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NATIONAL AUDIT OFFICE

DEPARTMENT FOR TRANSPORT

Progress on the Channel Tunnel Rail Link

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL | HC 77 Session 2005-2006 | 21 July 2005

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Comptroller and Auditor General
National Audit Office

18 July 2005

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Photographs courtesy of Union Railways (North) Limited and Rail Link Engineering

SUMMARY

1 In February 1996, the Department for Transport (the Department) awarded a contract to London & Continental Railways Limited (LCR) to:

- build the Channel Tunnel Rail Link (the Link), a high speed railway between St Pancras Station in London and the Channel Tunnel, and
- run the British arm of the Eurostar international train service (Eurostar UK).

2 LCR proposed to fund the construction of the Link from private finance (debt and equity) raised on the back of future revenue from Eurostar UK and from direct Government grants. By the end of 1997, actual Eurostar UK revenues indicated that LCR's forecasts were overly optimistic. Consequently, LCR abandoned its plans to raise private finance and approached the Department for additional grants in return for a share of future profits.

3 At this stage, the Department seriously considered abandoning the project and taking Eurostar UK, along with the intellectual and other assets of LCR, back into the public sector. The Government wanted the Link built, however. After reviewing options, the Department came to the view that the best way forward would be restructuring the existing deal with LCR.

4 In June 1998, the Deputy Prime Minister set out the principles of a negotiated restructuring that enhanced public sector support for the project. Although direct Government grants would not be increased, the Government agreed to guarantee most of the private sector funding. The Department also agreed to lend public money directly to LCR, up to a specified limit, if it ran out of cash. Construction was split into two sections **(Figure 1 overleaf)**. Railtrack Group joined the project to manage and eventually to purchase Section 1 and took an option to do the same for Section 2.

5 In 2001, we reported[1] on: the circumstances that led to the 1998 restructuring; the new financing arrangements; and the economic justification for the project. There have, however, been major new and problematic developments since. In particular, in 2001 Railtrack Group did not take up the option to build Section 2 of the Link and it then withdrew altogether from the project in 2002 following the entry of its subsidiary, Railtrack plc, into railway administration.

6 Taking account of the new developments, this report considers the steps the Department and LCR have taken to minimise the potential future call on the taxpayer. We found that:

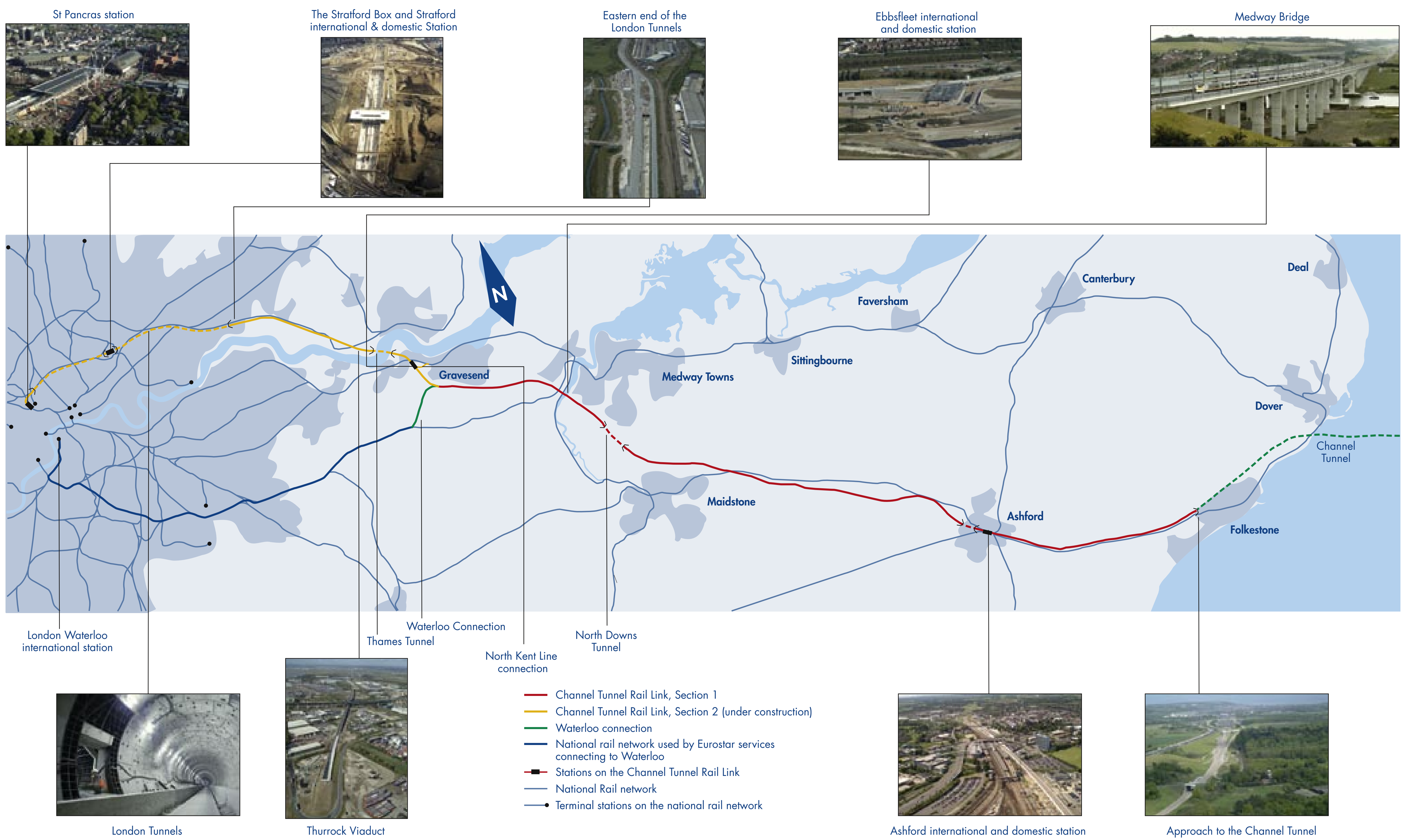
- Our adviser, RBC Capital Markets, part of the Royal Bank of Canada Group, considers that the financing of the project, post 2001, was obtained on good terms. Construction of Section 1 was completed to time and budget, and good progress is being made with the construction of Section 2;
- The likely future call on the taxpayer is uncertain. Current revenue forecasts prepared for the Department suggest that the 1997 present value of the Government's loan to LCR to cover cash flow shortfalls could range between £0 and £400 million[2,3], (1997 prices), net of repayments and the Government's share of revenue from forecast project related property developments. The most likely revenue scenario suggests a figure of £260 million[4] (1997 prices). The range is similar to that forecast at the time of the 1998 restructuring. LCR expects that it will have repaid the loan by 2086, the year its concession is due to end; and
- The economic justification for the project remains marginal. The project depends heavily on assumptions about regeneration benefits. There are, however, encouraging signs at King's Cross, Stratford and Ebbsfleet that these are beginning to materialise.

1 The Channel Tunnel Rail Link, HC 302, Session 2000-2001.
2 This figure is a present value calculated using a discount rate of six percent, which was the Government's discount rate prior to April 2003. For consistency, all present values appearing in the main text of this report have been calculated using the six per cent discount rate. We have produced, in footnotes, present values of future cash flows calculated using the Government's current discount rate of 3½ per cent.
3 £650 million (a 1997 present value in 1997 prices calculated by discounting cash flows using the Government's current discount rate of 3½ per cent).
4 £400 million (a 1997 present value in 1997 prices calculated by discounting cash flows using the Government's current discount rate of 3½ per cent).

Route of the Channel Tunnel Rail Link

Figure overleaf

1 Route of the Channel Tunnel Rail Link



Financing and construction of the project have been taken forward since 1998

7 The debt used to finance construction of the Link, the operation of Section 1 and the current Eurostar UK losses is a combination of:

- Government Guaranteed Bonds;
- Commercial bonds and bank debt secured against LCR's revenue from track access charges and from Government payments for domestic access to Section 1, both sources of revenues having been guaranteed by the Government; and
- Bank debt secured against unconditional payments of seven of the eight parts of the Government's grant for the construction of Section 2.

Our adviser, RBC Capital Markets, considers that LCR's dealings with the capital markets were handled well, given the way the project developed before and since 1998.

8 Construction of Section 1 of the Link has proceeded well. Despite the occurrence of a number of adverse events, the section opened on time in September 2003 at a cash outturn cost slightly below the target set in 1998. Since opening, the operational performance of Section 1 has exceeded expectations.

9 Although Section 2 is over 80 per cent complete in cost terms, its construction has entered its most challenging phase. Considerable work remains at St Pancras, where construction activities, including refurbishment of the existing station, are complicated by restricted access, heritage considerations and the proximity of the live railway. Section 2 has, to date, met all its construction milestones on a programme which concludes with the completion of the infrastructure in the spring of 2007.

10 Prior to the start of major construction activities for Section 2, LCR arranged a risk transfer agreement, known as the Cost Overrun Protection Programme. Under the programme, LCR paid £87 million to Bechtel and a group of insurers to bear £315 million of the first £600 million of any cost overruns including a contractually determined and capped risk for inflation. The Department considered the programme expensive, but approved it as the best value for money obtainable given the Department's desire to proceed with the project, as set out above, because the programme:

- reinforced a perception that the Government would not bail out the whole project;
- placed additional incentives on Bechtel to keep the cost of construction within a target;
- transferred some overrun risk at a time when the Department and the Treasury were concerned about escalating estimates for the costs of running the London Underground Public Private Partnerships and upgrading the east and west coast mainlines; and
- was substantially cheaper than the estimated cost of the improvements that Railtrack Group demanded to its terms if it were to exercise its option to purchase Section 2 and thereby take all associated construction risk. The cost of these improvements would ultimately have been met through increases in public sector support.

11 The Department and LCR expect that the final cost of Section 2 will exceed the target cost. LCR attributes most of the increase to railway-related inflation and considers that the overrun will be a few percentage points once inflation is removed. Generally, costs have increased faster than the assumed inflation rate (three per cent per annum) used in calculating the target. For the taxpayer, the cost overrun on Section 2 that is not absorbed by the Cost Overrun Protection Programme would, under current arrangements, ultimately flow through to the Department's future loans to LCR.

The current central case forecast of Eurostar revenues suggests a potential future call on the taxpayer of £260 million, but there is uncertainty

12 As part of the 1998 restructuring, the Department effectively gave Railtrack Group a guarantee that Eurostar UK would meet its obligations to pay charges for access to Section 1 of the Link. To avoid a call on this guarantee, the Department also put in place an access charge loan facility that LCR, as the owner of Eurostar UK, could draw on to pay access charges if all other sources of funds were exhausted. The Department capped the 1997 present value of the loan at £270 million (1997 prices, discounted at six per cent per annum), net of repayments and the Government's share of revenue from forecast project related property developments. When LCR bought out Railtrack Group's interest in Section 1, it acquired CTRL(UK) (formerly Railtrack (UK) Limited) together with the benefit of the guarantee covering Eurostar UK's track access payment obligations. The guarantee provided LCR the security it needed to borrow further funds from the capital markets.

13 Since the opening of Section 1, demand for Eurostar train services has grown rapidly, but passenger revenues still remain well below even the cautious forecasts made in 1998 **(Figure 2)**. The current, central case, Eurostar UK revenue forecast suggests the Department could lend LCR about £260 million[5] through the access charge loan (1997 present value in 1997 prices) through to 2051 and net of repayments and other receipts. Given the uncertainty surrounding Eurostar UK's revenues, current forecasts suggest that the loan support could range between 0 and £400 million[6] (1997 present values in 1997 prices). The maximum is not much more than the amount estimated in 1998 using the Government's Downside forecasts, because LCR has secured savings through lowering its cost of capital. Following Railtrack Group's departure from the project, LCR replaced funds carrying Railtrack Group's agreed return with bonds backed by Government supported revenue. LCR cut its expected cost of capital from a weighted average of 8.9 per cent in 1998 to 5.2 per cent in 2003. By the end of the concession in 2086, LCR expects that it will have repaid fully its borrowings under the access charge loan facility.

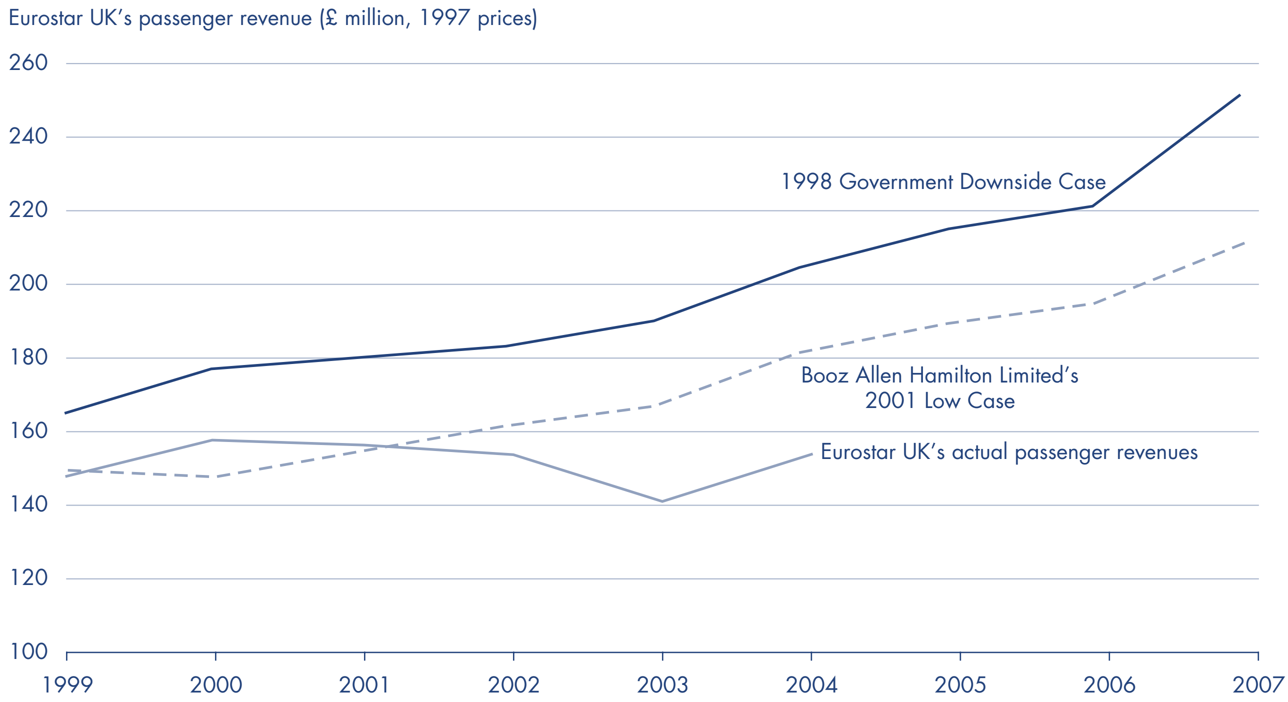
The economic justification

14 In 2001, the Department conducted a new appraisal of the uncommitted costs of Section 2 and the associated benefits. The benefit/cost ratio on the then central case passenger revenue forecasts for Eurostar UK (produced in 2001) and excluding regeneration benefits and benefits from the future domestic high speed services was 1.4:1. Subsequent actual revenues have been below the 2001 central projection and also below the 2001 low forecast, at which the benefit/cost ratio was only 0.45:1.

15 The Department has not recalculated the cost/benefit ratio to determine the effect of lower revenues. While revenues have dropped below the 2001 low case forecasts, the impact is not as negative as the Department's 2001 analysis projected. The lower benefits from lower patronage are offset by the reduction in the additional public sector support through the access charge loan largely due to the reduction in LCR's cost of capital. In the Department's judgement, domestic transport benefits, which should emerge in 2009, the year when domestic train services are planned to start using the Link will exceed the associated costs and improve the economics of the project.

5 £400 million (a 1997 present value in 1997 prices calculated by discounting cash flows using the Government's current discount rate of 3½ per cent).
6 0 and £650 million (1997 present values in 1997 prices calculated by discounting cash flows using the Government's current discount rate of 3½ per cent).

2 In 2004, Eurostar UK's passenger revenue was still below the 1998 and 2001 low case forecasts but grew by nearly 11 per cent in real terms, reversing a three-year trend of falling revenues



Source: National Audit Office analysis

16 To the extent that the economic case for infrastructure projects depends on regeneration benefits, the achievement of such benefits at the planned level is a key indicator of the success of the project. For the Channel Tunnel Rail Link, there are encouraging signs of the intended regeneration in the Thames Gateway and around the three international stations at St Pancras, Stratford and Ebbsfleet. The Master Planning Application for Stratford City has been approved and detailed planning applications are being prepared with a view to starting the development in 2006. LCR and its development partners have also submitted a Master Planning Application for the development at King's Cross: the consultation phase for the development has been completed and negotiations with the London Boroughs of Camden and Islington are underway. The London Borough of Camden has also granted planning consent for the £150 million redevelopment of St Pancras Chambers, the former Midland Grand Hotel at the St Pancras terminus. Outline consent has been obtained for the development at Ebbsfleet.

RECOMMENDATIONS

Recommendations for the Department

1 Eurostar UK's revenues grew by 11 per cent in real terms in 2004 thereby exceeding forecasts, however, both passenger volumes and revenues forecasted in 1998 and in 2001 have proven overall to be too optimistic to date. The Department should continue to monitor the risks to which the taxpayer is exposed by reviewing the forecasts regularly so that it can make realistic predictions of the value and timing of future lending to LCR through the access charge loan.

2 To learn lessons about preparing and using forecasts in appraisals of future infrastructure projects, especially in relation to passenger numbers and revenues, the Department will need to determine and review the economic benefits realised as a result of the project. In the shorter term, the Department is already developing guidance on demand forecasting for highways and local transport. As part of this process it should seek to incorporate material on railway forecasting, including advice on the difficult area of forecasting for one-off projects like the Channel Tunnel Rail Link.

3 When we started our fieldwork, we found that the Department's management team which had been in post during our investigations for our previous report (published in 2001) had moved on. The Department's internal knowledge of the project's history and the background to key decisions had inevitably been reduced. The Department must develop a robust and reliable means of retaining project knowledge within the Department's personnel. Towards this end, the Department has now established its own in-house corporate finance expertise.

Recommendations for future projects

4 The 1998 restructuring arrangements enabled LCR to raise the finance it required at the outset of the project. Project managers were therefore able to focus on delivery of the Link and plan work without being unduly influenced by the timing of funding. To achieve continuity and momentum on large and complex infrastructure projects, departments should ensure that dedicated funding is committed from the start.




5 Section 1 is, by itself, a major piece of infrastructure. LCR successfully completed the construction of the section on time and at a cost slightly below the target set in the 1998 restructuring. Drawing on the reasons for this achievement, lessons for other similar projects include the importance of:

- appropriate contractual provisions and incentives between the client, the project manager and contractors;
- once the design brief is established, designs that are kept as stable as possible during the pre-construction and construction phases;
- stability and continuity of management personnel during the pre-construction and construction phases; and
- basing allowances for contingency on thorough risk appraisals and releasing the allowances as risks materialise rather than treating contingency as avoidable expenditure.

6 There were good reasons at the time to put the cost overrun insurance in place and to transfer part of the construction risk of Section 2 from the public sector. From the Government's perspective, the cost overrun insurance represented good value compared to the alternative Railtrack proposals and it was more than an insurance policy because it provided a clear and additional incentive on the private sector to manage and mitigate risk. Nevertheless, departments considering such commercial insurance for future projects should clearly identify the benefits and assess the expected costs. Departments should be particularly wary of one-off novel insurance arrangements. These types of arrangements are likely to be expensive because the insurance market will have limited experience of the risks and, as a consequence, underwriters will, in their pricing, take a risk averse approach.

