House of Commons

Committee of Public Accounts

Estimating and monitoring the costs of building roads in England

Fifty-eighth Report of Session 2006–07

Report, together with formal minutes, oral and written evidence

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The Committee of Public Accounts

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The Reports and evidence of the Committee are published by The Stationery Office by Order of the House. All publications of the Committee (including press notices) are on the Internet at http://www.parliament.uk/pac. A list of Reports of the Committee in the present Session is at the back of this volume.

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Contents

Summary

The Department for Transport (the Department), the Highways Agency (the Agency) and local authorities have considerable experience of road building, but the Agency and Local Authorities have a poor track record in estimating the costs of road schemes. By September 2006, the Agency's 36 completed schemes in the Targeted Programme of Improvement cost 40% more than estimated initially. For schemes still to be completed, while the latest ministerially approved estimates are 5% more than the initial estimates made when the scheme was approved, the latest forecasts indicate that final costs could be 27% more than those original estimates. Local authority schemes undertaken within Local Transport Plans fared little better, with the 20 completed schemes costing 18% more than estimated and approved estimates for current schemes 11% more, with latest forecasts for final costs 31% above original estimates.

Estimates are prepared at an early stage, often when there is considerable uncertainty, for example on the line of the route, and before risks are fully identified, making preparation of a robust estimate difficult. The Agency should however, have a wealth of data and experience from completed schemes to inform and improve the reliability of estimates. The Department and the Agency have not until recently collected or analysed data on cost increases and delays for schemes or aggregated them to identify the main trends or reasons for cost overruns. Work by the National Audit Office and others identified the main causes for costs exceeding estimates as increases in construction cost, higher than forecast land prices and compensation to landowners, inflation and changes in the scope of the project. The Department and the Agency had not monitored emerging market trends closely, relying instead on inaccurate historical data on construction costs. The Agency had also made slow progress in comparing its costs both internally and against others, and on developing unit standard costs.

The Department has not been rigorous enough in its oversight of the Agency's delivery of major road schemes, allowing it too much latitude on delivery and cost plans. The Department has not monitored in-year expenditure against progress and delivery milestones. Agency schemes slipped from one year to the next and some regional and local schemes had been deferred on the basis of prioritisation at regional level. The Agency is overly reliant on consultants for project management expertise and needs to develop its in-house capability so that it can be an intelligent customer of contractors and consultants and to negotiate and manage the Early Contractor Involvement schemes. The Agency faces a particular challenge over the next five years, with some of its most experienced staff due for retirement at the same time as the larger and more complex road schemes come on stream.

On the basis of a report by the Comptroller and Auditor General,[1] the Committee examined the steps taken by the Department for Transport and the Highways Agency to improve value for money and oversight of the roads programme and contracting methods and project management capability.

1 C&AG's Report, *Estimating and monitoring the costs of building roads in England*, HC (2006–07) 321

Conclusions and recommendations

1. **Since the dawn of civilisation, governments have been constructing roads, yet the Agency has yet to master the estimation of scheme costs, and lives within its budget by allowing schemes to slip sometimes years into the future.** Over a quarter of the Agency schemes due to start construction by the end of 2005–06 had not done so. The A46 Newark to Widmerpool Improvement has been delayed until 2012–13. As sponsor of the Programmes, the Department should:

   - hold the Agency to account for delivery to time, cost and quality through rigorous assessment of progress against milestones and forecasts; and

   - investigate the reasons for variations between actual costs and original estimates in local authority schemes and use this information to challenge future forecasts made by local authorities.

2. **The road schemes now being developed are generally bigger and more complex than those already delivered under the Targeted Programme of Improvement since its inception in 1998.** With a poor track record for estimating the likely cost and comparatively little recent experience of delivering larger, more complex road schemes, the Agency needs to strengthen its estimating, project appraisal, project and contract management and post project evaluation techniques as a matter of urgency, looking for example at the techniques used by NetworkRail during the modernisation of the West Coast Main Line.

3. **The current measures of scheme progress monitor whether key events have taken place, but do not take account of the resources used to achieve them, making it difficult to judge whether enough progress has been made for the money spent.** The Agency needs to set targets for schemes related to elapsed time, delivery date and expenditure and measure progress against them.

4. **Regional prioritisation of road schemes can mean that neither small low cost local schemes nor schemes of national importance are given appropriate priority**. It would be more appropriate for:

   - large schemes of major strategic significance, which would otherwise absorb the majority of the regional budget, to belong in the national, rather than the regional, roads Programme; and

   - specific funds to be made available for small schemes to meet local problems, which would otherwise be delayed indefinitely in favour of wider regional schemes.

