National Audit Office

REPORT BY THE
COMPTROLLER AND
AUDITOR GENERAL

HC 1834
SESSION 2010–2012

28 MARCH 2012

Department for Transport

The completion and sale of High Speed 1

Summary

Project background

1 This report concludes our examination of the project to build a high speed railway between London and the Channel Tunnel for international and domestic railway services. The Department for Transport[3] (the Department) awarded a private finance initiative (PFI) contract in 1996 to London & Continental Railways (LCR). The contract was to build the line and run the British arm of the Eurostar international train service (Eurostar UK). The Department commissioned a high capacity railway with a theoretical capacity to run up to 20 trains an hour in each direction and chose a route through east London to stimulate regeneration.

2 Passenger forecasts carried significant weight in the project so it was important that they should be as well based as possible:

- The Department originally expected LCR to raise private sector finance against expected revenue from Eurostar UK.
- Transport benefits (journey time savings and capacity improvements) for international passengers made up over half of the expected project benefits in the Department's 1998 assessment.

3 We have published two previous reports on the project, which highlighted the value-for-money risks when expected passenger numbers did not materialise:

- In our first report, in 2001, we reported that the taxpayer was exposed to the financial consequences of international passenger numbers being below forecast.[4] This was because the Department had agreed to guarantee the debt LCR needed to fund the project in 1998. The Department did not then expect its guarantees to be called on. It expected the debt interest and principal debt to be repaid from charges that Eurostar UK paid for using the line and payments by the Department to reserve capacity for domestic high speed services.
- In 2005, we reported that Eurostar UK's revenues grew by 11 per cent in 2004 when it opened the first part of the line but international passenger numbers were below forecasts made in 1998.[5]

3 Then known as the Department of Transport.

4 Comptroller and Auditor General, *The Channel Tunnel Rail Link*, Session 2000-01, HC 302, National Audit Office, March 2001.

5 Comptroller and Auditor General, *Progress on the Channel Tunnel Rail Link*, Session 2005-06, HC 77, National Audit Office, July 2005.

4 The guarantees the Department agreed to in 1998 enabled LCR to build the high speed line. LCR opened the line fully in November 2007, when Eurostar began running international services from St Pancras station in London. Domestic high speed services to Kent followed in December 2009. In June 2009, LCR was brought into public ownership. In November 2010, LCR sold HS1 Limited, a company with a 30-year concession to run the line, to a consortium of Borealis Infrastructure and Ontario Teachers' Pension Plan.

5 This report examines:

- whether risks for the taxpayer were reduced during construction of section two of the line, and the subsequent restructuring of LCR, prior to sale;
- whether the sale of HS1 Limited was well managed; and
- the likely benefits and costs to the taxpayer of the project.

Our methodology is summarised at Appendix One.

Key findings

6 **International passenger numbers have grown since the high speed line opened but continue to be below original expectations. This left the taxpayer exposed to an ongoing liability to support the project.** In 2011, there were 9.7 million passenger journeys on Eurostar services. Actual numbers, however, between 2007 and 2011 have been, on average, one third of the level that LCR forecast in 1995 for its bid. While forecasting has improved since the project started, numbers were also around 30 per cent below the Department's 1998 forecasts, before it guaranteed the project debt. The Department, therefore, expected LCR, via its subsidiary Eurostar UK, to start to use loan arrangements that the Department had put in place when it agreed to guarantee the project debt to pay track access charges from 2010 onwards.

7 **LCR delivered the new railway within the overall funding available and timescale for construction although at higher cost and later than its targets. This compares well with other railway projects.** Constructing the high speed line, including additions to the project scope funded separately, cost £6,163 million (outturn costs). The total cost of building the line was 18 per cent higher than LCR's combined contract targets for both sections which LCR funded in part from contingency. The line fully opened in November 2007, within the overall timetable to complete the project by December 2007 but 11 months later than target. This compares well with performance on the West Coast Main Line upgrade where costs rose by over £6 billion (240 per cent) and the upgrade was delivered four years late. The Department negotiated an increase in the target cost on the second phase of construction. In our view, it did this because the forecast cost increase on section two would have required the contractor to forfeit the whole of its management fee, removing a key incentive to deliver. The high speed line has performed well since it opened with only 0.43 per cent of services being delayed by infrastructure incidents, such as track or signal failures, in 2010-11.