7 Part of the justification for public sector involvement in the project was that the project would stimulate local regeneration in Government priority areas. It is essential that there is a robust appraisal of the benefits for projects of this kind. LCR's approach in proactively developing partnerships with property developers has worked well and should be adopted in future transport projects.

PART ONE

The project went through a major restructuring in 1998

This part of the report provides a summary of the restructuring of the project after the original deal came close to collapse in 1998. The part sets the scene for the rest of the report as many later developments relate to the arrangements arising from the 1998 restructuring.

1.1 In February 1996, the Department awarded a contract to London and Continental Railways Limited (LCR)[7] for the development of the Channel Tunnel Rail Link (the Link), a high speed railway linking St Pancras Station, London, to the Channel Tunnel. LCR contracted to build, own and operate the Link, and to own and operate Eurostar UK, the British arm of the Eurostar international train service[8]. LCR agreed to raise private finance to construct the Link and cover anticipated losses from Eurostar services in the early years of the concession. As part of the agreement, LCR would receive, over time, direct grants from the Government that, in 1997, had a present value of £2,012 million **(Figure 3 overleaf)**.

1.2 Demand for the Eurostar train service ran well below forecasts. By the end of 1997, LCR realised that it would not be able to raise the funds from the debt and equity markets that it needed to build the Link, so it turned to the Department for an increase in direct grants in return for a share in future profits.

1.3 In June 1998, the Deputy Prime Minister announced an alternative way forward. The solution, a major restructuring of the project[9], included, among other things:

- Splitting construction of the Link into two distinct phases – Section 1, from the Channel Tunnel to Fawkham Junction, via Southfleet in northwest Kent and Section 2, from Southfleet to St Pancras. At the conclusion of the 1998 restructuring, the Department and LCR agreed that work to construct Section 1 would start in October 1998 with commencement of the Section 2 works planned for July 2001.
- Bringing Railtrack Group into the project - Railtrack Group, then responsible for operation of the UK domestic rail network, agreed to participate in the project. It was a key player in the 1998 restructured deal, taking construction risk on Section 1 should the cost exceed an agreed target.[10] Railtrack Group contracted to purchase Section 1 after its completion for a price based on the *actual* cost of construction, but its revenues from Eurostar UK for access to the section were calculated to provide an agreed return against a *target* cost of construction. Railtrack Group also accepted a capped share of Eurostar UK revenue risk and secured an option to purchase Section 2 on a basis similar to its agreed purchase of Section 1.
- Assuring Railtrack Group that it would receive a minimum income stream – The restructuring involved a separate agreement whereby the Department, for a period of 50 years from the opening of Section 1, guaranteed Eurostar UK's payments of Section 1 track access charges. To reduce the likelihood of a call on the guarantee, the Department provided LCR with a loan facility – the access charge loan facility – that LCR could draw upon should it lack the funds to meet Eurostar UK's obligation to pay access charges.

7 LCR's shareholders are Bechtel Ltd (22.41%), SG Securities (UK) Ltd (22.41%), National Express Group Plc (20.94%), French Railways Ltd (SNCF) (13.6%), EDF Energy plc (13.18%), Ove Arup & Partners (2.76%), Sir William Halcrow & Partners Ltd (2.43%) and Systra (2.27%).

8 The operation of the Eurostar train service is the responsibility of Eurostar UK, SNCF and SNCB, the latter two being state owned companies responsible for domestic rail services in France and Belgium respectively. Within the UK, responsibility for Eurostar services rests with Eurostar UK.

9 We examined the restructuring of the deal in our earlier report entitled, "The Channel Tunnel Rail Link", HC 302, Session 2000-2001.

10 The target cost was derived from risk assessment modelling. It was an estimate of the cost of constructing Section 1 and was prepared on the basis that there was a 75 per cent probability that it would not be exceeded. The probability level was the benchmark set by Railtrack Group for its capital investments.

3 Following the 1998 restructuring, the 1997 present values of the Government's grants remained at £2,012 million[3,4] in January 1997 prices

Grants	The 1997 present value of the grants (£ million in January 1997 prices)	Payment particulars following the 1998 restructuring
Capital Grant	557	Paid in eight equal instalments, subject to the achievement of relevant construction milestones for Section 1
Deferred Grant	1,044	Paid in eight equal instalments, subject to the achievement of relevant construction milestones for Section 2
Domestic Capacity Charge (Section 1)	205	Paid in 34 equal, semi-annual instalments from August 2005, provided the Permit to Use for Section 1 has been issued
Domestic Capacity Charge (Section 2)	206	Paid in 34 equal, semi-annual instalments from January 2008, provided the Permit to Use for the full length of the Link has been issued
Total	**2,012**	

NOTES

1 The Department pays LCR the Domestic Capacity Charge for providing capacity on the Link for other train operating companies to run services between London and north and east Kent.

2 Since 1995, the project has received from the European Commission instalments of a project development grant because the Link forms part of the Trans-European Network of transport corridors across the European Union. When LCR won the contract in 1996, it became the recipient of the payments, which have amounted to £141 million (cash). Under its contract with the Department, LCR agreed that the amount received from the European Commission would be deducted from the Capital and Deferred Grants.

3 In our previous report, published in 2001, we stated that the present value of the grants in 1997 prices was £2,014 million. The slight difference is attributed to minor changes in the way the grant payments have been discounted to establish a present value.

4 The 1997 present value of the grant payments is approximately £2,530 million if the payments are discounted using a 3½ percent discount rate.

- Contracting in Inter-Capital and Regional Railways Limited[11] (ICRR) as operational manager of Eurostar UK - The Department wanted Eurostar UK to operate under new management. In 1999, at the conclusion of a competition between ICRR and Virgin Group Limited, LCR appointed ICRR to manage the business of Eurostar UK until 31 December 2010.
- Changing radically the plans to raise private finance - The financing proposals for the project changed fundamentally during the restructuring but did not involve increasing the present value of the direct Government grants (Figure 3). The flotation of LCR was abandoned. To fund construction of Section 1 and concurrent losses incurred by Eurostar UK, LCR secured two sources of private finance. The first was bank debt guaranteed by Railtrack Group. The second was through an issue of Government Guaranteed Bonds (GGBs), which are bonds issued by a party other than the Government, in this case LCR, but carrying a Government guarantee to honour the bond if the issuer defaults. To fund construction of Section 2, the operation of Section 1 and projected further Eurostar UK losses, LCR planned to use the proceeds from its sale of Section 1 to Railtrack Group and to issue a second tranche of GGBs.

1.4 The Department and LCR agreed a target cost for Section 1 of £1,930 million in cash outturn terms (£1,670 million at January 1997 prices, plus a £260 million allowance for inflation) and a target cost for Section 2 of £3,303 million in cash outturn terms (£2,513 million at January 1997 prices, plus a £790 million allowance for inflation).

11 ICRR is a consortium comprising National Express Group (40%), SNCF (35%), SNCB (15%) and British Airways (10%).

PART TWO

Financing and construction of the project have been taken forward

In 2002, Railtrack Group completed its withdrawal from the project. The consequent restructuring exposed the taxpayer to only slightly more project risk. In September 2003, Section 1 was opened on time and at a cost slightly less than the target cost.

LCR's financing arrangements had to change when Railtrack Group withdrew from the project

2.1 In October 2001, Railtrack plc, the operator of the domestic rail network entered railway administration. While Railtrack Group, which owned Railtrack plc, was not directly affected by the administration of its subsidiary, it decided to exit the railway business and so sought disposal of its interests in the Link.

2.2 LCR negotiated with Railtrack Group an agreement to purchase the latter's interest in the Link. LCR paid £375 million. The price comprised £295 million for Railtrack Group's expected return from its ownership of Section 1, and £80 million for the expected return from operating the entire length of the Link.[12] The Department evaluated the deal and approved it.

2.3 Railtrack Group's withdrawal resulted in three notable changes to LCR's financing of the project. The company needed:

- To replace the guarantee it had from Railtrack Group that covered bank debt facilities. The Department agreed that LCR could secure these debt facilities against the first four instalments of the Deferred Grant (Figure 3). To improve the value of the grant payments as security to the banks, the Department agreed to pay each instalment on its due date irrespective of whether or not the relevant construction milestone had been attained;
- To find security for bank debt to bridge the period through to the receipt of the main funding for Section 2 which was to have been proceeds from the planned sale of Section 1 to Railtrack Group. The Department agreed that LCR could secure these debt facilities against three of the remaining four instalments of the Deferred Grant (Figure 3). To increase their value as security to the banks, the Department relaxed payment conditions by making payment no longer dependent on the attainment of construction milestones; and
- To find funds to replace the proceeds that it was to have received from its sale of Section 1 to Railtrack Group. The sale proceeds were one of the sources of funds for the construction of Section 2. The Department agreed that LCR could use the same financing mechanism that Railtrack Group had been preparing with LCR to finance the purchase of the section. LCR would raise funds from bond issues and bank debt that were secured against the income stream that LCR would receive from Eurostar UK for access to Section 1 and the Section 1 Domestic Capacity Charge (Figure 3).

12 LCR sold on the rights to operate the Link to Network Rail for £80 million.

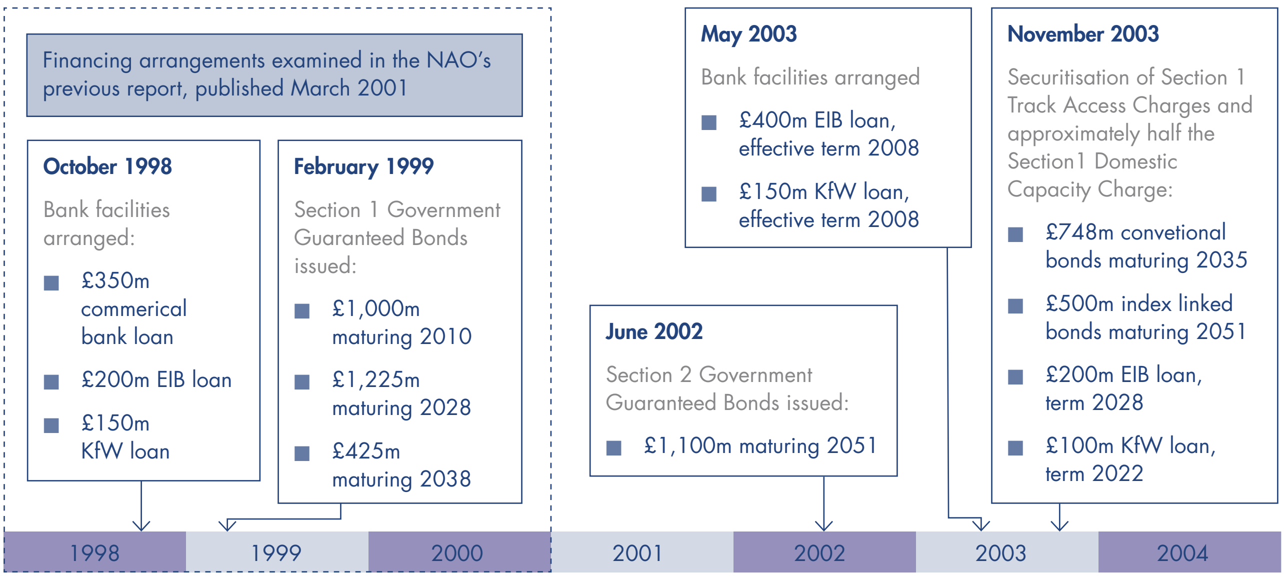
2.4 By the end of 2003, LCR had secured all the finance that it considered it would require to complete construction of the Link, operate and maintain Section 1 and fund Eurostar UK losses in the medium term. Since the 1998 restructuring, LCR has raised nearly £6,250 million of debt, comprising about £950 million of medium-term bank facilities and just under £5,300 million of longer dated debt maturing between 2010 and 2051 **(Figure 4)**. LCR repaid £50 million of the debt raised in 1998 from Kreditanstalt für Wideraufbau. LCR rolled over the remainder into new bank debt facilities, together with debt it raised in 1998 from the European Investment Bank. As of 31 December 2004, LCR had £6,200 million of long and medium term debt **(Figure 5)** with all bank credit facilities fully drawn down.

There was no substantial increase in taxpayer support following Railtrack Group's withdrawal

2.5 Under the 1998 restructuring, the Department agreed to direct taxpayer support of £3,750 million of project debt raised by LCR through the issue of Government Guaranteed Bonds (GGBs). With the exception of the direct Government grants, the remaining funds to construct the Link were expected to be raised on the back of Railtrack Group's purchases of Sections 1 and 2.

2.6 Also in 1998, the Government guaranteed Eurostar UK's payments of access charges to Railtrack (UK) Limited, a subsidiary of Railtrack Group into which the group vested its interests in the Link. LCR acquired CTRL (UK) Limited (formerly Railtrack (UK) Limited) in 2002, together with the benefit of the guarantee. LCR used the guarantee to help demonstrate to the capital markets the quality of the income stream.

4 Between 1998 and the end of 2003, LCR raised nearly £6,250 million of debt in the capital markets to fund: construction of Sections 1 and 2 of the Link; operation and maintenance of Section 1; and Eurostar UK's concurrent losses



Source: National Audit Office

NOTES

1 EIB is the European Investment Bank. KfW is Kreditanstalt für Wiederaufbau, a German development bank.

2 The last repayment instalment of the £350 million October 1998 commercial facility is due in the quarter ending December 2005.

3 LCR has repaid £50 million of the October 1998 KfW loan facility. The remaining £100 million of the October 1998 KfW loan facility and the £200 million, October 1998 EIB loan facility were rolled over in 2003 and secured against Eurostar UK's payment of the Section 1 track access charges and the Department's payment of the Section 1 Domestic Capacity Charge.

5 On 31 December 2004, LCR had £6,200 million of long and medium term debt

Types of debt issued by LCR	Outstanding debt as of 31 December 2004 £ million
Government Guaranteed Bonds	3,750
Bonds and bank debt secured against Section 1 Track Access Charges and the Section 1 Domestic Capacity Charge	1,248 (bonds) 300 (bank debt)
Bank debt secured against payments of the Deferred Grant	350 (1998 commercial bank loan) 400 (May 2003 EIB bank loan) 150 (May 2003 KfW bank loan)

Source: LCR

2.7 Following Railtrack Group's withdrawal from the project, taxpayer support of the project's financing increased slightly as a result of de-risking grant payments:

- £900 million of current medium-term bank facilities are secured against seven of the eight instalments of the Deferred Grant (Figure 3). While payment of these instalments has been decoupled from the attainment of construction milestones, the Department and LCR were confident, at the times when the decouplings occurred, that the milestones would be met. As of March 2005, construction of the Section 2 works had progressed beyond the first five milestones. In all five cases, construction progress was, or is, well ahead of the payment dates for the relevant grant instalments. LCR expects, also, to achieve the sixth and seventh milestones by the end of 2005 or early 2006, well in advance of the payment dates; and
- the £1,550 million of long-term financing raised in November 2003 was secured on Eurostar UK's payments of track access charges for Section 1 and just under half of the Section 1 Domestic Capacity Charge payments (Figure 3), which were decoupled from track availability. The risk of paying instalments of the Section 1 Domestic Capacity Charge when the section is unavailable has receded because, since its opening, the operational performance of the section has been excellent. The Department and LCR are confident that availability levels for Section 1 will continue to meet or exceed targets.

The Department ruled out public funding for Section 2

2.8 In 1999, LCR issued £2,650 million of GGBs to finance construction of Section 1 and fund concurrent losses from Eurostar UK. Two years later, when LCR was gearing up for the construction of Section 2, the Department started a review into alternatives to LCR raising, in line with its financial plan, an additional £1,100 million of debt through the second tranche of GGBs. The Department's principal alternative was a voted loan to LCR. The loan would not have required the issue of a project specific gilt. Rather, money would have been made available from the receipts of general gilt issuance or other sources available to the Treasury. The Department decided against this route because it was of the view that funding Section 2 through a voted loan would have been seen by the wider market as a Government bail out. The Department wanted to avoid the market developing the mindset that the Government would be willing to provide continued and open ended support when projects get into difficulties.

2.9 In 2002, the Department concluded that such policy considerations favoured private finance. The Department also held the view that, unlike an additional issue of gilts, the GGBs would not be classified as public borrowing because there was a very low likelihood that the guarantee would ever be called. Following Treasury consultations with the Office for National Statistics, the latter confirmed that the GGBs would be classified in the National Accounts and Public Sector Finances as a contingent liability rather than Government borrowing.

The new financing arrangements were sensible

The package of finance was well constructed

2.10 In view of the complexity of the financing for the project, we commissioned RBC Capital Markets (a part of the Royal Bank of Canada Group) to review a number of key areas relating to the private finance LCR raised since 2001. Its findings are at Appendix 3. In summary:

- the structure of LCR's debt financing is appropriate;
- overall, interest rates for the debt were competitive given the relevant degree of risk taken; and
- although, for technical and commercial reasons, some business was not placed following competitive tendering, LCR put in place processes to gain assurance that the prices paid were in line with the market.

The financing arrangements retain private sector disciplines

2.11 The Department and LCR consider, overall, that financing the Link using private capital has had the following advantages:

- the involvement of private finance reduced the risk of contractors developing the mindset that public funds would be available to cover cost overruns. LCR attributed the commercial disciplines between Union Railways[13], its project manager (Rail Link Engineering[14]) and the contractors, in part, to the perception that the project was not a Government enterprise;
- by having financing commitments in place at the start of construction for the two sections of the Link, LCR was able to plan its capital expenditure in a way that made sense for the project rather than be subject to the annuality of the Department's budget. Project managers, knowing what funds were available, could focus on delivery of the Link and managing problems as they arose rather than managing the project around cash flow issues; and
- the financing commitments that LCR had secured to fund construction of the two sections sent out a positive message to prospective contractors that the project would definitely proceed. LCR considered that, for each section, this message encouraged bidders to resource, as best they could, the preparation of their bids and to price aggressively.

Cost, construction progress and operation of Section 1 have so far met expectations avoiding additional calls on the taxpayer

2.12 Delays to the opening of Section 1 and increases in construction costs would have had an adverse affect on LCR's cash flow. The consequences would have resulted in an earlier and greater than expected call on the taxpayer to support LCR for a given level of Eurostar revenues. However, Section 1 opened on time and cost slightly less than the target set in 1998.

Construction of Section 1 progressed well

The cost of Section 1 met the 1998 revised estimate

2.13 The contractual target cost for Section 1, set in 1998, was £1,930 million (cash out-turn). The basis of the target, as prepared by Union Railways, was a base or 'point' cost estimate, which was the sum of 'point' cost forecasts for all the component works comprising the section. For such a large and complex project, the 'point' cost estimate inevitably accommodated assumptions about a large number of project risks, e.g. ground conditions; some of which would subsequently turn out differently. To address the uncertainty, Union Railways added to its estimate a contingency that was itself an estimate of costs that *will arise* from a reasonable proportion of risks that *might arise*. The contingency allowance was £180 million. The actual cost for Section 1 was £1,920 million (cash out-turn), **(Figure 6)**.

2.14 Achieving an out-turn very close to the target occurred despite a number of unforeseen events that were not anticipated within LCR's contingency allowance, including:

- exceptionally high rainfall during autumn 2000 and winter 2000/01 when many of the contractors were still engaged in major earth moving operations. The estimate of the associated loss was £80 million (2001 prices) of which Union Railways recovered approximately half through insurance claims, but had to absorb the remainder;
- scarcity of specialist rail industry resources because of concurrent activities on the West Coast Main Line and increased maintenance work on the rest of the national rail network following the Hatfield accident;
- activities of asylum seekers on the French side of the Channel Tunnel caused a temporary halt in deliveries of railway materials that put the project's budget and completion date at risk of overruns and delay respectively; and
- disruption of site activities during the fuel crisis in September 2000;

13 Union Railways (South) Limited was the client body responsible for the construction of Section 1. The company, an LCR subsidiary, was from 1998 to 2002 under the control of Railtrack Group. In this part of the report we refer to Union Railways (South) Limited as Union Railways.