5. **The Department and the Agency have not kept abreast of emerging trends in the construction market, having relied on inaccurate historical data.** To improve the quality and accuracy of their estimates, the Department and the Agency should analyse forecasts for the costs of construction material, and labour quarterly, and in the light of this analysis develop strategies for keeping costs down for example by using different procurement methods.

6. **The Agency has yet to collect sufficient data to compare performance in terms of scheme costs and delivery time across different projects.** The Agency should be more proactive in seeking comparisons internationally and with other major construction projects, for example the Channel Tunnel Rail Link and other organisations that undertake large procurements like the Ministry of Defence.

7. **The Agency has made slow progress in identifying the unit costs associated with building roads, for example the costs of structures such as roundabouts and bridges.** Earlier this year, this Committee took evidence from Network Rail on the extent to which unit cost information has helped drive down the cost to the taxpayer of upgrading the West Coast Main Line.[2] The Agency should build a database of unit costs for new roads, road widening and major maintenance schemes.

8. **The Agency has yet to evaluate Early Contractor Involvement contracts, which involve contractors in projects at an early stage to reduce costs and increase accountability.** The Agency should commission an assessment of the effectiveness of Early Contractor Involvement contracts and publish the findings.

9. **Reliance on consultants to challenge the estimates and costs proposed by contractors can lead to conflicts of interest as consultants often work for main contractors on other schemes, inhibiting disclosure of information to potential competitors.** The Agency needs to recruit and retain staff with the commercial skills and experience to challenge costs and negotiate target prices which offer value for money, and to plan now for future staff changes such as retirement. The Department needs to have staff who can act as intelligent customers of the consultants advising them on the reasonableness of estimates and requests for increased funding in Local Authority schemes.

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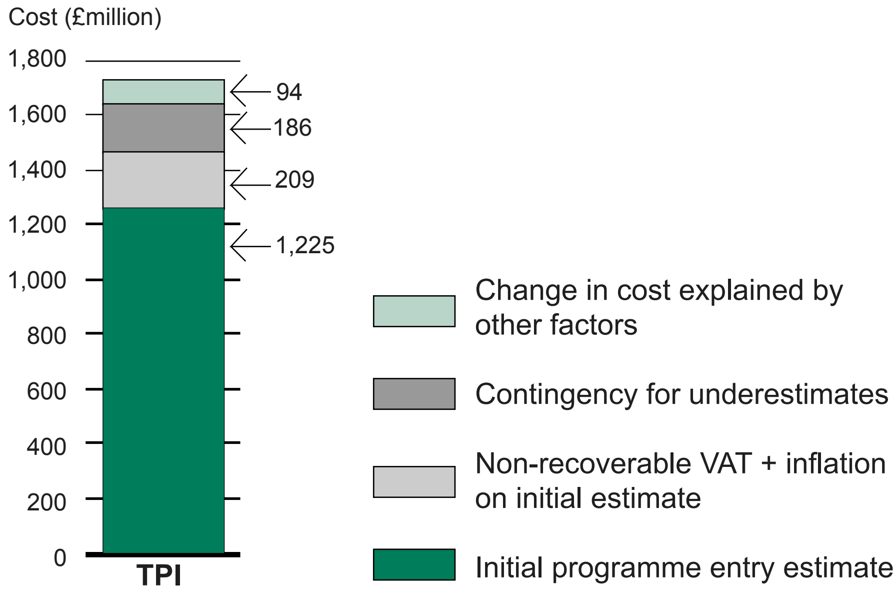
2 Committee of Public Accounts, Thirtieth Report of Session 2006–07, *The Modernisation of the West Coast Main Line*, HC 189

1 Improving value for money

1. Notwithstanding their considerable experience of delivering the construction of roads, the Agency's track record is poor, with schemes costing considerably more than estimated and delivered later than planned. The Agency's 36 completed schemes under the Targeted Programme of Improvements cost some 40% more than the initial estimates. Even when a contingency margin was added to compensate for underestimation, and to allow for inflation and for non-recoverable VAT, costs were still 6% more than estimated (**Figure 1**).[3] For the 67 Agency schemes still under development, estimates had increased by 27% from the initial estimates of £8,952 million[4] to £11,410 million in July 2006. The Department's handling of risk and uncertainty may not be robust enough for future schemes which are bigger and more challenging than those completed to date.

2. The National Audit Office found that the two main reasons why schemes cost more than estimated were increases in the cost of construction work (nearly 50% of total cost increases) and higher than forecast land prices and compensation to landowners (more than 25% of total cost increases).[5] Consultants engaged by the Agency found inflation accounted for 45% of the variation between initial estimates and actual and forecast costs. Changes in the scope of the project and weaknesses in estimates were the other main causes of cost increases.[6]

Figure 1: Factors accounting for scheme cost increases



Source: National Audit Office analysis of Highways Agency data

3 C&AG's Report para 2.3

4 Adjusted for inflation, VAT and a contingency provision to correct underestimation (C&AG's Report, para 1.5 refers)

5 Based on an examination of 13 schemes (seven from the Programme and six Local Transport Plan schemes), reviews of the results of exercises the Agency and its consultants had undertaken of schemes in the current Programme, and information from stakeholders (C&AG's Report, para 2.1 refers).