8 **The project demonstrates the impact that over-optimistic key assumptions at project initiation, in this case demand forecasts for international passengers, can have if the business case and financing are dependent upon them.** The cost to the taxpayer is higher than originally expected because the Department is now responsible for servicing and repaying the project debt. We estimate that net taxpayer support may reach £10,200 million (present value to 2070, in 2010 prices).

9 **The Department's business case in 1998 estimated a benefit-cost ratio of 1.5 to 1, when it included an estimated value for regeneration benefits. We have only been able to measure part of the benefits that the project is expected to deliver:**

- Drawing upon the Department's method for appraising transport projects and forecasts of passenger numbers on the high speed line, we estimate the value of journey time saving benefits would be £7,000 million.[6] There is some uncertainty around this estimate due to the complexities involved in modelling the behaviour of transport users. However, we estimate the value of journey time saving benefits lies in the range £6,100 million to £7,700 million. The estimate for business passengers is based on a simplifying assumption that all time savings result in additional productive time or reduced costs to employers.

- Other expected benefits from the project such as reduced crowding, improved train reliability, wider economic impacts and regeneration would have a significant value. We have been unable to estimate these as data are not yet available.

10 **In restructuring LCR before the sale, the Department removed open-ended taxpayer support and made the high speed line an attractive opportunity for investors.** The Department reduced track access charges to a sustainable level that reflected actual use of the high speed line. This increased the proportion of overall payments made by the domestic operator to bring payments in line with the actual services that are run on the high speed line. The taxpayer thus avoided having to lend LCR some £880 million to £1,440 million up to 2051[7] so its subsidiary, Eurostar UK, could continue to pay high access charges designed to both recover and earn a return on the cost of constructing the high speed line. The Department invested £660 million to establish Eurostar as a viable standalone company and prepare HS1 Limited for sale. The Department also negotiated the merger of Eurostar UK into a new company, incorporating the interests of the French and Belgian governments, with the Department retaining a 40 per cent shareholding.

6 Present value, 2010 prices.
7 Present value, 2010 prices.

11 The Department and LCR handled the sale of HS1 Limited well and it achieved higher-than-expected sale proceeds. At £2,048 million, the winning bid was higher than LCR's estimates of sales proceeds which were in the range £1,300 million to £1,900 million. The winning bid offered only the third highest net proceeds but was within £23 million of the top bid and had no conditions that might delay completing the sale. In particular, it was not subject to European Union merger controls. The Department took a number of actions which helped to achieve the high price:

- The Department provided comprehensive information that removed uncertainty and encouraged final bids from four bidders. It timed the sale during a period of relative stability in the financial markets.
- There was a high level of competitive tension in the sale. In uncertain market conditions, the Department judged that the relatively small difference in bids did not justify choosing the highest priced offer, and that a delay could reduce the price or force a resale.
- During the sale, the Department decided to guarantee the payment of track access charges to HS1 Limited based on the current level of high speed domestic services running on the line for the duration of the 30-year concession. LCR and its advisers estimated this guarantee could add up to £500 million to the sale price. The estimated present value of the track access charges is £2,400 million but this amount would be payable only if no domestic high speed services run after the current franchise ends in 2014, which is highly unlikely.
- The Department has transferred most operational risk to the new owners of HS1 Limited but, as with all sales of businesses running public services, it retains a residual risk as the ultimate owner of the high speed line.

12 The Department has not yet evaluated the project but it is developing an evaluation plan. The Department commissioned a review of project delivery in 2010 but it has not reassessed the project benefits and costs since 2001, despite committing to the Committee of Public Accounts to do so. It is the Department's view that a robust assessment of transport benefits from the high speed line requires at least three years of data and should therefore occur after December 2012, when the domestic high speed service has been operational for three years.