14 Rail Link Engineering is a non-incorporated body comprising Ove Arup & Partners Limited, Bechtel Limited, Sir William Halcrow & Partners Ltd and Systra.

6 Despite the cost of construction being slightly higher than estimated in 1998, savings made elsewhere and contributions from others resulted in Union Railways beating the target cost

	Union Railways' Budget – March 1999 £ million (cash out-turn)			**Union Railways' estimate[1] of the Final Cost £ million (cash out-turn)**		
Construction costs						
Construction contracts						
North Kent Works	200			300		
Kent Works	620			610		
Track, signalling and commissioning Works	230			360		
Contingency to construction Works	180			40[2]		
		1,230			1,310	
Project Management (Rail Link Engineering's Services)		450			440	
Insurance		30			20	
Total construction costs			1,710			1,760[3]
Project client costs			110			100
Property costs			110			80
Advance Works for Section 2			Included above			10
Rail Link Engineering's Bonus/(Overrun contribution)			0			(20)
Third party and other income			Included above			(20)
			1,930			**1,920[3]**

Source: Union Railways

NOTES

1 The Final Cost remains an estimate because, amongst other things, it includes an allowance of receipts Union Railways has yet to receive for the disposal of land that is no longer required for the project.

2 The remaining contingency is held against under recovery of insurance claims for bad weather affecting the project in 2000/2001.

3 There are rounding errors affecting these sums.

2.15 In the views of LCR and Union Railways, the success in bringing Section 1 in on budget reflects a number of key factors:

- extensive use of target-price contracting **(Figure 7)**;
- a design based on tried-and-tested technology;
- the stability of the design brief, which was held fixed throughout the construction phase;
- continuity of management personnel during the pre-construction and construction phases; and
- Union Railways' use of contingency to recognise that some costs would be incurred even if they could not be ascertained exactly at the outset. This approach makes allowance for uncertainty rather than ignoring it, and together with a management commitment to spend the contingency as risks materialise militates against the risk of attempting to manage a project to an unrealistic budget.

2.16 Rail Link Engineering was also incentivised to keep the project on course. It either would share savings if the cost of construction was less than the target it had agreed with Union Railways in 1998, or was at risk of losing part or all of its fee of £32 million (1997 prices) if the target was exceeded. The maximum potential bonus from its share of savings was £95.6 million (1997 prices).

2.17 In May 2003, Union Railways and Rail Link Engineering concluded negotiations on the extent to which client changes had impacted on the target construction cost. The parties agreed to increase the target, but it was, however, exceeded and as a consequence Rail Link Engineering paid Union Railways £12 million (January 1997 prices).[15]

Section 1 opened on time

2.18 Union Railways set itself a goal to open Section 1 in October 2003, five years after the start of construction in October 1998. Although some parts of the construction took longer than planned, notably signalling and track work, Union Railways achieved its goal when the section was opened for commercial use on 28 September 2003.

Generally, the health and safety record during construction of Section 1 was considerably better than the national average for the construction industry

2.19 Rail Link Engineering took an active role in the promotion of a strong health and safety culture during the construction of Section 1. Before receiving his/her security pass, each member of the workforce had to attend a health and safety induction and demonstrate his/her understanding by answering a questionnaire. Rail Link Engineering designed the programme so that it did not discriminate against those with literacy difficulties or for whom English was a second language. There were additional health and safety inductions when individuals were relocated to other areas of the section. These high level health and safety inductions were backed-up on site by each gang planning and reviewing the safety aspects of its activities, often on a daily basis. Rail Link Engineering also introduced its Target Zero Accidents programme. The programme was based around a mobile facility that used short videos and open discussion to present relevant health and safety information to groups of about 10 to 15 members of the workforce. To reinforce the presentation, "top-pocket" cards containing salient information were distributed.

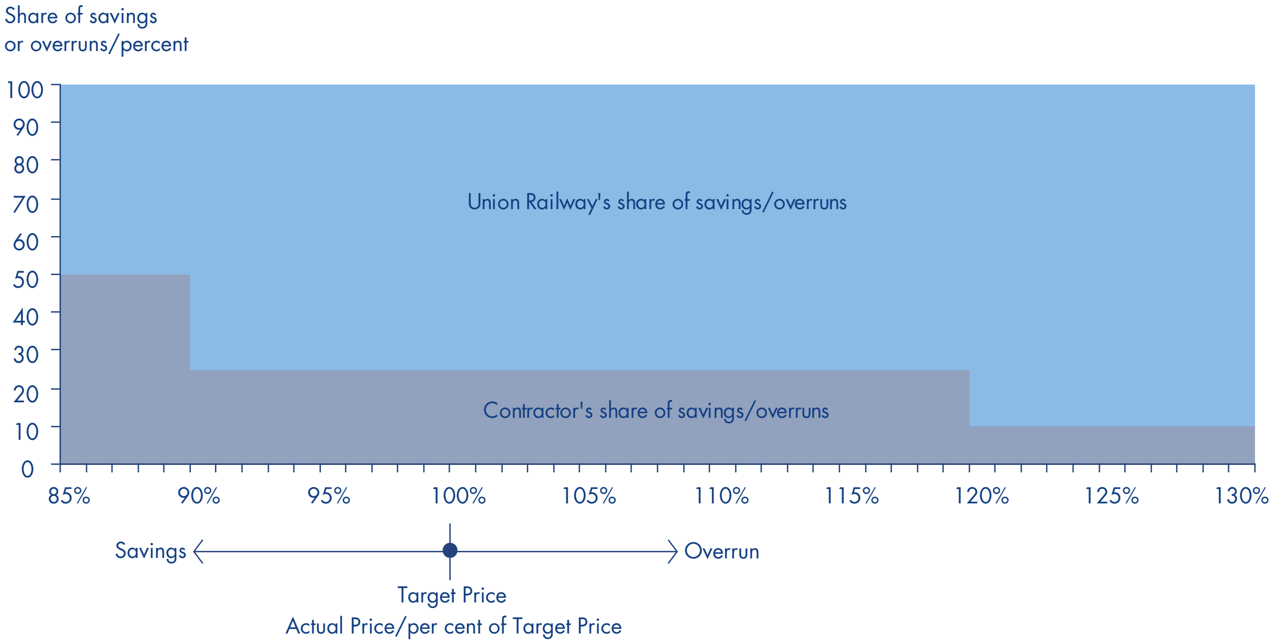
2.20 Rail Link Engineering wanted to bring about behavioural changes within the workforce so that attitudes were more in line with those of workforces in the petro-chemical, power and processing industries, which have a better health and safety record than the construction industry. To encourage the open and honest reporting of accidents, Rail Link Engineering operated a no blame regime. This, together with a policy of engaging the workforce to participate in improving the health and safety culture, provided Rail Link Engineering with information from which it could spot trends and take steps to prevent further or future accidents. The accident record for Section 1 was generally well below the national average across the construction industry.

15 In cash terms, Rail Link Engineering paid Union Railways £17 million (Figure 6).

7 LCR considers that extensive use of target-price contracting across the project led to significant benefits for the project's implementation

Target⊠
of the ⊠
propose ways in which the design and implementation of the works could be changed to reduce cost and/or risk to programme. For example, the design of the North Downs Tunnel for Section 1 was changed by the successful contractor in the bidding process from pre-cast c⊠

Contracts⊠
contractors were reimbursed their costs at the tendered rates for labour, materials and overheads. After completion, the contractor shared in cost savings or overruns against the target price:-



LCR decided to implement target-price contracting using a new form of contract that had been developed by the Institution of Civil Engineers in consultation with industry experts. The contract provided specific advantages in terms of clear risk allocation, early resolution of issues, and provisions for partnering arrangements. Together with an incentive regime under which all parties shared in the risks and rewards, LCR saw the following benefits in managing the project:

- the contracting approach encouraged partnering arrangements in which the project client, project manager and contractors col⊠
  in the construction of the North Downs Tunnel, once tunnelling was ahead of the schedule required by the overall project programme, the parties collaborated to focus on maximising cost-performance. The tunnel was constructed five months ahead of schedule and for £10 million less than budget;
- a non-co⊠
  was significantly reduced compared with the usual experience of major projects. No Section 1 contracts needed to go through disput⊠
  all contracts within six months of completion of Section 1;
- the incentive regime encouraged collaboration between contractors in which, after contract award, neighbouring contractors combined resources and/or collaborated at their interfaces. For example, during the substantial ground works over the length of the section⊠
  the volumes of spoil which otherwise would have needed expensive disposal off site; and
- the overall project programme could be delivered more quickly because significantly less engineering and design works were required, before contracts were tendered, than would have been needed to tender fixed-price 'lump sum' contracts. Also, the completed design benefited from the contractors' practical input into how the works would actually be implemented.

Source: LCR

LCR met its obligations to others during the construction of Section 1

2.21 Kent County Council and the Channel Tunnel Rail Link Complaints Commissioner[16] considered that, during the construction of Section 1, Union Railways and Rail Link Engineering exceeded construction industry standards for managing community relations. These views emerged because, amongst other reasons:

- At the highest levels of Union Railways and Rail Link Engineering, there were personnel determined to create and sustain good community relations, which was visible through various fora, such as the Planning Forum, a forum attended by representatives from Union Railways, Rail Link Engineering, the Department, the Complaints Commissioner and local authorities affected by the Link;
- Public bodies and local communities saw that Union Railways and Rail Link Engineering acted promptly to resolve complaints and other issues;
- Union Railways and Rail Link Engineering consulted widely with affected local communities prior to the start of, and during construction of major works, informing these communities why and how the works would progress, and explaining some of the inevitable consequences;
- Union Railways and Rail Link Engineering prepared well thought through planning submissions that displayed a willingness to meet their undertakings to others; and
- Union Railways manned a help line competently.

Since its opening, operational performance of Section 1 has exceeded expectations

2.22 There was a view in Union Railways that problems were likely to occur following the opening of Section 1 due to: the teething problems that are normally experienced with newly commissioned railways; and some shortening of the commissioning period. Such problems did not materialise and operational performance of the section has contributed to improved punctuality of Eurostar trains. Union Railways and Eurostar UK reported that the average delay per train[17] attributed to unavailability and/or under performance of Section 1 was only 11 seconds in the first year of operation and reduced to just 2 seconds for the first 12 weeks of 2005.

2.23 Union Railways and Network Rail (CTRL), Union Railways' operator of Section 1, attribute the reliability of the Section 1 infrastructure not only to quality workmanship, but also to the decisions to use proven technology and to implement a high maintenance regime. When Union Railways decided that it would only apply tried-and-tested technology to the Link, it looked at the technologies used in those countries that operated high-speed railways. Union Railways chose to adopt French technology after finding it to be both reliable and sufficiently leading edge.

16 The Channel Tunnel Rail Link Complaints Commissioner is an individual, with no interest in the project other than the occupied role, whose mandate is to direct construction-related complaints from the public to the appropriate party and to mediate in cases when the complainant believes that he/she has received an unsatisfactory response.

17 The averages are calculated from the cumulative delays to Eurostar services attributed to infrastructure defects over a reporting period divided by the number of trains that ran during the period.

PART THREE

But remaining risks mean that a call on the taxpayer is still likely

This part of the report examines the areas where the public sector continues to be exposed to risk. When the deal was restructured in 1998, the Department avoided conceding any material increase in the net amount of direct grants payable to the project. Nevertheless, the restructured deal depended on the Department agreeing to lend money directly to LCR to cover future shortfalls in its cash flow.

The taxpayer faces exposure to shortfalls in LCR's cash flow

3.1 In the 2002 restructuring, the Department transferred, from Railtrack Group to LCR, the Department's guarantee that Eurostar UK would meet its obligations to pay track access charges for a period of 50 years from the opening of Section 1 in 2003. To reduce the chance of a call on this guarantee, the Department kept in place the access charge loan facility that it had granted to LCR in 1998. LCR can draw down funds from the facility to pay Eurostar UK's track access charges if, as expected, Eurostar UK continues to experience operating cash shortfalls after LCR has exhausted its debt proceeds. The interest rate for the loan is LIBOR plus one percentage point.

3.2 In 1998, the Deputy Prime Minister informed Parliament that the 1997 present value of public sector support provided through the access charge loan facility could reach £360 million (in 1997 prices, calculated from a given cash flow that was discounted using a discount rate of six per cent real). Contractually, however, the 1997 present value of the loan draw downs, net of repayments and the Government's share of revenue from forecast project related property developments, is currently capped at £270 million (1997 prices). The Department can increase the facility to the originally agreed limit of £360 million (1997 prices) subject to state aid approval from the European Commission.

Estimates of passenger revenues have been progressively reduced

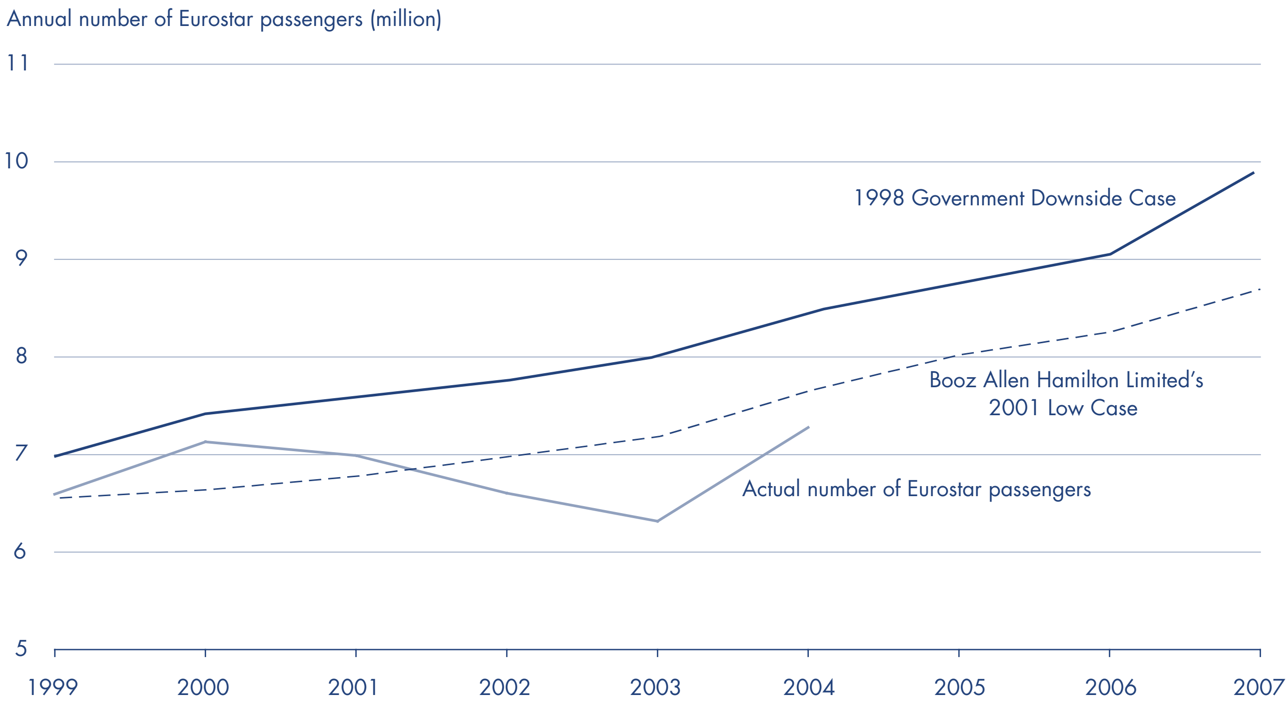
3.3 At the time of the 1998 restructuring, the Department, using the Government's Central Case for Eurostar UK's revenues, projected that LCR would suffer a cash shortfall and the 1997 present value of the additional support would be in the order of £140 million (1997 prices). Under the Government's Downside Case, the present value of the maximum expected additional support required was £360 million (1997 prices). Both estimates were calculated from cash flows net of repayments and the Government's share of revenue from forecast project related property developments. However, demand for the Eurostar service never met the Government's Downside Case (Figure 8) and, in 2000, the Department commissioned new passenger forecasts from Booz Allen Hamilton Limited, who modelled three scenarios, known in this report as the 2001 High, 2001 Mid and 2001 Low Cases. Passenger and Eurostar UK's revenue projections in the 2001 Low Case are lower than the 1998 Government's Downside Case **(Figures 8 and 9)**.

3.4 In 2000 and 2001, actual Eurostar passenger numbers exceeded the 2001 Low Case, but in the latter year demand started falling and in 2002 and 2003 actual usage ran below the 2001 Low Case (Figure 8). The lower than forecast usage had a negative impact on Eurostar UK's passenger revenue such that, in 2003, it was approximately £25 million (1997 prices) below the 2001 Low Case and £48 million (1997 prices) below the 1998 Government's Downside Case (Figure 9). Eurostar UK attributed the drop in patronage between 2000 and 2003 to a contraction of the market between London-Paris and London-Brussels. It cited a number of factors to explain the drop:

- the rise of low-cost airlines meant that there was not only competition on price but also on destination. Leisure travellers can choose between a multitude of European destinations when choosing short, low cost breaks;
- a decline in Eurostar business travel attributed to weak economic conditions on the continent;
- a reduction in leisure travel following declining consumer confidence in France;
- the reduction in travel following the terrorist attacks in the United States on 11 September 2001; and
- passenger frustration caused by increased levels of travel disruption following the train derailment at Hatfield and Railtrack plc's subsequent action, including the imposition of a greater number of speed restrictions on the lines used by Eurostar services.

3.5 In 2004, passenger numbers were up 15 per cent compared to the previous year (Figure 8). Eurostar UK's passenger revenues also increased and were up approximately 11 per cent in real terms compared with 2003 (Figure 9). However, both figures for 2004 were still below the 2001 Low Case. While the improvements are encouraging, it is not yet possible to say whether they will be sustained.

8 In 2004, the number Eurostar passengers increased by 15 per cent compared to the previous year's figure and reversed a declining trend that started in 2001



Source: National Audit Office analysis

3.6 In 2004, the Department commissioned Booz Allen Hamilton Limited to update forecasts of passenger demand and Eurostar UK's passenger revenues. The firm produced three principal forecasts for both passenger demand and Eurostar UK's passenger revenues – known in this report as 2004 High, 2004 Most Likely and 2004 Low **(Figures 10 and 11 overleaf)**. The 2004 High forecast indicated that passenger numbers for Eurostar services would exceed that projected in the 2001 Low case only by 2009 (Figure 10). Both the 2004 Most Likely and the 2004 Low forecasts show expected passenger numbers below the 2001 Low forecast until about 2035 and 2045 respectively (Figure 10). In terms of revenue projections, the expectation, under the 2004 Most Likely forecast, is that annual revenues through to nearly 2050 will remain below the 2001 Low forecast (Figure 11).

