

**Report by the
Comptroller and Auditor General**

Office of the Rail Regulator

**Ensuring that
Railtrack maintain
and renew the
railway network**

Ordered by the
House of Commons
to be printed 10 April 2000

Executive summary

We examined what the Office of the Rail Regulator (the ORR) have done to ensure that Railtrack properly maintain and renew the national railway network

1 In the 1999 Queen's Speech the Government set out its commitment to creating a modern, integrated and safe transport system. The railways will form a key part of that system and are of strategic national importance. Millions of people and businesses depend on them every day. In 1998-99 passengers made nearly 900 million journeys and over 100 million tonnes of freight were carried.

Railtrack own the national railway network; train operators pay Railtrack to use it.

2 Railtrack own the national railway network of track, bridges, stations and signals on which passenger and freight train operators run trains. In 1998-99 train operators received public subsidies of £1.5 billion¹ - some 30 per cent of their total income of £5.1 billion. The train operators used their income to pay Railtrack £2.3 billion in "access charges" for using the network, which made up some 90 per cent of Railtrack's total income. The taxpayer can accordingly be considered to be the indirect source of a significant proportion of Railtrack's income (Figure 1 and paragraphs 1.4 and 1.5).

3 The Office of the Rail Regulator (ORR) regulate access to Railtrack's network and set the access charges paid by train operators. They are also responsible for enforcing the licences granted to Railtrack to operate the railway network. The ORR were established in December 1993 following the Railways Act of that year. This report covers the ORR's activities over the period since they were set up, and particularly since the flotation of Railtrack in 1996. The present Rail Regulator, Mr Tom Winsor, took up office on 5 July 1999 (paragraphs 1.7, 1.8 and 1.17).

Railtrack are responsible for maintaining and renewing the national railway network

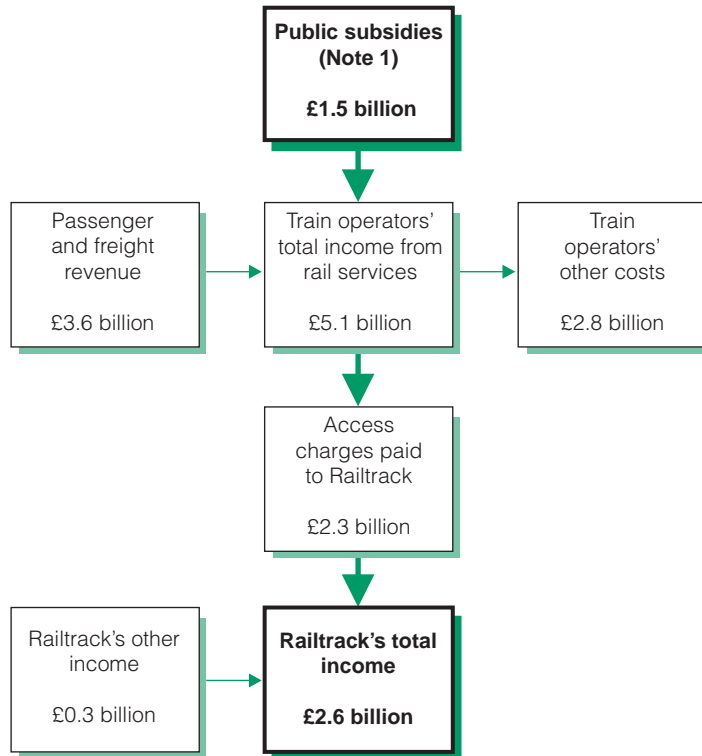
4 Maintenance and renewal account for more than half of Railtrack's spending on the network. Railtrack are responsible for maintaining and renewing the network so that train operators can provide a safe and acceptable service to the public. If they do not, there is a risk of serious delays and cancellations to trains, a poor or potentially unsafe service to rail users, and increased costs in the future to make good deterioration in the condition of the assets (paragraphs 1.18 to 1.20).

¹ All monetary amounts in this report are stated at 1998-99 prices unless otherwise stated.

How public subsidies contribute to the income of the railway industry and of Railtrack

Figure 1

Through subsidies to train operators, the taxpayer can be considered to be the indirect source of a significant proportion of Railtrack's income



- Notes:
1. Payments to train operators from central and local government are not earmarked specifically for onward payment to Railtrack.
 2. Amounts shown relate to 1998-99. Subsidies for 1999-2000 are planned to be £1.3 billion.

