety regulator and the regulatory framework are in good shape. Firstly, ORR is inheriting a well resourced inspectorate: when HMRI moved to HSE in 1990, there were 27 inspectors; there are now over 117 inspector posts in HMRI; a reflection of the importance that HSC/E has placed on improving railway health and safety.

Secondly, ORR is inheriting a modern regulatory framework. More recently, HSC has delivered to Transport Ministers the proposed (Railway and Other Guided Transport System (Safety) Regulations (ROGS). The ROGS package implements the European Rail Safety Directive, some recommendations arising from the Cullen Inquiry, and simplifies and modernises the current railway regulations. It also replaces the old ROTS approvals Regulations, the Railway (Safety Case) Regulations and the Railway (Safety Critical Work) Regulations; and is very closely linked to the interoperability package that has been separately developed by DfT. In simple terms, ROGS applies the 'polluter pays' principle, so that operators become responsible for verifying that their plans to improve safety are adequate.

Thirdly, ORR is inheriting a strong and independent safety regulator. At the close of the Rail Review when it was clear that rail safety would move from

HSC/E I wrote to the Secretary of State on the 1 July 2004 seeking certain assurances:

- ‘ - Ensuring safety is maintained, or improved so far as is reasonably practical...*
- Continued application of the Health and Safety at Work Act.*
- Having adequate resources for RI work on inspection, enforcement and promotion of good practice to give assurance to the public and to ensure compliance with the law.*
- Enforcement action will continue to be taken where that meets the better regulation tests, including of proportionality and transparency.*
- Effective consultation with all stakeholders (not just the railway companies) about the overall approach to regulation, as well as any other proposals.*
- A governance structure for ORR that demonstrates the independence necessary for a safety regulator, including from its other functions, as well as safety competence.’*

I was delighted when Alistair Darling agreed to them.

These assurances are the best guarantee for maintaining and improving health and safety on Britain’s railways; protecting both passengers and staff.

We should remember that although HSC/E loses statutory responsibility for railway health and safety, health and safety performance on the railway will still contribute to our overall targets for improvement; and HSC/E and ORR are committed to working together closely to achieve our objectives.

Fourthly, ORR is inheriting not just HSC/E's regulatory and enforcement framework but also its fine tradition of stakeholder engagement. I am glad that the work of RIAC will continue in the immediate future. RIAC is HSC's own Railway Industry Advisory Committee - and our longest standing advisory committee, which provides the railway industry, rail unions, the travelling public and other stakeholders with a forum for discussing railway health and safety concerns. After RIAC's creation in 1978, it enhanced its role, as it did after the rail safety function moved to HSE in 1990 and it continues to play a major role in improving dialogue between the health and safety regulator and the rail industry. One of the key documents developed through liaison with RIAC was the ‘Developing and maintaining staff competence’ document prepared by HMRI, which was aimed at providing guidance for those responsible for managing and assuring the competence of individuals and teams in the railway industry.

I believe that HSC/E have made a good start in embedding the concepts of risk assessment and reasonable practicability into the way that Britain’s railways manage risk. I was very reassured to find out that ORR's draft Corporate Strategy seeks continuous improvement in health and safety performance. I believe the immediate challenges ahead for ORR’s health, safety and welfare and safety function include:

- Level crossings – represent the greatest catastrophic incident precursor on Britain’s mainline railways, as recent incidents at Ufton Nervet and Elsenham have shown;
- The introduction of the European Rail Traffic Management System – it is right that time should be taken to test and plan the system, but this should not be an excuse for indefinite delay;
- Employee health, safety and welfare – despite the successes of the Railway Group Standard on minimising risk to track workers, there has been an increase in trackside worker fatalities and major injuries over recent years, making trackside workers, if analysed in isolation, one of the most ‘at risk’ employee populations in Britain’s workforce;
- Need to focus on human factor issues – improvements in health and safety performance will rely on addressing the human factor issues, rather than ‘big ticket’ heavy engineering solutions;
- Development of Community Railways – the development of proportionate health and safety standards for more economically marginal railway lines poses another opportunity to use risk assessment principles and align and prioritise resources according to the risks posed;
- Route crime – often this is a potential incident precursor that is outside the railways’ control, but about a half of all reportable rail incidents are caused by vandalism.