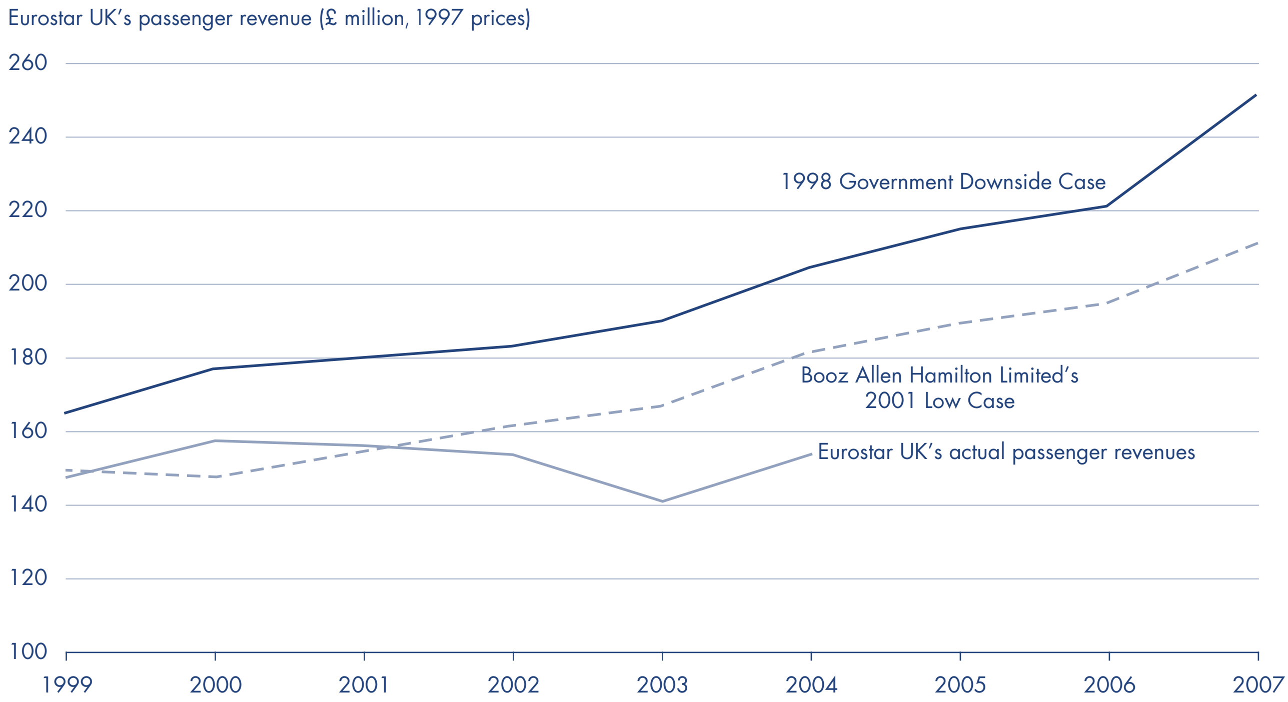
LCR has reduced the expected call on the access charge loan by reducing its cost of capital

3.7 While the lower than expected revenues from Eurostar UK adversely impact on LCR's financial position, LCR cut its expected cost of capital from a weighted average of 8.9 per cent in 1998 to 5.2 per cent in 2003. This was achieved principally by replacing the return required by Railtrack Group, for taking construction risk for Sections 1 and 2, with the cost of debt raised against revenues guaranteed by the Department.

3.8 Even after allowing for the payment of £295 million (2002 prices) to Railtrack Group for its interest in Section 1, LCR calculated that the 1997 present value of the savings from the reduced cost of capital would exceed £550 million.[18]

18 £990 million (a 1997 present value in 1997 prices calculated by discounting cash flows using the Government's current discount rate of 3½ per cent).

9 In 2004, Eurostar UK's passenger revenue grew by nearly 11 per cent in real terms, reversing a three-year trend of falling revenues



Source: National Audit Office analysis

LCR has, through risk management and risk transfer, held down its likely call on the access charge loan

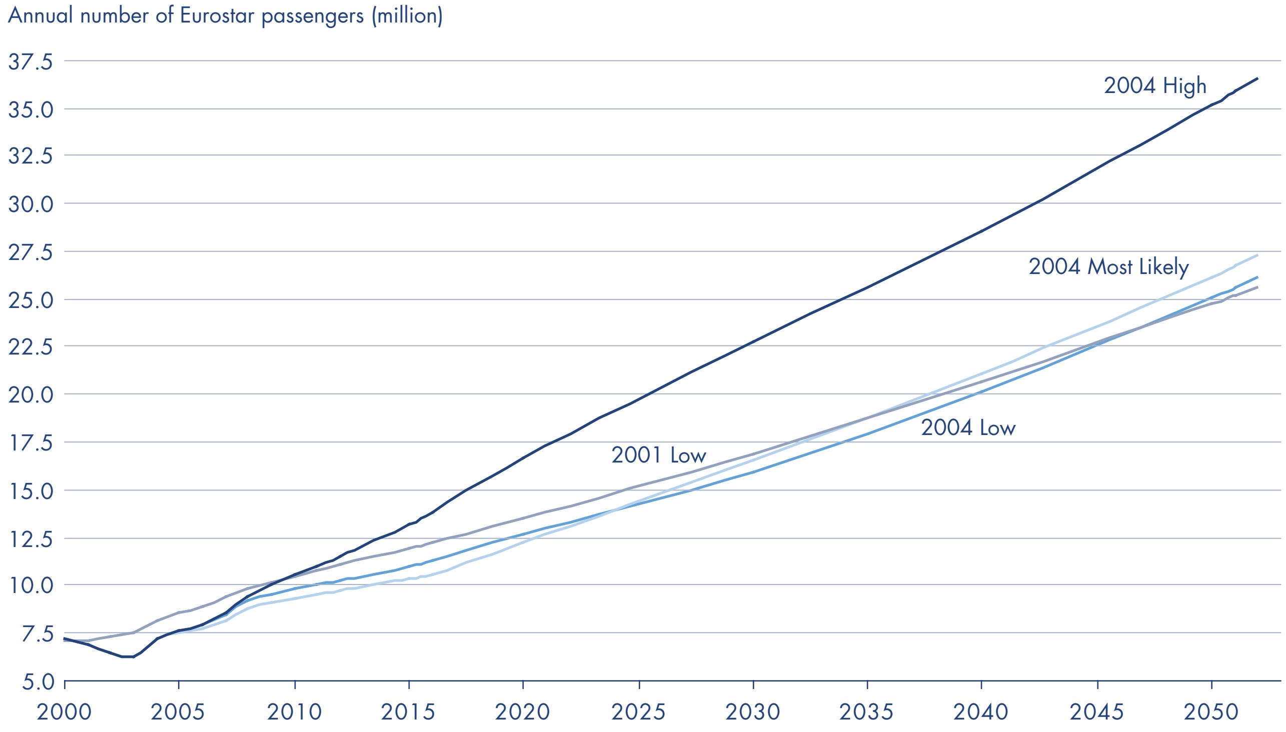
3.9 The size and timing of any call on the access charge loan will be influenced by LCR's future cash flow. Where these costs and revenues remain uncertain, LCR and the Department have taken steps to manage the relevant risks or share them with others.

Action is being taken to minimise the shortfall in Eurostar UK's revenue

3.10 Eurostar UK has shared or managed risks to reduce the shortfall in revenue and thereby lowered LCR's likely call for support from the taxpayer. Eurostar UK has:

a shared revenue risk with other parties. As part of the 1998 restructuring arrangements, LCR appointed Inter-Capital and Regional Railways Limited (ICRR) to operate and manage Eurostar UK in return for a management fee of two per cent of turnover. The contract includes an incentive regime based on comparing Eurostar UK's actual cash flow with the relevant forecast in the contract. ICRR receives an additional payment if Eurostar UK's actual cash flow is better than the forecast agreed in the contract. If the actual cash flow is worse, ICRR makes a payment to Eurostar UK, net of ICRR's management fee and subject to an annual cap of about £20 million per year (in 1999 prices). In each year of the period 1999-2004, Eurostar UK's actual cash flow was worse than the relevant forecast because Eurostar UK's passenger revenue were considerably below expectations. Over the period, the net cost to ICRR was £21 million. The annual cap is expected to be reached in every year after 2004 until the contract ends in 2010. Some of ICRR's shareholders have tried to negotiate themselves out of the contract because they no longer consider the business worthwhile;

10 In 2004, the Department revised its forecasts of passenger demand for Eurostar services



Source: Booz Allen Hamilton Limited

b under the direction of ICRR, reduced operating costs. ICRR has control over some of Eurostar UK's operating costs and, overall, has continued to hold these below the 1998 level, even before allowing for inflation **(Figure 12)**. ICRR has kept operating costs down through: reduced manpower costs; savings generated from re-negotiating and re-letting contracts; sub-leasing trains to GNER; better use of maintenance facilities; and reducing overheads such as business rates. Eurostar UK has also managed to negotiate some reduction in the access charges it pays to Network Rail (for access to relevant sections of the UK's domestic railway network);

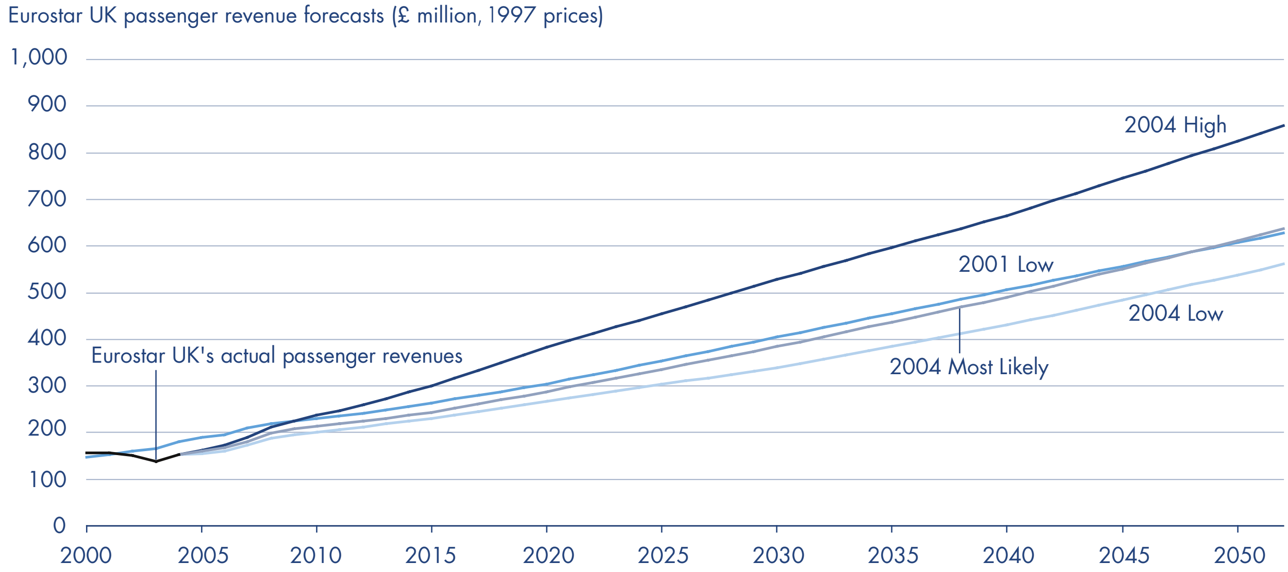
c revised its marketing strategy. Three main market segments with potential for improvements were identified and Eurostar UK is working with SNCF and SNCB, its partners in the Eurostar Group, to improve market share in these areas as shown in **Figure 13 overleaf**. Eurostar's market share on both the London-Paris and London-Brussels routes has increased since 2000, as shown in **Figure 14 overleaf**; and

d improved co-operation with the two other Eurostar train operators, SNCF and SNCB.

LCR's management of its finances has had a beneficial impact on cash flow

3.11 LCR has large cash balances to manage because the funds it raised through bond issues have not been required immediately. We asked RBC Capital Markets to examine whether LCR and its external fund managers had invested these large cash balances prudently. RBC Capital Markets found that LCR invests the bond proceeds in low risk investments with short maturities to ensure liquidity and availability of funding. LCR's management of its funds, investments and debt liabilities have tended to yield a positive return. However, this benefit will reduce as LCR runs down its investment portfolio to pay for construction of Section 2.

11 In 2004, the Department revised its forecasts of Eurostar UK's passenger revenues



Source: Booz Allen Hamilton Limited

12 ICRR has kept operating costs within its control below the 1998 level, even before allowing for inflation

	1998 £ million, nominal	1999 £ million, nominal	2000 £ million, nominal	2001 £ million, nominal	2002 £ million, nominal	2003 £ million, nominal	2004 £ million, nominal
Total costs[1]	**271**[2]	**243**	**235**	**240**	**235**	**276**	**366**
Less							
Access charges							
Eurotunnel usage charges	80	83	81	81	84	85	93
Railtrack plc/Network Rail access charges net of recovered penalties	39	39	37	37	36	38	12
Access charges to Section 1 of the Link						45	150
Redundancy/reorganisation costs[3]	2	1	1			2	
Distribution and sales	20	21	22	21	20	18	15
Charges and fees[3]							
LCR's management charges	7	2	1	1	2	2	2
ICRR's fees net of its contribution		1	2	(2)	(9)	(8)	(5)
Addressable costs[4]	122	95	92	102	102	94	100
Cost reductions achieved compared to addressable costs incurred in 1998 (no allowance for inflation)		27	30	20	20	28	22

Source: LCR and the Department

NOTES

1 Total costs have been calculated from Eurostar UK's operating expenditure. Allowances for depreciation and impairments have been deducted from the reported operating expenditure. Profits from disposals of fixed assets have been added to the figure.

2 Given as £257 million in Figure 10 of our 2001 report. The difference reflects an overcounting of an impairment allowance and an undercounting of depreciation.

3 LCR considers that costs for: reorganisation; and management charges and fees should not score towards addressable costs.

4 These figures have been amended to reduce rounding errors.

13 Eurostar UK identified the markets where it needed to improve its share and identified actions to do so

Brussels route

- Introduced new price schedule
- Revised timetabling and reduced journey time
- Strengthened the Brussels marketing team
- Introduced corporate sales programme

Business market

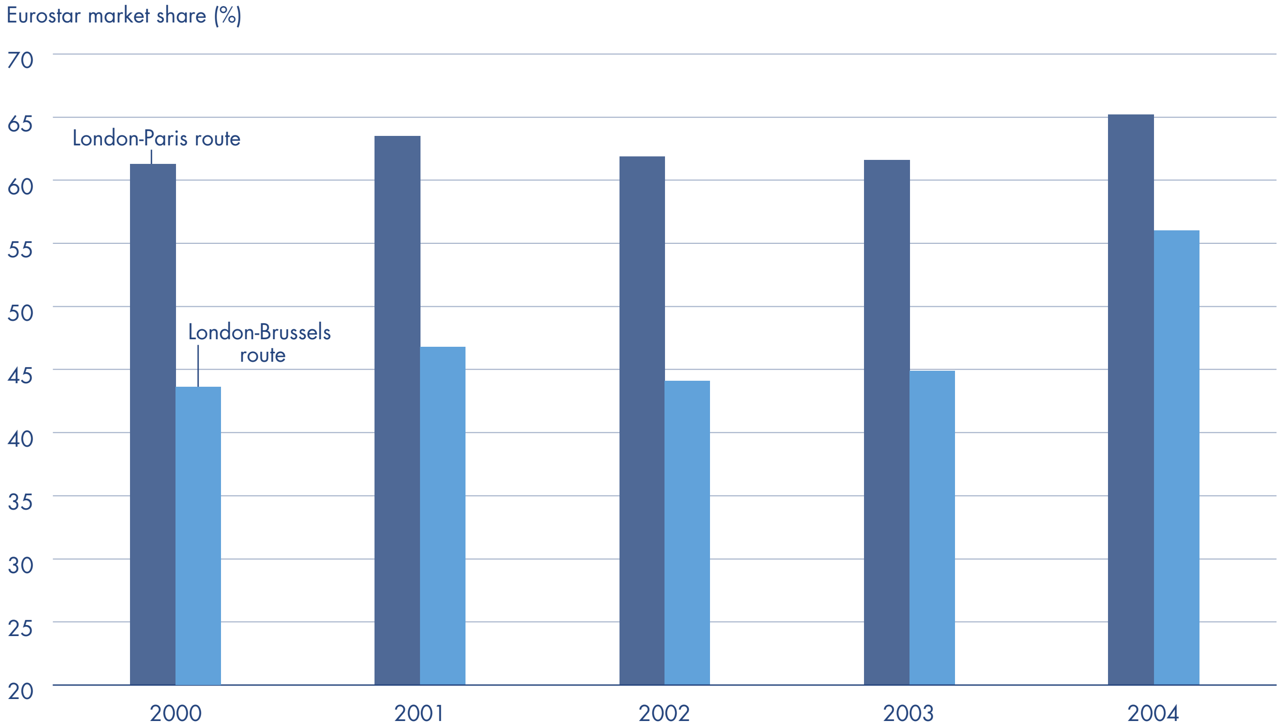
- New advertising strategy focusing on journey time and city centre access as unique selling points
- Distribution through corporate travel managers and airline based booking service
- Planning to introduce broadband internet access

Overseas market

- Distribution of Eurostar tickets through airline distribution systems
- Partnerships with overseas airlines (e.g. Delta Airlines, All Nippon Airways)
- Planning to promote London-Paris, London-Brussels daytrip opportunities

Source: National Audit Office

14 Eurostar's market share of passengers on both the London-Paris and London-Brussels routes has increased since 2000



Source: National Audit Office analysis

The Department and the Treasury considered that transferring some construction risk was expensive but justified the decision on the basis of the protection offered to the taxpayer

3.12 The construction of Section 2 is a complex enterprise. The works include: 20 kilometres of twin tunnels under east London and the Thames; and the redevelopment of the existing St Pancras station, with only limited closure of this major London terminus permitted. The associated construction risks are considerable. If these risks were not transferred to others, then the costs incurred in dealing with those that materialised would have a negative impact on LCR's cash flow and would increase the call on the access charge loan facility.

The Department reviewed options into the placement of Section 2 construction risk

3.13 Under the 1998 restructuring, the Department expected that construction risk associated with Section 2 would transfer to Railtrack Group when it exercised its option to purchase the section. While the Department was keen not to carry the Section 2 construction risk, it was not, in late 2000, prepared to accept Railtrack Group's revised proposals for exercising the option. Compared against the original terms of the option, the Department estimated that the revised proposals would increase the 1997 present value of public sector support through the access charge loan facility by between £370 million and £430 million (1997 prices) depending on forecasts of Eurostar UK's passenger revenues **(Figure 15)**.

3.14 The Department, wanting to consider its options, progressed discussions with both LCR and Railtrack Group. LCR explored the feasibility of the insurance market taking risk at high thresholds of cost overrun. The Department also analysed the option in which the 1998 arrangements remained in place, but with the Department supporting LCR by carrying the risk of construction overruns through an earlier and increased call on the access charge loan.

3.15 The Department, finding LCR's initial proposals unattractive because it would effectively bear construction risk, agreed with LCR that it could involve Bechtel, a key member of Rail Link Engineering, in working up proposals under which Bechtel would carry some construction risk. The Department also asked Railtrack Group to work up a proposal to manage the construction of Section 2, including carrying some construction risk, but without the obligation of purchasing the section.

3.16 As a result of these requests, by late February 2001, the Department had two sets of viable proposals to compare with the arrangements already in place under the 1998 restructuring, albeit without Railtrack Group exercising its Section 2 option, **(Figure 16)**. The Department appraised each option, calculating, in net present value terms, the total costs that the taxpayer would bear and the benefits that it would forego in relation to the construction of Section 2.

15 The Department estimated that Railtrack Group's revised terms for exercising the Section 2 option would increase the 1997 present value of public sector support through the access charge loan facility by between £370 million and £430 million

Proposal	Forecast of Eurostar UK's passenger revenues	Access charge loan (£ million, 1997 present value in 1997 prices)
Railtrack Group exercising its option to purchase Section 2 under the 1998 terms	2001 Mid Case 2001 Low Case	340 1,080
Railtrack Group exercising its option to purchase Section 2 under enhanced terms	2001 Mid Case 2001 Low Case	710 1,510

Source: The Department

NOTES

1 Railtrack Group wanted the enhanced terms to cover: lower than expected revenues associated with lower than expected Eurostar UK passenger revenues; expected lower revenues from future use of the Link by domestic services; an underestimated allowance for inflation; additional costs associated with Thameslink 2000; and an increase in risk allowance.