6 Based on an examination by consultants engaged by the Agency of data collected from 35 of the Programme's 103 schemes (C&AG's Report, para 2.2 refers).

3. The Department scrutinises business cases and approves funding for road schemes delivered by local authorities through Local Transport Plans. These also show significant increases as compared to the initial estimates. The total cost of the 20 schemes completed by July 2006 had increased by 18% from initial estimates; the latest forecasts of the 61 schemes currently under development indicate costs will be nearly £1.9 billion compared to initial estimates of just over £1.4 billion, an increase of 31%.

4. Both Agency and local authority schemes are approved at an early stage in their life, often before the line of the route has been decided, so that the Agency can determine whether a scheme is worth developing and local authorities can get some assurance as to the likelihood that it will be funded. There is a risk, however, that such judgements are being made on poor cost information and so value for money cannot be properly assessed. The Department and the Agency accepted the need for more accurate forecasting in future. To reflect the inherent risk and uncertainty during the early life of these more complex schemes, the Department and the Agency plan to switch in 2007 from a single definitive value cost estimate to estimating the likely cost of each road scheme within a broad range that would narrow as design work progressed.[7]

5. The Agency and local authorities would also need to provide more accurate estimates of road costs if the Department were to conduct the rigorous comparisons of economic, environmental and social costs, benefits and impacts for road and rail solutions recommended by the Eddington Transport Study. Generally, the Department considered that road schemes in the Programme offered high value for money which was not affected by costs being much greater than originally estimated. Rates of return were checked at intervals during a scheme's development and the Department would not generally progress schemes with a Benefit Cost Ratio of less than 2:1. Schemes with poor value for money could not go ahead without Permanent Secretary and Ministerial approval. Recalculating the Benefit Cost Ratio using the actual costs incurred showed that had the costs been known at the start the schemes would still have shown an acceptable benefit on the assumption that the assessed benefits would still have been as great as before.

6. The Agency had not taken account of the cost of carbon emissions when costing road schemes but had costed other environmental impacts such as degradation in the landscape.[8] Where environmental impacts could not be quantified, the Department made a judgement as to whether the effect would be sufficient to move the Benefit Cost Ratio.[9] On rail schemes, the preparation of the cost appraisal for the West Coast Main Line modernisation had taken into account pollution involved in generating the power needed to run extra trains but did not take account of positive environmental impacts likely to arise from travellers switching from road to rail. The Department's appraisal now takes full account of this factor to give a more balanced assessment of rail projects.[10]

7 Qq 1, 2, 30, 105

8 Q 28

9 Q 22

10 Committee of Public Accounts, Thirtieth Report of Session 2006–07, *The Modernisation of the West Coast Main Line*, HC 189, Ev 19

7. Whilst regions have been able to prioritise road schemes according to their regional importance since 2006, big regional Agency schemes and small local authority schemes were sometimes difficult to fit within regional priorities. For example, large schemes, such as the A46 Newark to Widmerpool improvement tended to distort regional programmes.[11] On the other hand the Department also recognised that some small schemes to alleviate congestion, such as the A140 Norwich to Ipswich improvement, rarely qualified as a strategic priority and so were unlikely to be built under the current system. Measures under consideration to help small but significant schemes included proposals to increase the size of schemes the Department allowed to be funded through the integrated transport block rather than through the regional funding allocations.[12] The block provides funding for schemes which address specific issues such as traffic management and widening travel choices .

11 Qq 5, 7

12 Qq 134–135

2 Improving oversight of the Roads Programme

8. The Department has recently strengthened its oversight of local authority schemes. Since 2005, for example, it had increased scrutiny of forecast costs by introducing a further approval stage of forecasts after procurement begins. The Department's oversight of the Agency's roads programme however, is still not rigorous enough. For example the Agency does not report on progress towards the delivery date for each scheme and does not calculate slippage. Two surrogate indicators are used instead, one measuring actual spending against budget and the other a progress points system, whereby each scheme under development could earn a maximum of 100 points towards an overall points target to be achieved over a three year period.[13] Neither method measured the proportion of a scheme delivered for the expenditure incurred to date. Nor was the time taken to deliver a scheme measured. The Agency had set itself a target in 2002 to reduce the total time taken to deliver new road schemes to between 5 and 7 years, but had not monitored whether it had done so.