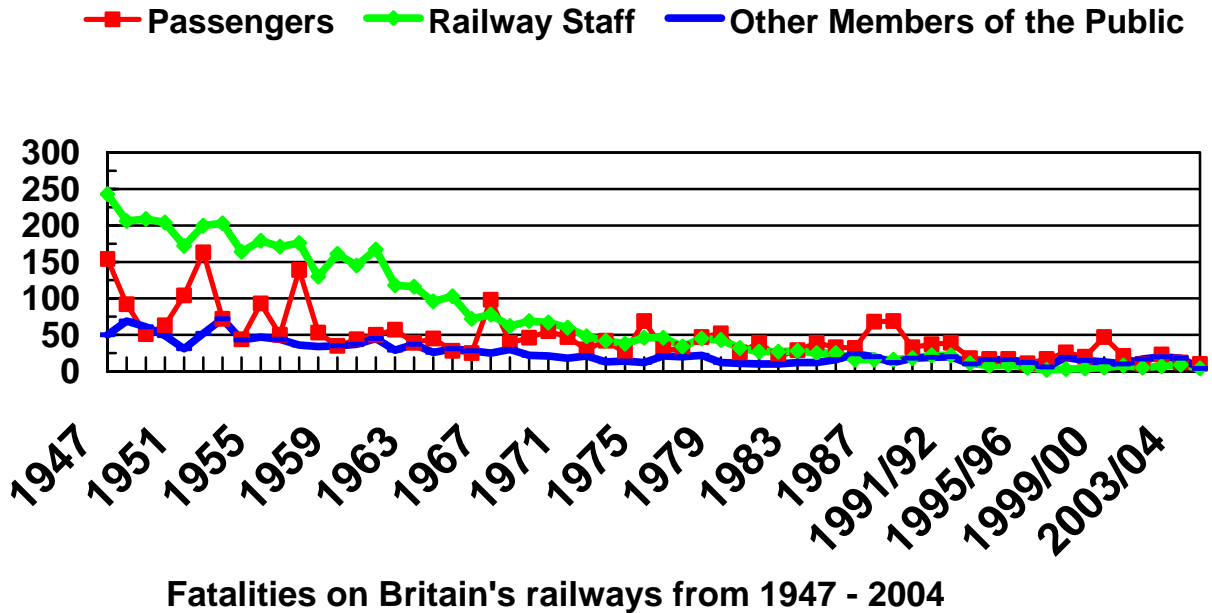
## **Thanks to the staff**

Last and by no means least, I am personally very proud of the improvement in railway health and safety indicators during the period that this function was within HSC/E. Both individually and collectively, I want to acknowledge the very significant efforts of HSE staff in reducing risks on Britain’s railways. It is only through their knowledge, practical application of that knowledge, and professionalism that it has been possible to successfully reduce health and safety risk on Britain’s railways. Indeed it is often the day-to-day contacts with the duty holder, which although usually unreported and unglamorous, are the basis on which the whole regulatory system is built. I would like to acknowledge the immense amount of work done by HSE’s and ORR’s transition teams, who ensured the merger of the two regulators happened smoothly.

The HSE staff who work on railway health and safety have been through some difficult and uncertain times and met some tough challenges. I know most of them are now ready to transfer to ORR and they have my very best wishes for continued achievement in this very important safety sector.

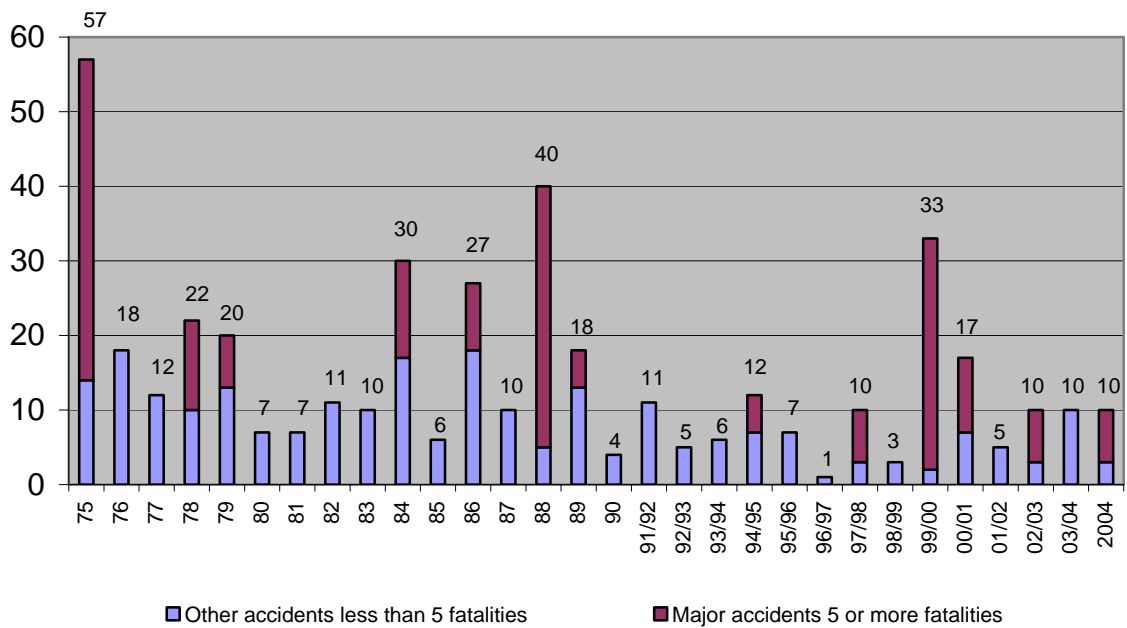
### Graph 1

[Graph does not include trespass fatalities on Britain's railways.]



### Graph 2

Train accident fatalities 1975 - 2004



**Graph 3**

**Fatal injuries to railway employees and contractors 1988 - 2004**