2 Railtrack Group would own the full length of the Link under both proposals.

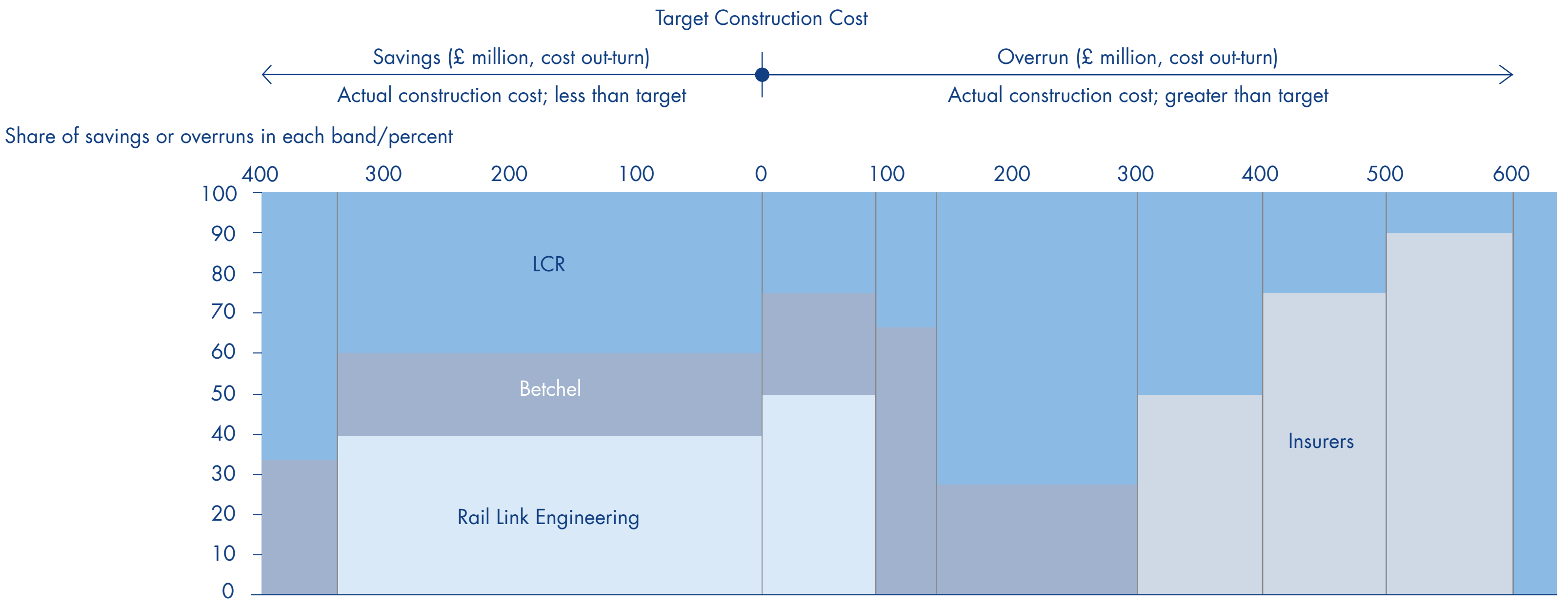
3 Railtrack Group would carry Section 2 construction risk under both proposals.

Figure 16 overleaf

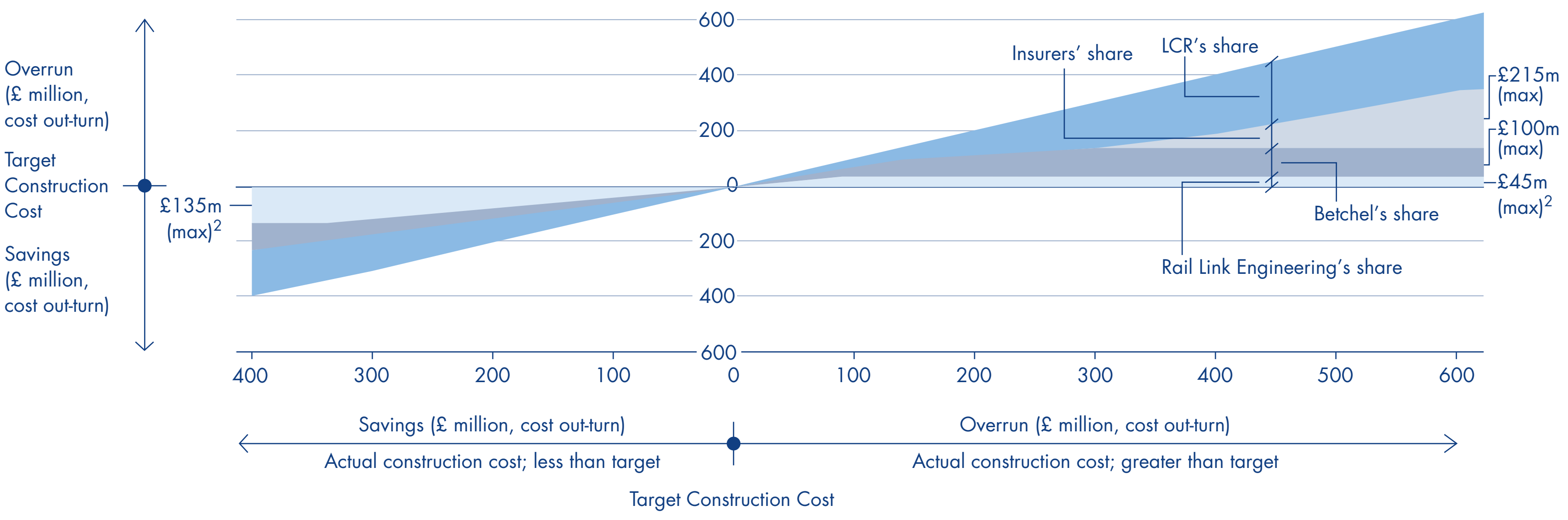
16 Compared against the Target Construction Cost set in 2001, the LCR/Bethel proposal transferred more construction risk to the private sector than the other proposals reviewed by the Department

The LCR/Betchel Proposal

Bands showing the distribution for sharing savings or overruns as a result of the actual construction cost being respectivly less than or greater than the Target Construction Cost set in 2001.

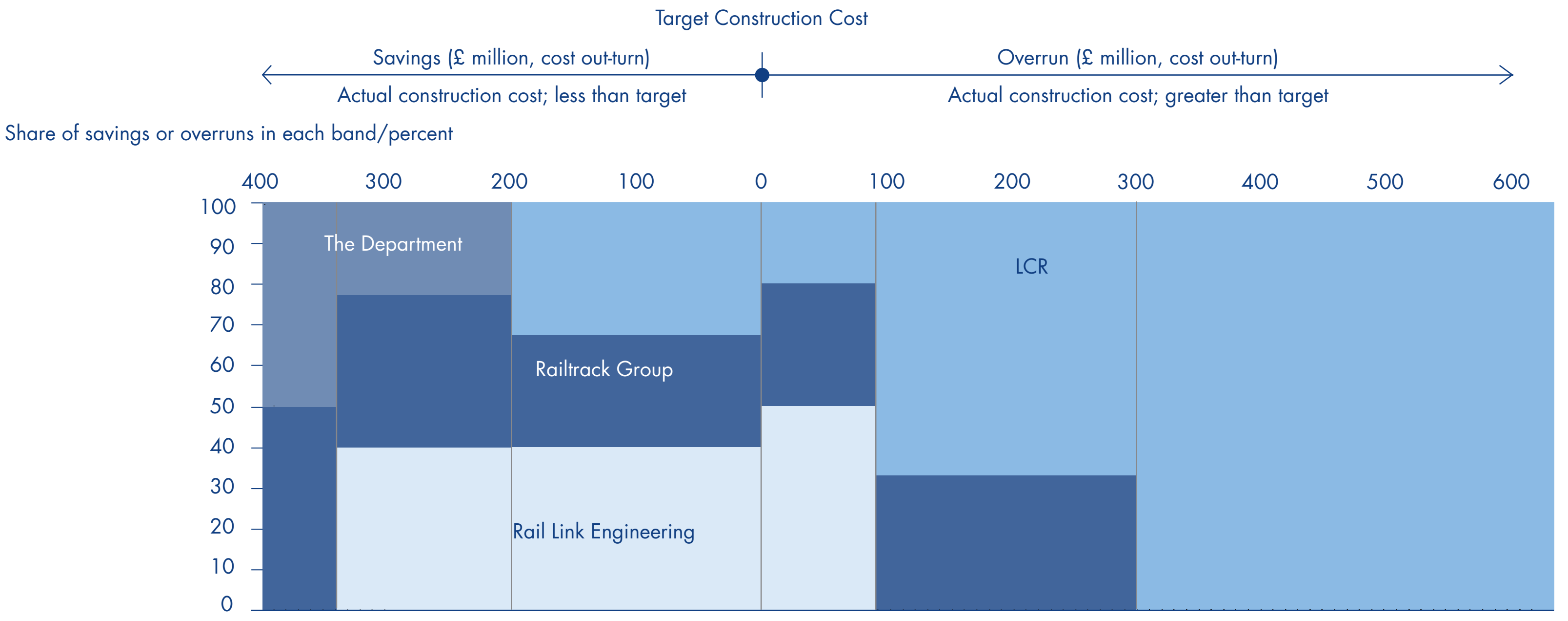


The distribution of savings/overruns



Railtrack Group's Proposal

Bands showing the distribution for sharing savings or overruns as a result of the actual construction cost being respectivly less than or greater than the Target Construction Cost set in 2001.



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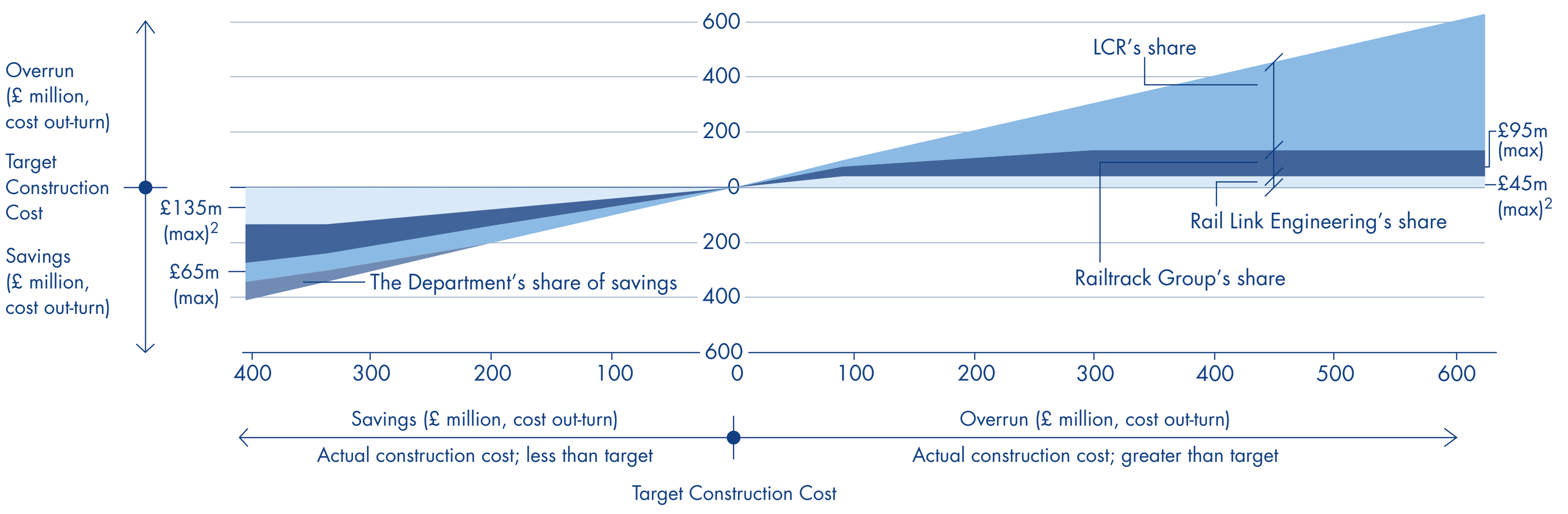
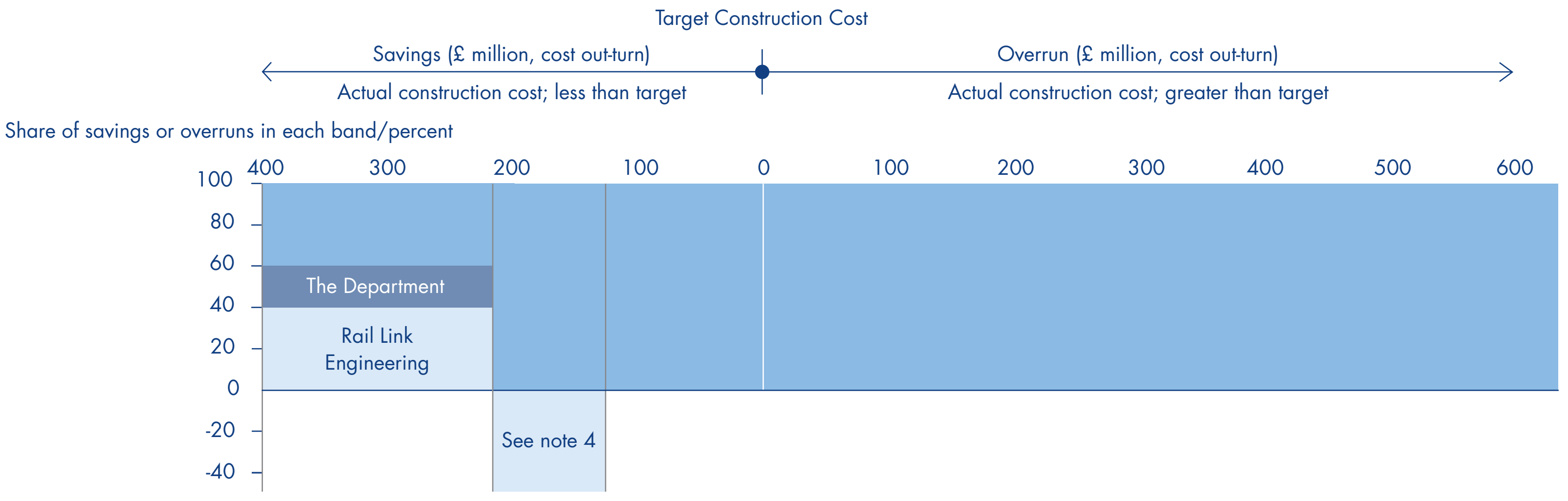
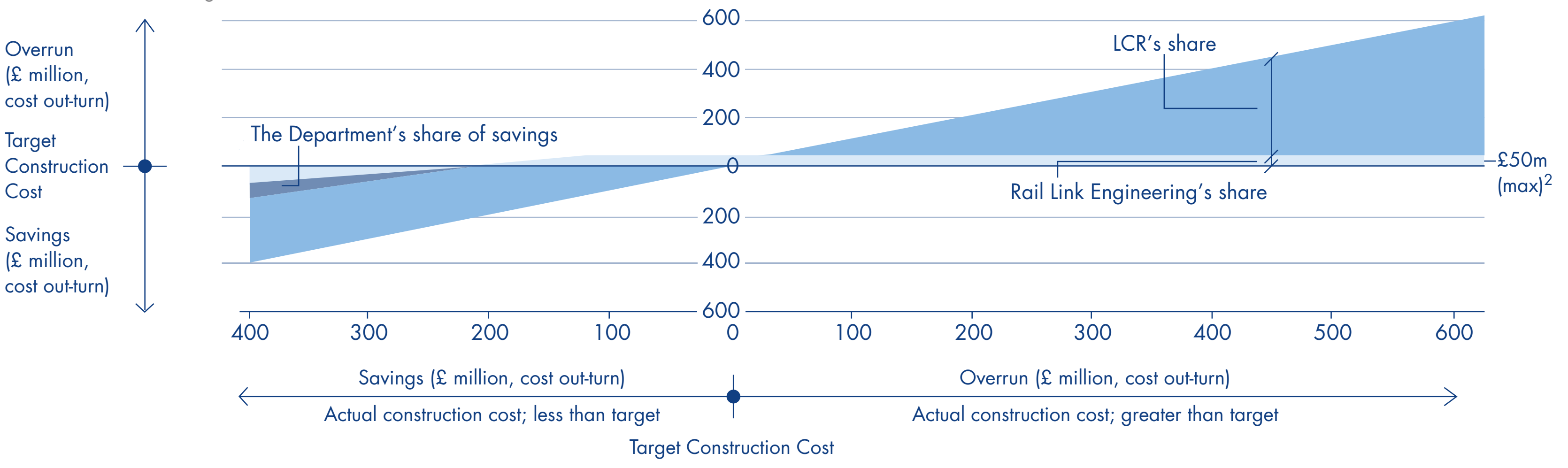


Arrangements under the 1998 restructuring but without Railtrack Group's participation

Bands showing the distribution for sharing savings or overruns as a result of the actual construction cost being respectivly less than or greater than the Target Construction Cost set in 2001.



The distribution of savings/overruns



Source: The Department

NOTES

1 In the above arrangements, inflation is assumed to be below the contractual caps.

2 The limit of Rail Link Engineering's share of savings/overruns is based on the value of its fixed fee at the actual completion date, inflated using the Average Earnings Index. The maximum shown in the LCR/Bechtel proposal and Railtrack Group's proposal are based on inflating the 2001 fee at the rate of 3.7 per cent per annum. The maximums shown under the 1998 arrangements were calculated using the 1998 fee, actual average earnings inflation to 2001 and 3.7 per cent per annum thereafter.

3 Arrangements for Section 2 under the 1998 restructuring did not have contractual force. It is questionable whether Rail Link Engineering would have agreed to contracts that retained the sharing mechanism for the target construction cost set in 1998 in the light of further planning and development work on the project between 1998 and 2001.

4 The Section 2 target construction cost in the 1998 restructuring was £2,215 million (1997 prices). As part of the 2001 negotiations, the Section 2 target construction cost was increased to £2,714 million (2001 prices), a real increase of about £180 million (1997 prices) after allowing for project-related inflation. Therefore under the 1998 arrangements, Rail Link Engineering's sharing of overruns would crystalise at an actual out-turn cost lower than the out-turn cost related to the target construction cost set in 2001.

3.17 Assuming the same outcome from all three options, the calculations showed that the most financially advantageous option for the taxpayer was the proposal under which the Department took all the construction risk **(Figure 17)**. The Department calculated that the 1997 present value of Railtrack Group's proposal was £190 million (1997 prices) more expensive. The 1997 present value of the LCR/Bechtel proposal was around £40 million (1997 prices) more expensive, depending on concessions granted to Railtrack Group if the LCR/Bechtel proposal was accepted.

3.18 The Department chose to proceed with the LCR/Bechtel proposal on the basis that it contained performance incentives (the sharing of savings and the risk of sharing cost overruns) that did not exist in the option in which the Department carried construction risk. In addition, the Department expected that, as a consequence of the incentive arrangements, the risk of overruns would be significantly less than in the case where the Department took the risk. In comparing the LCR/Bechtel proposal against Railtrack Group's proposal, the Department favoured the former because, should cost overruns exceed £300 million (cash out-turn), £215 million of the next £300 million of overruns would be covered by insurers, subject to the insurers' limited exposure to the risk of inflation, which is contractually determined and capped.