Sources: Department of the Environment, Transport and the Regions; Railtrack

The Health and Safety Commission have prime responsibility for regulating railway safety.

5 Ensuring the safety of those who use or work on the railways is an overriding concern for all involved in providing and regulating rail services. Railtrack are responsible for the safety of their operations and for overseeing the safety of the operations of others who work on the railway, such as contractors and train operators. The Health and Safety Commission and their operational arm the Health and Safety Executive have prime responsibility for regulating health and safety on the railway, but the ORR have a statutory duty to take into account the need for safety and the advice of the Executive (paragraphs 1.12 to 1.14).

6 Railtrack were set up as a government owned company in 1994 and privatised in 1996. The ORR have prime responsibility for regulating Railtrack in areas other than safety. They enforce, and in certain circumstances can amend, the terms of the licence to operate the network issued to Railtrack by the Secretary of State in 1994. And they set the access charges paid by train operators, which they are currently setting for the period 2001 to 2006. In doing so, they are responsible for ensuring that Railtrack maintain and renew the network properly, and for ensuring that the regulatory regime provides appropriate incentives to ensure that Railtrack do so (paragraphs 1.4, 1.7, 1.21 to 1.29).

This report examines the ORR's work in regulating Railtrack's maintenance and renewal of the network.

7 This report examines the work of the ORR in regulating Railtrack's maintenance and renewal of the network. We carried out our examination at a time of rapid change. Passenger and freight traffic are growing strongly and Parliament is considering legislation to establish a Strategic Rail Authority to develop and promote railway use. The Government have also appointed new personnel to the ORR and the proposed Strategic Rail Authority, to take action in the face of continuing debate over the performance of the railways (paragraphs 1.15 to 1.17 and 1.32).

The network's performance has not improved sufficiently to meet the ORR's requirements

Railtrack are responsible for nearly half of passenger train delays.

8 Railtrack are responsible for an average of around 70 seconds delay per passenger train, nearly half of such delays. They are also responsible for around four minutes delay per freight train. Delays occur for many different reasons, but often they result from action to ensure safety following an equipment failure, for example when track is temporarily closed due to a signalling fault. If delays are reduced by improving the reliability of equipment, that can benefit safety, but the Health and Safety Executive have stressed to Railtrack that they must make sure that such reductions are not secured by reducing safety margins (paragraphs 2.3 to 2.6).

Train delays caused by Railtrack's maintenance and renewal problems have fallen.

9 Since 1995-96, passenger traffic has grown by 27 per cent and freight traffic by 35 per cent. During this period total delays caused by Railtrack's maintenance and renewal of the network have fallen by 26 per cent, mostly between 1995-96 and 1996-97 and in 1999-2000. Taking into account the growth in traffic, passenger delays from this cause in the year ending September 1999 were 35 per cent lower than in 1995-96 (paragraphs 2.7 and 2.8).

The ORR are seeking further improvements.

10 Since 1998-99 Railtrack have set themselves annual targets for reducing delays from all causes for which they are responsible. The ORR did not require Railtrack to set such targets until after September 1997, when they amended Railtrack's network licence. They then put pressure on Railtrack using the amended licence both to set targets and to ensure that they were sufficiently demanding. In 1998-99 Railtrack achieved a reduction for passenger trains of 2 per cent against a target of 7.5 per cent. The ORR have told Railtrack that in 1999-2000 they must make good the deficiency and reduce delays by a further 7.5 per cent – equivalent to reducing delays by 12.7 per cent on the 1998-99 level. If they do not, the ORR will fine them £4 million for every percentage point by which they fall short of this target. Railtrack have appealed to the courts about the size of this potential fine. In March 2000 Railtrack reported that they expected to achieve a reduction in 1999-2000 of 10 per cent, compared to the 12.7 per cent required by the ORR (paragraphs 2.14 to 2.18).

11 At privatisation the only commercial incentives for Railtrack to improve their performance were provided by contracts between Railtrack and train operators, approved by the ORR in 1995. These contracts provide for Railtrack to receive bonuses or penalties depending on their performance in avoiding delays. Railtrack have sought to improve their performance in response to these incentives and they received bonuses every year between 1996-97 and 1998-99 because they were responsible for less delay than in 1995-96, the baseline used for assessing bonuses. In 1998-99 the bonuses totalled £25 million and it appeared likely in March 2000 that Railtrack would also receive bonuses for 1999-2000 (paragraphs 2.21 to 2.26).