13 The Department also expected the project to deliver regeneration benefits at sites around the three international stations. LCR is working in partnership with the private sector at King's Cross and Stratford where development is occurring. Analysis of the approved developments at all three locations commissioned by LCR has estimated they will support at least 70,000 jobs. The Department told us that it intends to review regeneration benefits after the 2012 Olympic Games when the legacy plan for the Olympic Park has been implemented. Under its transport analysis guidance the Department would need to identify the impact, for example, on unemployment in areas served by the high speed line to quantify regeneration benefits. It is the Department's opinion that these impacts are not as easy to isolate as the impact on transport benefits, where the Department already collects data, and a specific study will be required to assess the wider economic and regeneration benefits.

14 **It is the National Audit Office's view that the Department should already have an evaluation plan in place which identifies the data it needs to collect and monitor to measure project benefits.** The Department has started work to identify the method it will use to evaluate wider economic impacts and regeneration benefits and how it will establish a counterfactual. There is a risk that the Department will not be able to measure robustly the impact of the project because it is not able to demonstrate that it has collected the information it will need.

Conclusion on value for money

15 In assessing whether a project will deliver value for money, the Department considers a wide range of impacts that a project might have, some of which it can quantify and others on which it has to make more qualitative judgements. The original business case in 1998 was based on benefits to transport users, from faster journey times and increased rail capacity, and regeneration benefits. The data available only allows us to estimate that the value of journey time savings benefits, over a 60-year appraisal period to 2070, would be £7,000 million. We estimate that the net costs to the taxpayer to 2070 would be £10,200 million. On these measures we would conclude that the project is not value for money. When including other impacts from the project, some of which are unmeasurable, we accept that such a clear conclusion is not possible. The Department, however, would need to demonstrate that these benefits are going to be at least £8,300 million, giving a higher contribution than originally expected, to achieve the benefit-cost ratio of 1.5 to 1 estimated in 1998.

Recommendations

16 Our recommendations are designed to apply to the Department for Transport and other government departments starting major infrastructure projects.

Demand forecasting

a **The original estimates for passenger demand on which the business case was based were over-optimistic. This was partly because the project was novel and there were no comparable data on likely demand. The Department has improved its forecasting since the project started.** In such cases, departments should ensure that demand forecasts are subject to rigorous scrutiny and scepticism. Departments should assess the benefits under a range of different scenarios, perform a sensitivity analysis of key assumptions and a sense check to understand the reality of meeting forecast demand.

Risk transfer

b **Forecast cost overruns on section two meant the private sector consortium managing the construction would forfeit its entire fee, removing a key incentive to deliver the project.** Departments should recognise that the private sector will bear project risks only to the extent of any investment or profit that it has at risk. Departments should not try to transfer excessive risk as this can create unintended behaviour within its project partners.

Regeneration benefits

c **The Department justified the project on the basis of jobs that will be delivered at the three regeneration sites. The delivery and measurement of regeneration benefits needs cooperation with many parties at both a local and national level.** For future projects, departments should work with HM Treasury and other departments to develop a government-wide strategy for delivering all benefits identified during the project appraisal and how they should be subsequently evaluated. This strategy will help to make a party responsible for monitoring progress in achieving expected benefits and taking remedial action if they are delayed or look at risk.

Project evaluation

d **The Department is developing a plan to evaluate whether the project costs and benefits have been delivered in line with expectations.** In its evaluation plan, the Department should set a clear timescale for the evaluation and a clear framework and data collection processes to assess the impact of the high speed line on travel patterns and behaviour. It should ensure that its evaluation framework will give a robust counterfactual, if the high speed line had not been built, and evidence on the source of benefits. In particular, the Department should understand how the project contributes towards regeneration goals which were one of the scheme objectives.

e **The Department should follow the Magenta Book evaluation guidance published by HM Treasury in its evaluation of the project and critically assess the assumptions included within the project appraisal.** The business case for transport infrastructure includes assumptions and other inputs to the modelling and appraisal processes. As part of its evaluation plan the Department should seek to understand whether these were appropriate, and learn lessons where necessary for the appraisal of future schemes. This will allow more confidence over the costs and benefits in future business cases and improved analysis of alternative options.