While keen to avoid bearing construction risk, the Department considered the proposed risk transfer expensive but likely to represent best overall value for money

3.19 In 2001, LCR paid £87 million to put the proposal in place. Bechtel received £60 million for arranging the proposal and for carrying a £100 million share of the first £300 million (cash out-turn) of cost overruns in excess of a target construction cost for Section 2, providing overruns were not the consequence of inflation greater than the contractually determined cap of three per cent per annum. The insurers received a £27 million premium for bearing £215 million of overruns for those in the range £300 million to £600 million (cash out-turn) more than the target construction cost.

17 The Department estimated that, under the 2001 Mid Case forecasts for Eurostar UK's passenger revenues, accepting the LCR/Bechtel proposal would increase the 1997 present value of public sector support through the access charge loan facility by £40 million (1997 prices) compared to the case of the Department bearing Section 2 construction risk

Proposal	Forecast of Eurostar UK's passenger revenues	Ownership of Link		Cost of Construction		Access charge loan (£ million, 1997 present value in 1997 prices)
		Section 1	Section 2	Section 1	Section 2	
Railtrack Group does not exercise its option to purchase Section 2 but manages construction of the section and carries some construction risk	2001 Mid Case	Railtrack Group	LCR	Target Cost	Target Cost	220
	2001 Low Case	Railtrack Group	LCR	Target Cost	£300 million overrun	980
LCR/Bechtel proposal	2001 Mid Case	Railtrack Group	LCR	Target Cost	Target Cost	70
	2001 Low Case	Railtrack Group	LCR	Target Cost	£300 million overrun	820
LCR backed by the Department	2001 Mid Case	Railtrack Group	LCR	Target Cost	Target Cost	30
	2001 Low Case	Railtrack Group	LCR	Target Cost	£300 million overrun	820

Source: The Department

NOTE

In putting forward its proposal Railtrack Group sought concessions from the Department that would: (1) increase track access charges for Section 1 in line with the increase that it would have received had it exercised its Section 2 option; and (2) compensate Railtrack Group for likely delays to the start of domestic usage of the Link. The Department estimated that the impact of the concessions added £180 million to the 1997 present value of public sector support through the access charge loan facility. At the time of its analysis, the Department was uncertain whether Railtrack Group would demand similar concessions if the Department went ahead with the LCR/Bechtel proposal.

3.20 Within the 1998 target cost for Section 2 (£2,513 million (1997 prices)), LCR and Rail Link Engineering included a target construction cost for Section 2 that was £2,215 million (1997 prices); a sum their risk analysis predicted had only a 25 per cent chance of being exceeded. This construction target, however, never acquired contractual force. As part of the 2001 Section 2 negotiations, the construction target was increased to £2,714 million (2001 prices). This was a real increase of about £180 million (1997 prices) after allowing for project-related inflation since 1997. This real increase reduced the risk of a cost overrun occurring. Railtrack Group sought a similar increase under its proposal (Figure 16).

3.21 The Department viewed the reward that Bechtel was seeking for arranging the insurance and for increasing its exposure to cost overruns as excessive. The Department was able to negotiate a halving of Bechtel's share of savings below the target cost to 20 per cent, but considered this a small concession.

3.22 The Treasury, however, was, at the time, concerned about the level of railway industry related risk that the Government faced which then included risks associated with Railtrack plc's upgrades of the west and east coast main lines and London Underground Limited's Public Private Partnerships. With these wider risks materialising, the Treasury, therefore, was keen to transfer as much Section 2 construction risk as possible. The Treasury and the Department had concerns that the Department was in a weak negotiating position with Bechtel, but in reviewing the options, the Treasury agreed with the Department that the LCR/Bechtel proposal was likely to represent best overall value for money.

3.23 The Department placed a high value on the increased performance incentives that the LCR/Bechtel proposal imposed on Bechtel and approved LCR's entry into what became known as the Cost Overrun Protection Programme. The programme increased Bechtel's share of over or under-runs against the agreed target. The company benefits financially from any cost saving solutions that it finds and successfully implements **(Figure 18)** that keeps any overrun below £300 million.

The Cost Overrun Protection Programme was successfully underwritten at a difficult time

3.24 When LCR prepared its proposal, its soundings in the insurance market revealed that there was limited appetite for underwriting construction cost overrun risk except at high thresholds of cost overrun. Bechtel and LCR persuaded the market to accept a greater degree of risk by demonstrating that they, as parties involved in managing construction risk, were considerably exposed to the financial consequences of overruns before exposure crystallised against the insurers.

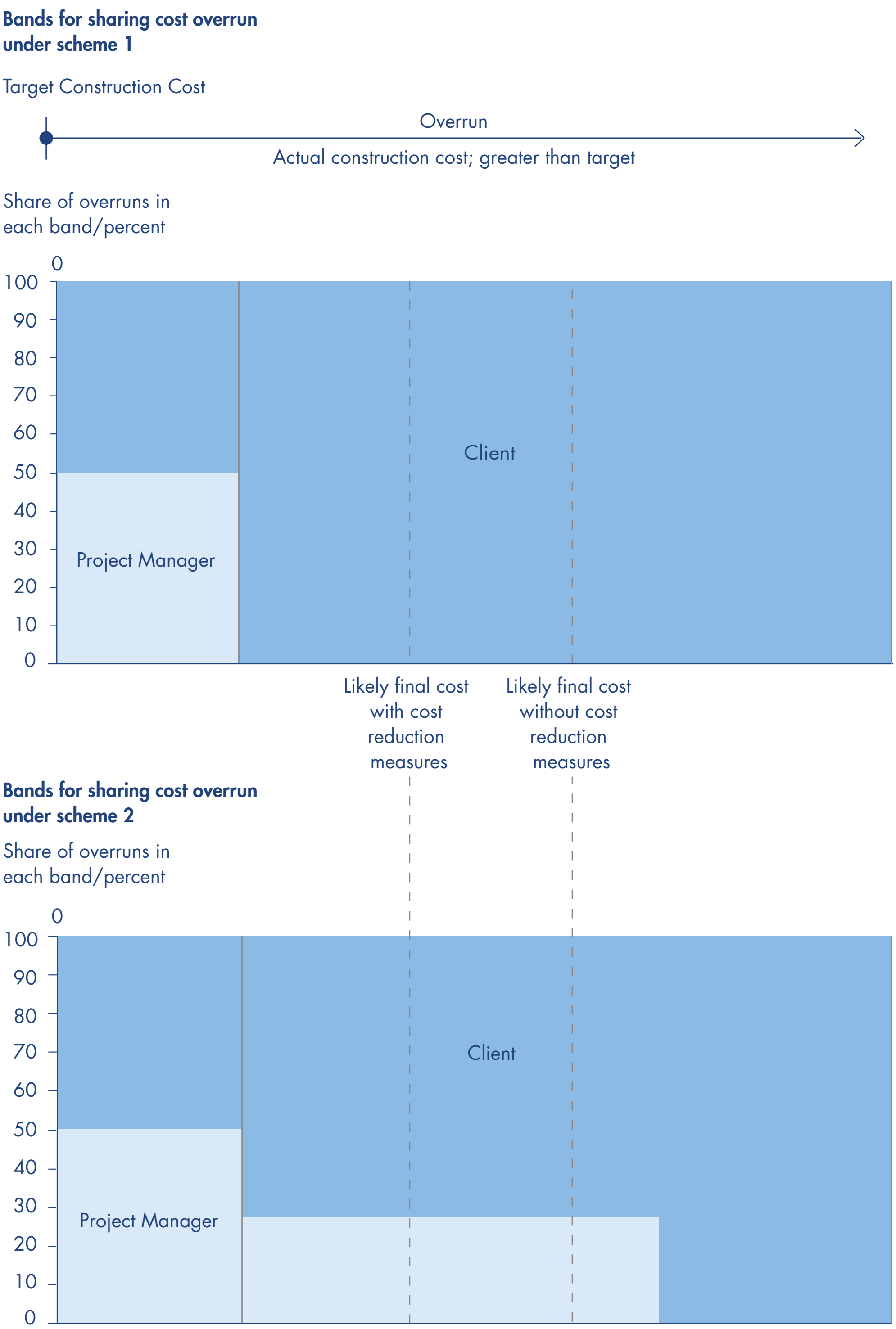
3.25 Bechtel's agreement to increase its risk exposure facilitated the placing of £173 million of the £215 million of top level of overrun risk with insurance underwriters. Bechtel's ability to place the remainder of the programme was very limited after the terrorist events of 11 September 2001. Bechtel, in accordance with its agreement, took the unplaced risk and subsequently placed the remaining £42 million of the insurance programme with underwriters in late 2004.

So far, Section 2 has been delivered to programme but its cost looks likely to increase slightly the call on the access charge loan

3.26 To date, progress of construction activities has met expectations, with key milestones along the route attained as follows:

- all civil engineering works at Ebbsfleet and in the Thames Valley are now complete including the 1km viaduct structure at Thurrock and the installation of piled slab-work across the Rainham Marshes. The route was handed over to the track-work and signalling contractors on schedule. The shell of the new international station at Ebbsfleet is complete;
- all tunnelling along the Section 2 route is complete with over 20km of twin bored tunnels completed on or ahead of programme;
- a 1km long and 50m wide reinforced concrete box housing station platforms has been constructed below ground level at Stratford and the shell of the new international station building is complete;

18 The higher the cap on overrun sharing arrangements, the longer the project manager's interest in finding cost reduction measures is preserved.



NOTES

1 Project Manager will not benefit from finding cost reduction measures and so rationally will not seek them out.

2 Through reducing the quantum of its share of cost overrun, the Project Manager will benefit from finding potential savings and so rationally will seek them out.

- works in the King's Cross Lands are well-advanced. Major bridges across the East Coast Main Line and the Midland Main Line were slid into place on programme;
- the St Pancras Interim Station was opened on schedule in April 2004 allowing works to build a new underground Thameslink station to commence on schedule in September 2004. The scheduled works were completed within the programmed 34-week suspension of the Thameslink service;
- work on the Grade I listed Barlow Shed at St. Pancras is underway. The work has proved to be difficult but solutions to the technical issues have been identified; and
- Trackwork is well advanced and signalling installation has commenced.

3.27 The Department and LCR expect that the final cost of Section 2 will exceed the target cost. LCR attributes most of the increase to the effect of railway-related inflation being greater than that assumed in 2001 at the outset of the Section 2 project. Once inflation is removed, LCR expects that the cost of Section 2 will be within a few percentage points of the target. For the taxpayer, the cost overrun on Section 2 that is not absorbed by the Cost Overrun Protection Programme would, under current arrangements, ultimately flow through to amounts drawn down under the access charge loan facility.

The current range of the call on public sector support through the access charge loan facility is slightly wider than announced in 1998

3.28 As reported in our previous report, the Department, in 1998, estimated that LCR's cash short fall, based on the Government's Central Case forecast would result in lending LCR an amount with a 1997 present value of £140 million (1997 prices), net of repayments and the Government's share of revenue from forecast project related property developments. The 1997 present value of public sector support through the track access charge loan facility increased to £360 million under the Government's Downside Case forecast.

3.29 The Department used Booz Allen Hamilton Limited's 2004 forecasts for Eurostar UK's passenger revenues to revise estimates of the 1997 present values of LCR's draw downs of the loan through to 2051. Under the 2004 Most Likely forecast, the 1997 present value of the loan, less repayments and the Government's property development receipts, is about £260 million **(Figure 19)** on the basis of the current anticipated final cost of the project. This sum increases to just over £390 million (1997 prices) when calculated using the 2004 Low forecasts, but using the 2004 High forecast, the Department estimates that the present value of the Government's receipts exceeds the present value of the loan by about £60 million (1997 prices). LCR expects, in all cases, that it will have repaid the drawn down amounts by 2086 when the concession ends.

19 2004 projections of the 1997 present value of the access charge loan net of repayments and revenue paid to the Government for its share of income from forecast project related property developments

Forecast of Eurostar UK's passenger revenue	Public sector support through the access charge loan facility (£ million, 1997 present value in 1997 prices)[1, 2, 3]	Period of drawings on the access charge loan
2004 High	(60)[5]	2015 – 2028
2004 Most Likely	260[5]	2014 – 2029
2004 Low	390[5]	2013 – 2030

Source: National Audit Office's review of Department for Transport data

NOTES

1 The public sector support through the access charge loan facility is *net* of:

- expected future receipts of payments to the Government from LCR of 35 per cent of pre tax cash flows from the later of, either 2021, or the date when draw downs from the access charge loan facility cease; and
- the Government's share of revenue from forecast project related property developments.

2 The present values of the access charge loan have been calculated from estimated cash flows of the loan, net of repayments and other receipts, for the period to 2051 and discounted at the rate of six per cent real

3 Cash flows beyond 2051 have been ignored

4 The cost of the Link equals to sum of the target costs for the two sections.

5 The 1997 present values of the access charge loan, net of repayments and other receipts, for cash flows to 2051 when discounted at 3½ per cent equates to levels of public sector support that are: £400 million in the 2004 Most Likely case; and £650 million in the 2004 Low case. In the 2004 High case, the public sector receives a net credit, the 1997 present value of which is £260 million.

PART FOUR

The economic justification for the Link remains marginal

The project, one of the largest infrastructure projects in Europe, required considerable investment and even the most optimistic projections indicated that passenger revenues alone would not be sufficient to make the project commercially viable. The Government was prepared to contribute to the project provided the expected overall benefits could be expected to outweigh the Government's financial contribution. This part of the report looks at the Department's value for money assessment and the progress made so far in ensuring that the expected benefits will be realised in full.

The economic justification for the Link depends on wider and unquantified policy benefits

4.1 In 1998, the Department assessed the economic justification for the Link. Using the Government's 1998 Central Case forecasts for passenger volume and revenues, the Department concluded that the benefits exceeded the projected cost to the taxpayer by a ratio of 1.5:1. Our analysis of the Department's assessment, documented in our 2001 report, revealed some errors in the figures and the use of some unconventional methodologies, in particular attaching a monetary value to regeneration benefits, which was contrary to the Department's then guidance. After making adjustments to the Department's figures, our calculations revealed a reduced benefit/cost ratio of 1.1:1.

4.2 Demand for Eurostar services has, since 1998, never met the Government's 1998 Central Case forecasts and, furthermore, has not met the Government's 1998 Downside Case forecasts, which when used to calculate the benefit/cost ratio resulted in a ratio less than 1, even after including regeneration benefits. In our 2001 report, we, therefore, found that justification for the Link was heavily dependent on wider and unquantified policy benefits, such as national prestige, that the project was thought to bring.

The justification for proceeding with Section 2 depends on wider benefits and uncalculated transport benefits

4.3 In 2001, prior to the commencement of the major construction works for Section 2, the Department appraised the benefits and costs relating solely to Section 2. The Department used its appraisal to support its decision to permit the construction of the section to proceed and to accept the LCR/Bechtel proposal for sharing Section 2 cost overruns.

4.4 The Department appraised two scenarios: (i) Eurostar serving both London Waterloo and St Pancras stations; or alternatively (ii) Eurostar serving St Pancras only following the closure of the Eurostar terminal at Waterloo.[19] The Department used Booz Allen Hamilton Limited's 2001 Mid Case and 2001 Low Case passenger number projections in the assessment. It also estimated the monetary value of regeneration benefits associated with Section 2. Acknowledging comments in our previous report that such estimates would always be problematical, the Department produced sets of figures for the benefits with and without regeneration benefits. At the time, the Department's guidance still recommended that a monetary valuation of the impacts of regeneration of local economies should not be included in value for money assessments.[20]

4.5 Using the 2001 Mid Case passenger volume and revenue projections, the international transport benefits of Section 2 alone outweighed the costs, **Figure 20 overleaf**. This analysis was the basis of the Department's support in permitting construction of Section 2 to proceed. However, the Department estimated that costs would exceed benefits on the basis of the 2001 Low Case projections, even after including regeneration benefits.

4.6 Passenger volumes and revenues have subsequently dropped below the 2001 Low Case forecasts. The Department has not recalculated the cost/benefit ratio to determine the effect of lower revenues, but does not expect the impact to be as negative as the 2001 analysis projected. Lower benefits from lower patronage have been offset by the reduction in the additional public sector support through the access charge loan facility largely due to the reduction in LCR's cost of capital. In the Department's judgement, domestic transport benefits, which should emerge in 2009, the year when domestic train services are planned to start using the Link, will exceed the associated costs and improve the economics of the project further.

19 In November 2004, Eurostar Group announced that, following the opening of the refurbished St Pancras Station, Eurostar services into Waterloo would cease.

20 Since 2001 the Department has published detailed guidance on demonstrating the impact of a transport scheme on a Regeneration Area (http://www.dft.gov.uk/stellent/groups/dft_econappr/documents/page/dft_econappr_023708.hcsp). This guidance states that an Economic Impact Report must be prepared if regeneration benefits, in the form of increased employment in a Regeneration Area, are being claimed. The Department has also recently published advice (http://www.dft.gov.uk/stellent/groups/dft_about/documents/page/dft_about_033477.hcsp) on assigning a monetary value to these regeneration benefits to give an idea of the significance of regeneration benefits generated relative to cost. In future, the Department expects monetary valuation of regeneration benefits to be a routine part of transport appraisals.

20 The Department's 2001 Value for Money Assessment of the case for going ahead with Section 2

	Mid case (£ million, 1997 present values in 1997 prices)		**Low case (£ million, 1997 present values in 1997 prices)**	
	St Pancras & Waterloo open	St Pancras open only	St Pancras & Waterloo open	St Pancras open only
Benefits[1]				
International transport benefits (capacity and journey time saving)	1,453	1,527	783	842
Domestic transport benefits	Not available	Not available	Not available	Not available
Regeneration benefits	475	475	450	450
Total estimated benefits (including regeneration benefits)	1,928	2,002	1,233	1,292
Estimated transport benefits only	**1,453**	**1,527**	**783**	**842**
Costs				
Government grants[2]	(1,241)	(1,241)	(1,241)	(1,241)
Estimated additional public sector support (access charge loan)	(70)	(70)	(820)	(820)
Phase 2 of new London Underground ticket hall at Kings Cross (required for Section 2)	(97)	(97)	(97)	(97)
Thameslink 2000 works at St Pancras in the absence of Section 2 (i.e. cost saved by proceeding with Section 2)	194	194	194	194
Project wind-up costs (cancelled contracts, etc) saved by proceeding	43	43	43	43
Sale of Waterloo Eurostar terminal to the Strategic Rail Authority	0	70	0	70
Total costs	**(1,171)**	**(1,101)**	**(1,921)**	**(,1851)**
Benefit cost ratio (excluding regeneration benefits and without an allowance for domestic transport benefits)	**1.24**	**1.39**	**0.41**	**0.45**
Benefit cost ratio (including regeneration benefits but without an allowance for domestic transport benefits)	1.65	1.82	0.64	0.7

Source: Department for Transport Cost Benefit Appraisal of Section 2, 2001

NOTES

1 A full explanation of the methodology used to quantify passenger benefits in financial terms can be found in our previous report, The Channel Tunnel Rail Link, HC 302, Session 2000-2001.

2 The slight differences between the cost of Section 2 related Government grants reported here and in Figure 3 results from minor changes in the calculations of present values between 1998 and 2001.

3 The Mid case was based on Booz Allen Hamilton Limited's 2001 Mid case forecasts for passenger usage and revenues and the cost of Section 2 equalling the target cost.

4 The Low case was based on Booz Allen Hamilton Limited's 2001 Low case forecasts for passenger usage and revenues and the cost of Section 2 exceeding the target cost by £300 million.

There are encouraging developments associated with regeneration

4.7 The justification for Section 2, like that for the whole Link, depends on wider benefits, in particular regeneration benefits. Given this dependency, we examined progress to date.

4.8 The Department expects regeneration benefits to arise in areas through which Section 2 passes, particularly in the Thames Gateway and areas surrounding the three international stations at St Pancras, Stratford and Ebbsfleet. While project-related property developments are in their early stages, there are encouraging developments to indicate that the schemes will go forward.