Cancellations caused by Railtrack's maintenance and renewal problems have more than halved.

12 Around a sixth of the 130,000 passenger train cancellations each year are the result of maintenance and renewal problems by Railtrack. There were some 41,500 such cancellations in 1995-96 but this number more than halved between 1995-96 and 1996-97 and totalled some 20,500 in 1998-99 (paragraph 2.10).

Railtrack report that their spending on maintenance and renewal will exceed that forecast at privatisation

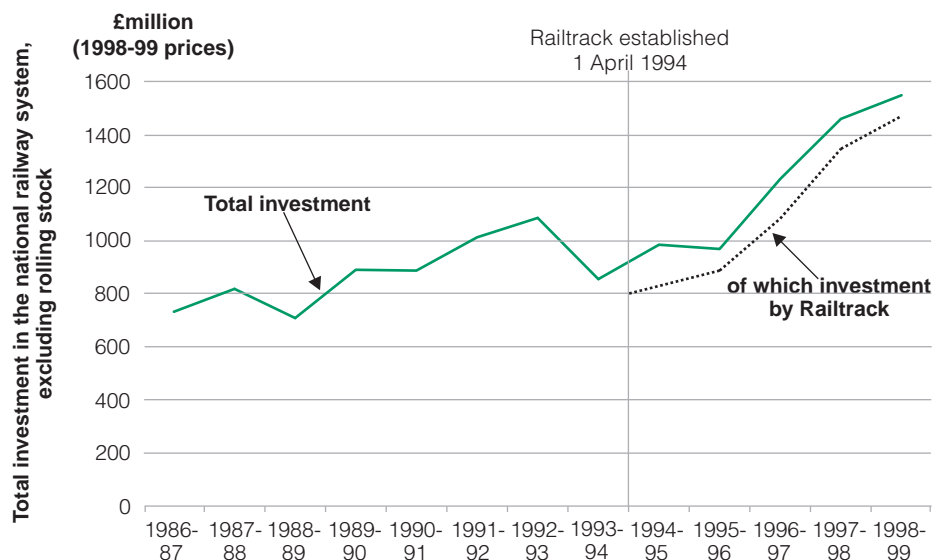
Railtrack are expected to have spent at least £10.5 billion on maintenance and renewal by 2000-01.

13 In the absence of other information on the condition of the network, the ORR have focused on Railtrack's spending on maintenance and renewal. The prospectus issued by the Department of Transport for the 1996 privatisation of Railtrack included spending projections that indicated that Railtrack would spend £10.5 billion on maintenance and renewal between 1995 and 2001 - an average of some £1.7 billion a year. The ORR were initially concerned that Railtrack were spending less than this amount. But in 1999 the ORR's consultants estimated that Railtrack would spend very close to it and in March 2000 Railtrack's latest forecast was that they would spend some £750 million more than forecast in the prospectus. Railtrack also plan to spend some £2 billion a year on maintenance and renewal up to 2005-06. In addition, spending on enhancing and renewing the network is at its highest level for many years (Figure 2) (paragraphs 3.8 and 3.12 to 3.20).

Investment in the national railway network 1986-87 to 1998-99

Figure 2

This figure shows that total investment in the railway network has increased since Railtrack were established and is at its highest level for many years



Sources: Department of the Environment, Transport and the Regions; Railtrack

Note: Investment consists of spending on enhancement and renewal and excludes maintenance. Due to a change of accounting practice in 1994-95, investment shown for 1994-95 and later years includes around £75 million a year excluded from totals for earlier years.

The ORR have limited information on the condition of Railtrack's assets

Track condition has deteriorated but Railtrack have now undertaken to restore it.

14 Railtrack's network is made up of four main types of asset: track; structures, such as bridges and tunnels; stations; and signalling equipment. The quality of information on the condition of these assets was poor when Railtrack were formed in 1994 and it remains incomplete (paragraphs 3.2 and 3.30).