4.9 LCR formed partnerships with development partners: Chelsfield[21] and Stanhope are initiating a £3,000 million investment programme at Stratford; Argent is undertaking a £2,500 million development at Kings Cross; and Land Securities is investing £3,000 million at Ebbsfleet. LCR estimate that £8,000 million to £9,000 million of additional private sector capital is planned to be invested in developments at Ebbsfleet and on LCR's development lands over the ten to twelve year period following the completion of Section 2.

4.10 As a result of LCR's position as land-owner and developer of the railway project, LCR has developed long-standing and key relationships with local authority planning officials, and other Government agencies and stake-holders. LCR's principal role in its development partnerships has been to use these relationships to facilitate the submission and approval of the development schemes for Stratford and King's Cross which meet the development objectives of the local authorities and other stakeholders as well as the development ambitions of its development partners.

4.11 LCR's Master Planning Application for Stratford City has been approved by Newham Council, the Mayor of London and the Office of the Deputy Prime Minister. Detailed planning applications are being prepared and LCR expects that construction will commence in 2006. In June 2004, LCR submitted the Master Planning Application for the development at King's Cross to the London Boroughs of Camden and Islington for approval. The consultation phase has been completed and negotiations with the Boroughs began in May 2004. In March 2005, the London Borough of Camden gave planning consent for the £150 million redevelopment of the St Pancras Chambers (the former Midland Grand Hotel), a Grade 1 listed building at the St Pancras terminus, which had fallen into disuse since the early 1980s. Given the location of the St Pancras Chambers, at the gateway of the wider King's Cross development, LCR regards development of this site as particularly important and a catalyst for the wider regeneration scheme. Outline consent has been obtained for the development at Ebbsfleet.

4.12 The construction of the Link appears to be bringing about the development on brown-field land that, without the Link, had low, if any value and would have required significant investment in infrastructure to enable development to take place. In the case of the Stratford City and Ebbsfleet developments, the associated regeneration falls within the Thames Gateway, an area high on the Government's priority list for regeneration.

4.13 Regeneration benefits from the developments will bring new local job opportunities. If the developments are profitable, LCR and the Department will benefit financially with a corresponding reduction in the call required under the access charge loan facility. The Department transferred to LCR, the Department's rights to a share of any surplus profit earned by Land Securities from the development of the Ebbsfleet site as part of the original 1996 arrangements. Under the same arrangements, the Department will receive a 50 per cent share of LCR's profit after development costs for both the Stratford and King's Cross schemes.

21 Chelsfield's interests in the partnership have since been acquired by Westfield and Multiplex.

GLOSSARY

Glossary of terms

Basis point	1/100th of 1%. A measure normally used in the statement of interest rates; 100 basis points equals 1%.
Bond	A form of interest bearing security issued by governments, companies and other institutions - usually a form of long-term financing.
Bond issue	A method of borrowing by which debt is raised from a wide variety of individual or institutional investors. Bonds usually carry a fixed coupon payable by the issuer (borrower) to the bondholder (investor) and have a predetermined repayment date.
Cost Overrun Protection Programme	Insurance arrangement implemented by LCR and Bechtel for sharing risk of cost overruns associated with construction of Section 2 of the Link.
Cost Benefit Appraisal	A quantitative assessment of the relative value of the costs and benefits of a project, usually carried out to determine whether proceeding with the project can be justified on the basis that the benefits outweigh the costs.
Debt Management Office	Carries out the Government's debt management policy of minimising financing costs over the long term, taking account of risk, and to manage the aggregate cash needs of the Exchequer in the most cost-effective way, in both cases consistently with the objectives of monetary and wider policy considerations
Discount rate	The percentage rate applied to cash flows to enable comparisons to be made between payments made at different times. The rate quantifies the extent to which a sum of money is worth more today than the same amount in a year's time.
Domestic Capacity Charge (DCC)	Charges paid by the Government to allow domestic train operators access to the Link.
Equity	The value of a company or project after all liabilities have been allowed for. The equity is owned by the shareholders.
Floating interest rate	A rate of interest which varies periodically in accordance with a stated market reference, usually the London Interbank Offered Rate (LIBOR).
Gilts	Government securities traded on the London stock exchange. They are called gilt edged as it is certain that the interest will be paid and they will be redeemed on the due date.
Gilt rate	The rate of interest paid on a government security. The gilt rate is often considered to be the risk free rate of interest because of the certainty that the interest will be paid.
Government Guaranteed Bonds (GGBs)	Bonds issued by a party other than Government but carrying a Government Guarantee to honour the bond in the event of the issuer being unable to do so.

Hedging	Instruments used by the consortium company to manage the risk of variations in future interest rates. In most cases, the company will choose to fix its future interest rate thereby providing it with certainty about what its financing charges will be.
Index linked bond	A bond where the value of the interest payments and principal are linked to an index of inflation.
Interest	An additional amount that a bank charges on a commercial loan over and above its own cost of providing the loan. The margin serves to provide the bank both with a profit and compensation against the risk of not having the loan repaid.
LIBOR	London interbank offered rate. The interest rate at which banks will lend to each other.
Net present value (NPV)	The net present value of the contract price represents the amount that would have to be invested at the start of the contract to fund the expected future cash payments which the department will be required to make to the contractor.
Nominal	Prices expressed in current money terms, i.e. inclusive of the effect of inflation.
Real	Prices expressed in money terms adjusted for the effect of inflation from a previous date.
Securitisation	Issuing bonds through a bankruptcy remote vehicle where the debt service is funded by and secured on the asset of a company e.g. in the case of LCR, its future income stream from track access charges.
Section 1	The section of the Channel Tunnel Rail Link that runs from the Channel Tunnel to Fawkham Junction, via Southfleet in northwest Kent
Section 2	The section of the Channel Tunnel Rail Link that runs from Southfleet to St Pancras station, London
Swap	A financial instrument that can be used to change the basis on which interest is paid on an asset or liability, for instance a floating rate is turned into a fixed rate or vice versa.
Track access charges	Charges paid by train operating companies, in this case Eurostar UK, to the owner of the network, in this case LCR, for rights of access to the network.
Value for money	Achieving the optimum combination of whole life cost and quality to meet customer requirements.

Glossary of Parties

Bechtel Ltd	Shareholder in LCR, a member of Rail Link Engineering and, together with LCR, responsible for arranging the Section 2 Cost Overrun Protection Programme
CTRL (UK) Limited	Formerly Railtrack (UK) Limited and now a wholly owned subsidiary of LCR
Eurostar UK	British arm of the Eurostar international train service
Inter-Capital and Regional Railways Ltd (ICRR)	The consortium appointed operational manager of Eurostar UK as part of the 1998 restructuring of the deal
London & Continental Railways Ltd (LCR)	The consortium that, in 1996, won the contract to build, own and operate the Channel Tunnel Rail Link and to operate Eurostar UK. The consortium currently comprises Bechtel Ltd, SG Securities (UK) Ltd, National Express Group Plc, French Railways Ltd (SNCF), EDF Energy plc, Ove Arup & Partners, Sir William Halcrow & Partners Ltd and Systra
Network Rail	Owner and operator of the domestic rail network following Railtrack plc's exit from administration in October 2002
Network Rail (CTRL)	Part of Network Rail contracted by LCR to maintain and operate the Link
Rail Link Engineering	An unincorporated association comprising Bechtel Ltd, Ove Arup & Partners, Sir William Halcrow & Partners Ltd and Systra. Contracted to design and project manage construction of the Link.
Railtrack Group	Parent company of Railtrack plc and Railtrack (UK) Ltd
Railtrack (UK) Ltd	Subsidiary of Railtrack Group that held Railtrack Group's interest in the Link
Railtrack plc	Subsidiary of Railtrack Group and private sector operator of the UK's domestic rail network until it entered railway administration in October 2001
SNCB	Belgian national rail operator. The company owns and manages the Belgian arm of the Eurostar international train service
SNCF	French national rail operator. The company owns and manages the French arm of the Eurostar international train service
Union Railways	The client company responsible for the planning, design, construction and operation of the Link. Initially Government-owned, Union Railways was privatised and transferred to LCR when the contract was signed in 1996. In 1998, Union Railways was split for contracting purposes into Union Railways (South) and Union Railways (North) responsible for the construction and operation of Section 1 and Section 2 respectively. From 1998 to 2002, Union Railways (South) was under the control of Railtrack (UK) Ltd.

APPENDIX 1

Chronology of Key Events

	Event
1984	French and British Governments awarded Eurotunnel, a private sector Anglo-French consortium, the concession to build and operate the Channel Tunnel between the United Kingdom and France.
1987	The Department identified the need for extra rail capacity in the South East and in particular a new rail link from the Channel Tunnel to London.
1988 – 93	The Department investigated designs, routes and sources of finance for the proposed rail link.
1994	
February	The Department launched a competition inviting interested parties to design, build, finance and operate a new high-speed rail link between the Channel Tunnel and London St Pancras.
June	The Department invited four consortia, including London & Continental Railways (LCR), to submit full proposals.
November	Eurostar international train services began running through the newly opened Channel Tunnel, but on existing UK domestic lines between London Waterloo and the Channel Tunnel.
1996	
February	The Department awarded LCR a contract to build the Channel Tunnel Rail Link (the Link) and run the UK arm of the Eurostar international train service (Eurostar UK). LCR intended to fund construction of the Link from direct Government Grants and from private finance, raised on the back of Eurostar UK's projected revenues.
May	LCR raised initial financing through £430 million bank loans secured against Eurostar UK revenues.
1997	
	Actual growth in Eurostar UK revenues for 1996-97 was lower than expected, new 1997-98 projections lower than forecast.
September	LCR entered into discussions with the Department after determining that Eurostar UK may lose £750 million more in the medium-term than forecast. The scale of the expected loss put raising further financing from private investors beyond LCR's reach.
1998	
January	LCR requested an additional £1,200 million of direct Government Grants. The Department rejected LCR's request but allowed negotiations to continue.
June	The Deputy Prime Minister announced that the Department, LCR and Railtrack Group had signed a Statement of Principles for restructuring the project. Main elements of the restructuring included: ■ splitting construction of the Link into two sections: Section 1 from the Channel Tunnel to Ebbsfleet and; Section 2 from Ebbsfleet to St Pancras; ■ bringing Railtrack Group (operator of the UK domestic network) in to manage the construction and, when complete, to purchase Section 1. Railtrack Group was also granted an option to share Section 2 construction risk; and ■ not increasing Government Grants but making financing of the Link no longer dependent on Eurostar UK's performance. Further financing included commercial bank borrowing guaranteed by Railtrack Group and an issue of Government Guaranteed Bonds.
October	Construction of Section 1 of the Link began.

	Event
1999	
February	As planned under the 1998 restructuring, LCR raised finance to fund construction of Section 1 through an issue of £2,650 million Government Guaranteed Bonds.
2000	
October	Railtrack Group suffered from financial difficulties following the aftermath of the Hatfield rail accident.
December	LCR and the Department wanted construction of Section 2 to begin in 2001, as per LCR's programme. Railtrack Group submitted a proposal for exercising its option (agreed as part of the 1998 restructuring) to share Section 2 construction risk. The Department rejected the proposal as too expensive.
2001	
January	LCR and Bechtel offered the Department an alternative proposal for sharing construction risk on Section 2. While the Department found this proposal unacceptable, it formed the basis of a potential way forward.
April	The Department accepted the LCR/Bechtel proposal following negotiations. LCR would remain the owner of Section 2 once it is complete. Railtrack would not be involved in the construction of Section 2.
July	Construction began on Section 2.
October	As a result of continuing financial difficulties, Railtrack plc entered railway administration and subsequently exited the railways business.
2002	
June	As planned under the 1998 restructuring, LCR, through an issue of £1,100 million of Government Guaranteed Bonds, raised further finance to fund construction of Section 2.
	LCR purchased Railtrack's interest in Section 1 for £375 million following trilateral negotiations with the Department. LCR would now own both Section 1 and Section 2.
2003	
September	Section 1 opened on time and within budget; operational performance exceeds expectations.
November	LCR raised approximately £1,250 million in the bond markets to fund construction of Section 2.
2005	
To date	Construction of Section 2 is progressing to timetable: tunnelling works are complete; tracklaying is underway and; work is ongoing at the new St Pancras international terminal.

APPENDIX 2

Scope and Methodology

Study Scope

1 We examined progress with the Channel Tunnel Rail Link project, including: construction and operation of the Link; and the operation of Eurostar UK Limited, the British portion of the Eurostar train service. The objective was to assess how changes to the deal since 2001, when we published our first report about the project, have affected the value for money of the deal and altered the taxpayer's interests in it.

2 We used the Issue Analysis/Dinner Party, IADP™, approach first to design the scope of the examination and to determine the nature of the evidence required. Using this methodology, we set a series of high-level audit questions that we considered necessary to answer in order to assess whether or not the project remained worthwhile for the taxpayer. Following work to collect evidence we brought the audit questions together into the following groupings:

- **Have major risks to the taxpayer been successfully managed?**
  - Is the funding of the project being well managed?
  - Is construction of the Link likely to be successful?
  - Is the operation of Section 1 meeting expectations?
- **Is appropriate action being taken to minimise the risk to the taxpayer from Eurostar?**
- **Do the projected benefits of the CTRL project justify the costs?**

Study methodology

3 We collected evidence from a variety of sources to enable us to answer the questions set out above. We found that the Department's management team which had been in post during our investigations for our previous report (published in 2001) had moved on. The Department's internal knowledge of the project and the backgrounds to key decisions had inevitably been reduced and while we were able to obtain the information we required, this was sometimes not without difficulty. The information sources included:

- An extensive review of documentation held by the Department. In particular we examined correspondence, minutes, reports and internal papers relating to the financing of Section 2 of the Link, construction progress with Section 1, the negotiation of the Cost Overrun Protection Programme for Section 2, management and performance of Eurostar UK and the Cost Benefit Appraisal of Section 2. This review allowed us to understand the factors the Department took into account when making decisions, how elements of the deal were negotiated, and how the Department monitored progress and risks;
- Semi-structured interviews with key members of staff within the Department and its financial, legal and technical advisers. We also conducted semi-structured interviews with personnel at LCR, Union Railways (both construction and operations activities), Rail Link Engineering, Network Rail (CTRL) Limited and Eurostar UK. **Figure 21 overleaf** gives further details about the interviews;

21 Who we interviewed

Interviewees	Issues examined
Department for Transport and its advisers	
The Department's project team	All aspects of the project
The Department's Rail economists	Cost Benefit Appraisal
Citigroup (financial advisers)	Financing of Section 2, Cost Overrun Protection Programme, Projected public sector support through the access charge loan facility
Mott Parsons Gibb (technical advisers)	Construction of Sections 1 and 2
Cameron McKenna (legal advisers)	Cost Overrun Protection Programme
London & Continental Railways, its subsidiaries and other key parties involved in: the construction of the Link; its operation; and the operation of Eurostar services.	
LCR's Management Board	Construction, operation of Section 1, financing, Eurostar performance
Union Railways	Construction of Sections 1 and 2, operation of Section 1
Rail Link Engineering	Construction of Sections 1 and 2, health and safety
Network Rail (CTRL) Ltd	Operation of Section 1
Eurostar UK and ICRR	Eurostar operations
Third parties	
Health & Safety Executive Constuction Division	Health and safety
Kent County Council	Parliamentary undertakings, community relations
Complaints Commissioner	Parliamentary undertakings, community relations

- Validation of the Department's Cost Benefit Appraisal for Section 2. We examined the assumptions made, and the inputs and methodologies used by the Department; and
- An investigation of the project's funding structure by RBC Capital Markets. We commissioned RBC Capital Markets to examine whether the funding structure is optimal, whether the funding was achieved at prices consistent with those available in the market and whether LCR had invested the proceeds of bond issues prudently. Further details of RBC Capital Markets' approach to the assignment are at Appendix 3.

APPENDIX 3

Evaluation of financing of London & Continental Railways by RBC Capital Markets

1 We appointed RBC Capital Markets (a part of the Royal Bank of Canada Group) to review key areas of LCR's financing of its obligations to build the Link and fund the operation of Eurostar train services. We set the following questions:

- Is the current funding structure, involving a combination of bank and bond financing of varying maturity, optimal?
- Was the funding achieved at prices consistent with the market price for the relevant degree of risk taken?

2 In preparing its responses, RBC Capital Markets reviewed material held by the Department and made specific enquiries of LCR, the Debt Management Office and Citigroup, the Department's advisers. Information specific to the Section 2 financing transactions (issue of the 2002 Government Guaranteed Bonds; the 2003 bond issues for the securitisation of track access charges and the associated interest rate swaps transactions; and the 2003 bank facilities) was examined to gain an understanding of:

- the decision making process of the Department;
- the details of the selected funding route; and
- the execution process.

3 RBC Capital Markets drew on its knowledge of the capital markets, market conditions at the time of the various debt issues, interest rate management and methods of placing debt in the market to assess, as best it could, the efficiency of the financing and whether best practice was followed. Wherever possible, RBC Capital Markets tested its own experience and views against publicly available information.

Overall conclusions

4 RBC Capital Markets concluded that:

- LCR put in place an appropriate capital structure in light of the nature of its cash flows and risk appetite;
- The bonds and loans put in place to fund Section 2 of the Link were negotiated and processed in an efficient and effective manner, taking into account the options realistically available to LCR; and
- The cost of funds (measured in terms of the interest rate margins achieved) can be justified in light of the complex structure and other constraints (particularly timetable constraints in relation to the possible issuance of a 49 year Gilt instead of GGBs).

Detailed summary of RBC Capital Markets' main findings and conclusions

5 RBC Capital Markets produced a full report of its evidence and findings. This is not reproduced here; rather this summary, produced by the National Audit Office, presents RBC Capital Markets' main conclusions and responses to the questions we set at the outset of the assignment.

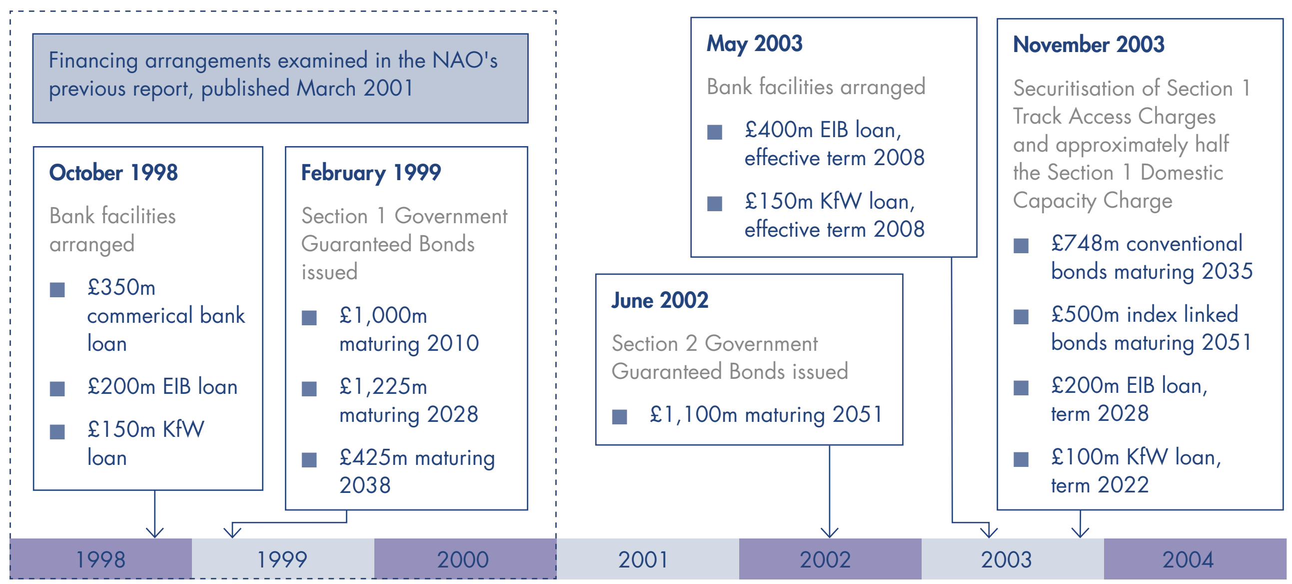
The structure of the LCR's debt financing is appropriate

6 By the end of 2003, LCR had secured all the finance that it considered it would require to complete construction of the Link, operate and maintain Section 1 and fund Eurostar UK losses in the medium term. The financing in place, as shown in **Figure 22**, currently comprises £900 million of medium-term bank facilities and just under £5,300 million of longer dated debt maturing in 2010, 2022, 2028, 2035, 2038 and 2051.