15 The ORR have reasonably full information only on the condition of track. Track condition declined between 1994 and 1996, when Railtrack were privatised, the proportion of track assessed as being "satisfactory" or better falling from 90 percent in 1994 to 87 per cent in 1996. It partially recovered to 89 per cent in 1998. Some three per cent of track is currently rated as "very poor". The ORR did not act to address this problem until 1998, when they agreed that Railtrack should restore track condition to its 1994 level by April 2000 where maintenance is required, and by April 2001 where renewal is required (paragraphs 3.39 to 3.45).

16 The number of broken rails has also increased, from 750 in 1995-96 to 937 in 1998-99, a 25 per cent increase. In 1999 an increase in the number of broken rails in the Severn Tunnel prompted the Health and Safety Executive to order Railtrack to replace track in the tunnel and to restrict train speeds until they had done so. In August 1999 the ORR told Railtrack that they must reduce significantly the number of broken rails and asked for detailed information on the cause of broken rails. This step may lead to enforcement action if the ORR conclude that Railtrack are in breach of their licence to operate the network. Railtrack told us that the number of broken rails had been affected by the large increase in freight traffic in recent years and they did not believe that it indicated that they were in breach of their responsibility to maintain the network (paragraphs 3.46 and 3.47).

The ORR have had difficulties in monitoring and in setting incentives

The ORR have had difficulty in establishing whether Railtrack have carried out enough maintenance and renewal.

17 The ORR have had difficulty in establishing how far Railtrack have discharged their obligation to maintain and renew the railway network properly. There have been five main problem areas:

- the ORR have not agreed with Railtrack what work is needed;

a) When in 1995 the ORR set the access charges currently paid by train operators, there was limited understanding of what future expenditure was needed, and the ORR did not specify or agree with Railtrack what maintenance and renewal work Railtrack would carry out, or what would be achieved as a result of such work, for example in terms of the performance or condition of the network. They have been unable, therefore, to measure what Railtrack have actually done against any agreed baseline. Railtrack told us that because of this problem, and the lack of any specified output requirements from the ORR before 1998, they have found that the ORR's expectations have been unclear and unpredictable (paragraph 3.30).

- the renewal concept the ORR have expected Railtrack to apply has lacked definition and been difficult to apply;

b) The ORR set access charges in 1995 at a level intended to pay for assets to be renewed in "modern equivalent form", that is, when renewal is necessary, replacing old assets in the form of modern assets capable of doing the same job. The ORR have consistently said they have expected Railtrack to renew assets in this form but at privatisation there was a lack of performance indicators for the condition of Railtrack's network, and the ORR did not provide any clear guidance on how Railtrack should apply this concept. In 1997 the ORR amended Railtrack's licence to require them to develop investment criteria showing how they intended to apply this concept. The ORR have commented on drafts of these criteria, but, in order to see first how they work in practice, they have not finally approved them.

As a result, the ORR's requirement for renewal to be in "modern equivalent form" has lacked clarity. It has also been difficult to apply in practice. For example when new assets have been capable of doing a better job than those they have replaced there has been difficulty in determining whether the replacement constitutes renewal, which is paid for from existing access charges, or enhancement, for which Railtrack are entitled to charge extra. Such difficulties have weakened the ability of the ORR and Railtrack to judge whether since 1995 Railtrack have delivered what they should. The ORR intend to make much less use of the concept of modern equivalent form when they set access charges for the period from 2001 to 2006, and to provide a clearer framework for how expenditure on enhancing the network is to be monitored and paid for (paragraphs 3.28 and 3.29).

- the ORR have not been able to monitor the condition of Railtrack's assets;

c) Railtrack and their contractors have local records of the condition of Railtrack's assets but Railtrack do not yet have an effective method of producing a national overview of the condition of many of their assets. As a result, the ORR lack a comprehensive picture of how well such assets are being maintained. Railtrack have reservations about how much detailed national monitoring of most assets is required, and they consider that the ORR should focus primarily on Railtrack's performance, for example in terms of network capacity, train delays

and ride quality. But for some types of assets, such as signalling equipment, bridges and stations, asset condition can deteriorate considerably before such performance is affected. Timely maintenance of such assets can keep them in good condition and avoid costly renewal later, and monitoring of their condition is essential both for Railtrack's management of maintenance and renewal, and for the ORR's monitoring of Railtrack's stewardship of these assets. Railtrack are therefore seeking to improve the information they provide the ORR on these matters (paragraphs 3.27 and 3.34 to 3.67).