7 The track access charges paid by Eurostar UK and domestic train operators are predictable, long-term and back ended. Given these long term cashflows, raising long-term debt on the back of them is likely to be the most efficient form of funding. Furthermore, future financing pressures on LCR are eased by the spread of maturities for the GGBs and amortising the principal for the bonds secured against Eurostar UK's payment of track access charges.

8 In principle, LCR could have raised all of the 2002/03 financing through bond issues. However, long-term debt is innately inflexible and therefore short-term fluxes in any business may be better funded by alternative facilities. LCR recognised that to avoid a funding shortfall some short-term facilities to cover the peak of Section 2 construction expenditure in 2003/04 were required until it received the first instalments of the Deferred Grant in 2005/06. The European Investment Bank (EIB) (£400m) and KfW (£150m) debt arranged in May 2003 introduces an element of revolving (in the case of the KfW debt), flexible, short term debt, which is an important part of the overall funding structure. Furthermore, the £200 million EIB debt raised through the 2003 securitisation was cheaper than bonds at that time. The banks and borrower have a bi-lateral relationship, making bank terms easier to negotiate than bond finance.

22 Between 1998 and the end of 2003, LCR had raised nearly £6,250 million of debt in the capital markets to fund: construction of the Link; operation and maintenance of Section 1; and Eurostar UK's concurrent losses



Source: National Audit Office

NOTES

1 EIB is the European Investment Bank. KfW is Kreditanstalt für Wiederaufbau, a German development bank.

2 The last repayment instalment of the £350 million October 1998 commercial facility is due in the quarter ending December 2005.

3 LCR has repaid £50 million of the October 1998 KfW loan facility. The remaining £100 million of the October 1998 KfW loan facility and the £200 million, October 1998 EIB loan facility were rolled over in 2003 and secured against Eurostar UK's payment of the Section 1 Track Access Charges and the Department's payment of the Section 1 Domestic Capacity Charge.

9 Refinancing Section 1 through the bank debt market may not have been possible and, even if it were, would not have been optimal. Lower pricing and longer maturities were achieved for the bond financing relative to what might have been available in the loan market. Although the draw-down profiles and repayment terms would be much more flexible in the bank market, the length of term (out to 50 years) required by the project is not currently available in the loan market in material volume.

Interest rates for almost all of the debt were consistent with the market prices given the relevant degree of risk to be taken

10 RBC Capital Markets examined the availability and cost of funds in the financial markets in 2002 and 2003 and compared its findings with the terms achieved by LCR **(Figure 23)**. RBC Capital Markets concluded that the interest paid on both the GGBs and the bonds secured against Eurostar UK's payment of track access charges was in line with the prevailing market prices.

Debt raised through the GGB's was competitively priced

11 In advance of the issue of the tranche of GGBs in 2002, the banks arranging the issue for LCR opened an order book for the bond. While the GGBs would have a 50-year maturity, the basis of their pricing was the yield[22] demanded, by the capital markets at the time of sale, for an existing 30-year benchmark gilt, maturing in 2032 and for which the Government paid interest at 4.5 per cent plus a credit margin. LCR, through its arranging banks, invited investors to place provisional orders for the GGBs at different prices, which if fixed at the time of its sale, would offer them a return of between 0.40 and 0.45 per cent above the yield rate demanded by the market for the benchmark gilt. Provisional orders came from over 100 investors, with demand exceeding supply by over a factor of four. LCR repeated the exercise, but this time reduced the margin over the benchmark gilt to 0.32 per cent. The number of interested investors fell to 63 and their combined provisional orders exceeded supply by a factor of about 2.5. At this point LCR closed the book and proceeded with the sale. RBC Capital Markets expressed the view that it was possible that LCR was advised that it would have been at risk of losing a large number of potential investors had it tried to reduce the margin further.

23 Cost of financing raised since the 2001 NAO report

Debt	Amount (£ million)	Term	Pricing[1]
Government Guaranteed Bonds 5.1% priced 25 June 2002	1,100	2051	Gilts + 0.32%
Bank facilities			
■ European Investment Bank loan priced 30 June 2003	400	2008	Maximum LIBOR + 0.13%
■ KfW bank loan priced 30 June 2003	150	2008	LIBOR + 0.275%
Securitisation of track access charges			
■ Conventional bonds 5.234% priced 4 November 2003	748	2035	Gilts + 0.24%
■ Index linked bonds 2.334% priced 4 November 2003	500	2051	Gilts + 0.21%
■ European Investment Bank loan priced 4 November 2003	200	2028	LIBOR – 0.15%
■ KfW bank loan priced 4 November 2003	100	2022	LIBOR + 0.15%

Source: National Audit Office based on RBC Capital Markets' review

NOTE

1 The price of the financing is the interest rate compared to an appropriate benchmark. Bond prices are shown versus the Gilt rate, the rate of interest paid on a Government security. This is an appropriate benchmark because the Gilt rate is often considered to be the risk free rate of interest because of the certainty that the interest will be paid. The interest rate on bank loans is shown versus the London Interbank Offered Rate (LIBOR). This is the interest rate at which banks will lend to each other.

22 Yield of Bonds - The rate of return an investor earns on a Gilt or bond, which takes into account the price the investor pays, the gross coupons payable, its maturity and the redemption amount is known as the gross redemption yield (GRY).
The price of the Gilt or bond is a function of the GRY. It is the sum of the present value of all the future cashflows, discounted at the GRY. Therefore, when the GRY goes up, the price goes down and vice versa.

12 Concurrent with the investigation of market interest, LCR embarked on a market management exercise. The aim was to preserve an orderly market and avoid erratic movements in the price of the benchmark gilt which can happen as a result of investors selling gilts and other comparable financial instruments in order to buy the new GGBs. Since market price of a bond and its yield are inversely related, a drop in price of the benchmark gilt increases its yield which in turn increases the interest rate that LCR would have to pay. To counter the risk, LCR, in advance of the GGB issue, sold £700 million of the benchmark and comparable gilts that it did not have, with a promise to supply these to the purchasers at, what was then, a future date. LCR was therefore a ready buyer of gilts when the GGB issue was sold. RBC Capital Markets reported that LCR's market management exercise seemed to have been successful. At the time of the GGB issue, the yield of the benchmark gilt stayed within reasonable bounds of its then current trend and it did not trade out of line with other long dated gilts **(Figure 24)**.

13 When LCR sold the GGBs, the market price for the benchmark gilt equated to a yield of 4.78 per cent. The interest rate on the GGBs is therefore 5.1 per cent of the face value of the bonds, the increase equalling the margin of 0.32 per cent agreed during the building of the order book. In the four months following the issue, the GGBs, in comparison to the benchmark gilt, traded close to the margin set in the book building exercise **(Figure 25)**. This suggests that the market did not consider that the GGBs had been mis-priced.

Debt raised through the bond issues in 2003 was also competitively priced

14 In November 2003, a little over a month after the opening of Section 1, LCR raised nearly £1,550 million of debt secured against payments of track access charges from Eurostar UK and the Government's payment of the Domestic Capacity Charge. The debt comprised bank debt, an issue of fixed interest bonds and an issue of index linked bonds.

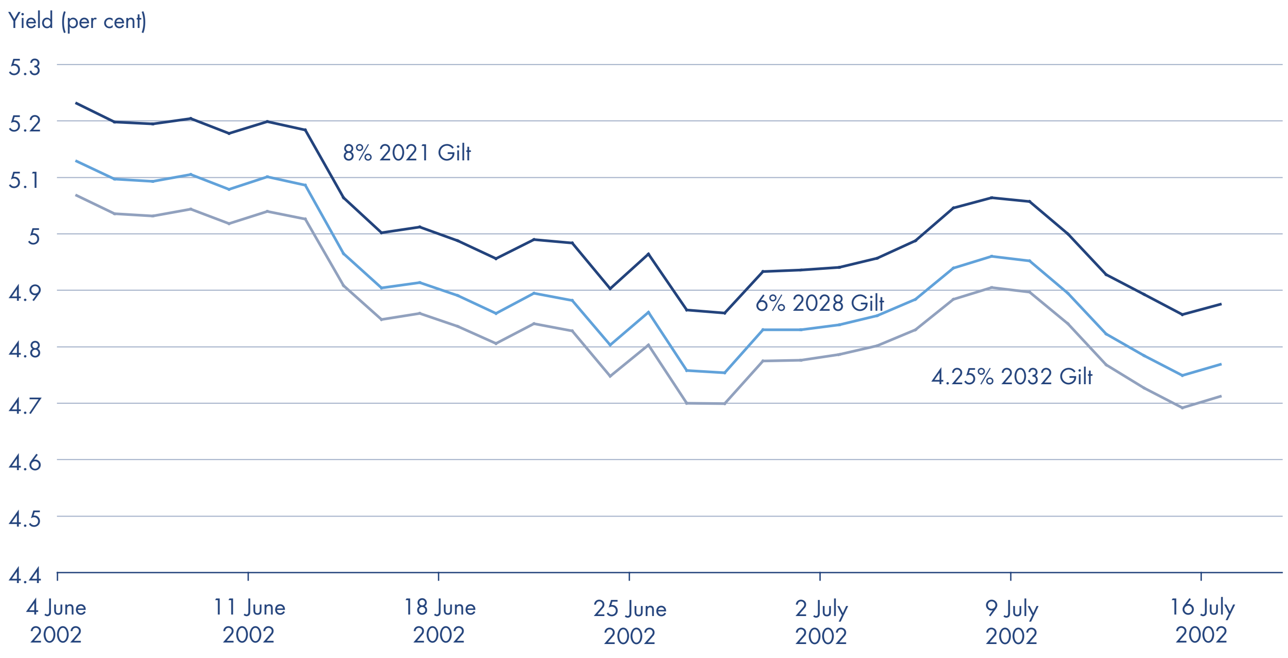
15 LCR marketed the two bond issues more actively than it had the 2002 issue of GGBs because investors were not familiar with the structure and credit basis of the proposed issues. Similarly to the 2002 issue of GGBs, LCR took provisional orders from investors. Demand for the index linked bond was so strong that the margin (over the benchmark gilt) was so competitive that LCR increased the size of the issue. LCR placed the index linked bonds and the fixed rate interest bonds in the market with margins of 0.21 per cent and 0.24 per cent above their respective gilt benchmarks. RBC Capital Markets considered these margins competitive compared to the concurrent margins demanded by the market in secondary trading of similar issues such as bonds issued by the European Investment Bank.

16 LCR's preparations in advance of securing the bond and bank debt in 2003 was more complex than the market management run prior to the launch of the 2002 issue of GGBs. To take advantage of the low cost of debt in June 2003, LCR entered into a number of financial transactions known as swaps[23], which the company used to hedge against adverse movements in interest rates in the period through to the conclusion of the debt arrangements. The value of LCR's swaps was £1,666 million, which it spread over a portfolio of swaps with seven different maturities ranging from 10 years to 40 years.

17 Shortly before LCR went to market to raise the debt it unwound the swaps by taking an opposite position, in other words agreeing to pay a floating rate and to receive a fixed rate. As it happened, during the period of the hedge, interest rates increased and, consequently, LCR saved approximately £60 million. However, had interest rates fallen LCR would not have benefited from the lower cost of funds. The aim of a hedge is to lock in an element of the cost of financing to gain a greater degree of certainty over affordability rather than speculate on interest rate movements.

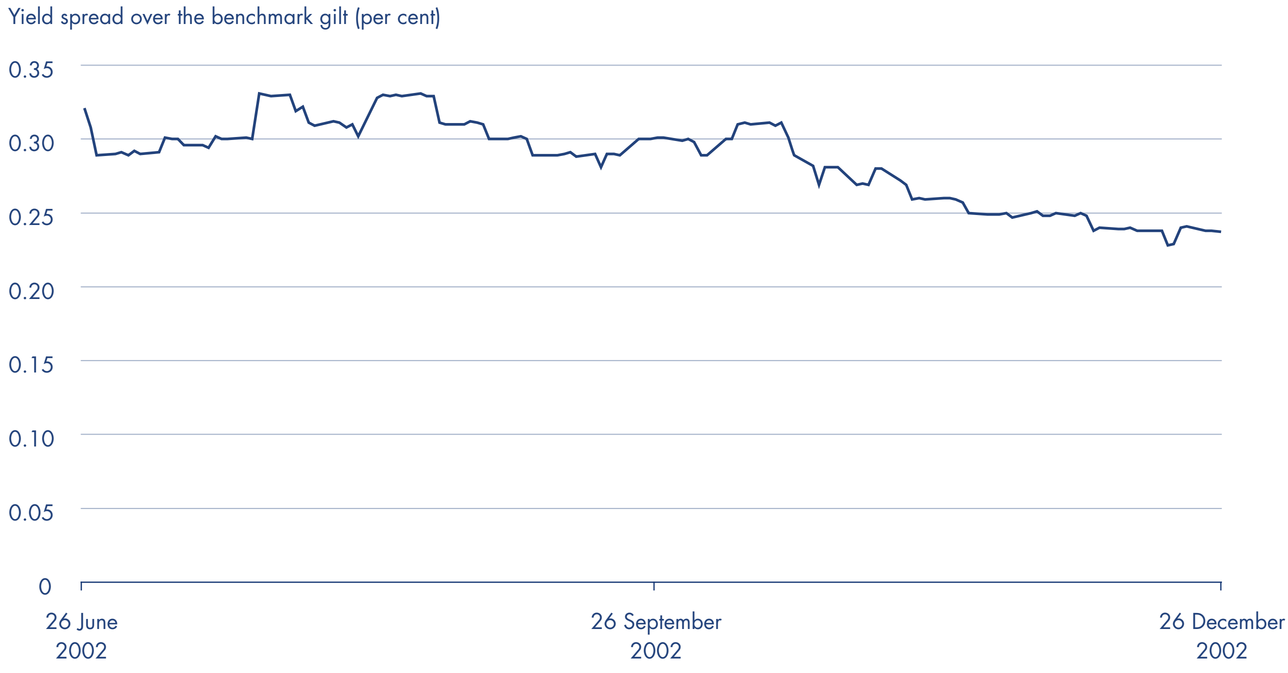
23 A swap is a financial instrument that can be used to change the basis on which interest is paid on an asset or liability, for instance a floating rate is turned into a fixed rate or vice versa.

24 When the GGBs were sold on 25 June 2002, the yield of the benchmark gilt (4.25 2032Gilt) stayed within the bounds of its current trend and did not trade out of line with other long dated gilts



Source: RBC Capital Markets

25 For nearly four months after their issue, the 2002 GGBs traded close to the margin set in the book building exercise



Source: RBC Capital Markets

18 As LCR unwound its swaps, it commenced a market management exercise similar to that it had executed in advance of the sale of the GGBs. RBC Capital Markets reported that the yields of the benchmark gilts remained within the reasonable bounds of their trends, indicating that LCR's market management was successful. The interest rates that LCR pays for the debt is 5.234 per cent under the fixed rate bonds and 2.334 per cent plus RPI[24] for the index linked bonds.

19 The Government guaranteed LCR's obligations under the hedging arrangements, as LCR did not have the resources to set aside sufficient cash to meet potential payments under the swaps. Although LCR was first in line for any risk associated with interest rate movements, ultimately the Government and the taxpayer would have had to bear the impact of the adverse consequences to LCR's cashflows. LCR was responsible for the hedging exercise but the Department monitored the transactions to protect its position.

20 The Department's financial advisers, Citigroup, monitored transactions for the longer dated swaps to ensure that the prices offered were good value. However, it wanted to compete for some of the shorter dated swaps business and so stepped down from its monitoring role to avoid conflicts of interest. The Department accepted Citigroup's reduced monitoring role because the shorter-dated swaps market is competitive and, therefore, the role for independent monitoring was less important. RBC Capital Markets found that effective processes were in place for ensuring that the pricing for the swaps transactions was in line with the market.

Most of the bank debt is competitively priced

21 The bank financing for Section 2 was all provided by either the European Investment Bank (EIB) or KfW. EIB is the financing institution of the European Union and its task is to 'contribute towards the integration, balanced development and economic and social cohesion of Member Countries'. It is a non-profit making bank and its pricing is generally close to cost of funds. RBC Capital Markets concluded that the EIB debt is highly competitively priced and could not have been funded more cheaply through any other bank.

22 In contrast, some of the KfW debt, especially the short dated debt, does not seem to be as competitively priced and it may have been possible to have achieved cheaper financing from the commercial bank market. RBC Capital markets recommends that future projects planning to use the KfW 'daughter' bank (KfW IPEX Bank) which prices loans on a commercial rather than policy driven basis, consider competing the loan pricing by approaching commercial banks as well. However, the additional presence of KfW as a lender may give other lenders confidence in the robustness of the project and therefore borrowers may consider the relevant premium a worthwhile cost.

24 RPI is the UK All Items Retail Price Index published by the Office for National Statistics as a measure of UK inflation.

There are opportunities for refinancing in the near future

23 The £400 million EIB and £150 million KfW facilities arranged in May 2003 and effectively maturing in 2008, are expected to be refinanced and converted into longer term lending. By 2007, Section 2 construction should be complete and this would allow for another securitisation of track access charges and domestic capacity charges. If this were structured on a similar basis to the Section 1 securitisation, it could include rolling the EIB and KfW facilities into the securitisation and extending their term.

24 The commercial bank debt would also be fairly straightforward to refinance because, as a revolving facility, it can be repaid at any time. In cost terms it would seem the most appropriate debt to refinance because it is the most expensive facility LCR has at LIBOR + 55 basis points during 2004 and 2005. However, as a flexible revolving facility, it could prove very valuable to LCR over the next two years when LCR will be funding the bulk of construction of Section 2. Any future refinancing should be carefully considered in its effect on the total funding structure and whether the refinancing would maintain an appropriate balance of flexible short term facilities and long term debt matched to predictable future cash flows.

LCR's transaction costs were reasonable, even for the business placed non-competitively

25 LCR competed contracts for the shorter-dated swaps. For the longer-dated swaps it was decided to appoint one bank without competition because LCR considered the market was less liquid for ultra long dated swaps. LCR was concerned that, had it approached a number of banks to bid for the long dated swaps, it would run the risk of the banks using the knowledge they had gained to take a position in anticipation of the transaction and that this would adversely affect the swap rates available to LCR. Despite this lack of competition, RBC Capital Markets' view is that LCR had reasonably effective processes in place to achieve pricing in line with the market and limit the extent of the swaps banks' profits. RBC Capital Markets considers liquidity often changes and so departments and others considering similar arrangements should investigate market liquidity thoroughly before electing to place any swaps business without a competition.

26 The commission paid to the Lead Managers for the GGB issue was competitive, with fees considerably lower than quoted for comparable deals in the market at the same time. The commission paid to the Lead Managers for the securitisation was in line with the securitisation market at the time.