- Railtrack have changed their approach to when to renew assets;

d) Railtrack have changed their approach to deciding when it is necessary to renew assets. They aim to focus, particularly for signalling, on small scale renewals of assets based on their condition, rather than on larger scale renewals of groups of assets according to their age. This change could benefit both customers and Railtrack if it allows the cost of the network to be permanently reduced without compromising safety or performance. The ORR are concerned, however, that Railtrack's information on the condition of their assets is not yet good enough to allow them to adopt this approach without running the risk of unexpected failures of equipment in service or a decline in the long-term health of the network (paragraphs 3.31 to 3.33 and 3.67).

- key information supplied by Railtrack is not independently verified.

e) The ORR have not required independent verification of all key monitoring information provided to them by Railtrack, although some information is independently verified. Independent verification is important to ensure that the data used by the ORR for their monitoring is soundly based and can be relied upon. Only then can the users and funders of the railway have full confidence in Railtrack's stewardship of the network (paragraphs 3.10 and 3.11).

Recommendations

18 Since privatisation the ORR have made improvements each year to their regulation of Railtrack's stewardship of the national railway network. For example, they have secured significant improvements in the information they require Railtrack to publish on their plans for maintaining and renewing the network, in clarifying Railtrack's responsibilities for carrying out this work, and in specifying targets for improved performance by Railtrack. In doing so, they have strengthened significantly the regulatory regime established by the licence granted to Railtrack in 1994. But much still needs to be done to provide a fully effective regime for the future (Appendix 4 and paragraphs 2.14 to 2.17).

19 The ORR recognise the need for change and are seeking to address it in their current review of Railtrack's access charges for the period 2001 to 2006 and by plans to amend Railtrack's network licence (paragraph 3.34). In doing so, we recommend that the ORR need to ensure that they successfully address the following issues:

Greater clarity on what Railtrack should deliver.

1. The ORR should set out more clearly than before what they expect Railtrack to deliver as the result of maintenance and renewal. The ORR plan to make a final decision in July 2000 on the level of access charges for the period from 2001 to 2006. They have announced that they intend to set out with greater precision what Railtrack will be expected to deliver over this period in terms, for example, of the performance of the network in supporting train services, and the condition of key network assets. The ORR need to ensure that, in doing so, they provide greater clarity than in the past as to how they will assess what Railtrack have delivered in terms of maintenance and renewal to discharge their obligation as an efficient and effective steward of the network.

Improved monitoring of asset condition.

2. The ORR should secure a better picture of the condition of the network's assets. Passengers, freight users and the taxpayer are paying for Railtrack to spend some £1.7 billion a year on maintaining and renewing the network. The ORR need to remove the deficiencies in their information on the condition of Railtrack's assets so that they can assess satisfactorily on customers' behalf what is being achieved with this money. Comprehensive information on the condition of assets is also necessary if Railtrack are successfully to base the timing of future renewals on the condition of their assets, rather than on their age, and if the ORR are to assess accurately how much Railtrack need to spend on maintenance and renewal in the future. This is particularly so for assets whose condition may deteriorate considerably without immediately affecting those aspects of Railtrack's performance, such as train delays, already monitored by the ORR. The ORR announced in November 1999 plans to amend Railtrack's licence to improve the information on these matters provided to them by Railtrack. In doing so, the ORR need to agree with Railtrack a timetable to remove the information deficiencies and to monitor Railtrack's progress in meeting this timetable.

Independent verification of monitoring information.

3. The key elements of the monitoring information that the ORR receive from Railtrack should be independently verified to ensure that it is robust and commands public confidence. The ORR also announced in November 1999 plans to adopt the approach used in the water industry, where the water companies are required to employ independent "reporters", approved by the water regulator, to verify and give their professional opinion on the information supplied by the companies to the regulator.

Ensuring that Railtrack maintain and renew the railway network

*Improved monitoring
of network
performance.*

- 4. The ORR should continue to develop appropriate targets and clearly predictable incentives for Railtrack to improve their performance on punctuality, cancellations and track condition.** In their review of access charges, the ORR are reviewing the incentives for Railtrack to improve their performance. In doing so, they need to ensure that they consider whether the rewards and penalties to improve Railtrack's performance on delays, provided for in Railtrack's contracts with train operators, need to be strengthened and brought into line with the system of performance improvement targets and penalties that the ORR have more recently developed and enforced under Railtrack's network licence.