9. The Department and the Agency had also been taken by surprise by rising costs and had not demonstrated the necessary commercial acumen and awareness of underlying market trends. The Agency had based their oversight of cost in part on inaccurate historical data. For the first four or five years of this decade, the Department of Trade and Industry's Roadcom index, relied on (for local authority schemes) by both the Highways Agency and the Department, rose and fell slightly at a time when road construction prices were rising steadily. Only after the Agency realised that costs were rising faster than expected had it approached specialist consultants for advice on likely future market trends.[14]

10. The Agency needs to develop a better understanding of the costs it incurs and those incurred by its supply chain. For example, the Agency pays the aggregates levy indirectly through its supply chain. The Agency deduced that it had paid £17 million in aggregates tax since its introduction in 2002, and expected to pay a further £20 to £30 million depending on the detailed implementation of the Programme, taking into account the recent increase in the tax. It also pays landfill tax through its supply chain, and estimated that it had paid between £13.65 million to £25.4 million since 1997. The Agency also estimated that it had paid £468 million in non-recoverable Value Added Tax since 1997.[15]

11. The Agency has made little progress towards implementing the Office of Government Commerce recommendation made in February 2004 that the Agency should identify realistic and relevant comparators against which to benchmark road construction and procurement costs. To date it had spoken to European colleagues, notably the Irish Government which has an extensive roads programme, about working together to try to persuade a number of other European countries to set up benchmarking arrangements. It did not get a lot of feedback from other countries and the data it obtained was not good

13 Q 38

14 Qq 61–63, 78

15 Ev 22

enough to be meaningful. It had not explored other comparators across government, such as the Ministry of Defence or the Channel Tunnel Rail link. The Agency and the Department (in respect of the local authority schemes) does not need to mount a joint international co-operation exercise to get data to make comparisons and might be more successful approaching its French, Australian, New Zealand, Canadian and American counterparts directly.[16]

12. Historically, the Agency had developed its estimates on the advice of the engineers, estimators and quantity surveyors of the quantities of materials required to build a bridge or a stretch of a particular type of road in a particular environment. The Agency has recently begun to calculate what these structures should cost, and in 2006 it started to develop a database of unit costs for different types of projects, such as average cost per mile for new roads, road widening and major maintenance schemes. The Agency planned to compare top-down unit costs with bottom-up estimate calculations and check whether tender bids were broadly in line with expectations. Based on completed projects, the Agency had made retrospective calculations on what it had cost to widen motorways. The Agency told us that when it deflated actual cost to 2001 levels, it could see improvements in the unit cost of motorway-widening provision, achieved through the use of innovation and better techniques.[17]

13. The Highways Agency and local authorities carried out post project evaluation but at different stages. Twelve months after opening a road, the Highways Agency looked at the benefits, for example to see if traffic flow was what has been predicted. Since December 2006, the Agency's post-project evaluations of major road schemes also covered whether they have been delivered to time and cost, or the reasons for cost increases or delays. On the local authority side, local authorities were now required as a condition of funding to carry out a post-evaluation review and supply those results to the Department.[18]

16 Qq 40, 48–53, 72–76, 80–83

17 Qq 56–59

18 Qq 9, 84, 85

3 Contracting methods and project management capability

14. The Agency has concluded that traditional forms of contracting and Design and Build contracts do not offer value for money and now relies mainly on Early Contractor Involvement contracts, although they sometimes use the Private Finance Initiative for larger schemes. The Agency was positive about the benefits it expected from using Early Contractor Involvement contracts to procure roads, as they provided more transparency on costs during a project which allows the Agency to know the true cost of a completed scheme more quickly, three months compared to three years under the traditional contracts. Their success however, depends on the Agency's ability to negotiate a target price which gives the taxpayer value for money. The National Audit Office's analysis showed that to date final target costs for the Early Contractor Involvement contracts have been on average 11% higher than initial target costs. Six years after this procurement method was introduced in 2001, there has not been a proper evaluation. The Agency told us that while it evaluated every scheme as it came through, many Early Contractor Involvement Schemes were still at an early stage; but agreed that there were now enough schemes to be evaluated in 2007 for a judgment about its effectiveness to be made.[19]

15. The Department and the Agency acknowledged that they were reliant on consultants to advise and manage the roads programme and did not have the in-house capacity themselves to check that the consultants were doing a good job or to operate as an intelligent client. In part this was a consequence of privatising the Agency's road construction units 20 years ago, when most of the Agency's consulting engineering expertise had left. Consultants were now used when these skills were needed. A key area where the Agency needed to develop its skills was in management of its Early Contractor Involvement contracts. The Agency had 14 employers' agents, consultants who act as the Agency's project managers on site and check that contractor estimates and costs are accurate and reasonable. Like other participants in Early Contractor Involvement contracts, they are incentivised on the outcome achieved; but as the Agency pays for their time, there does not appear to be an incentive for them to progress schemes quickly and so reduce delays which are a significant contributor to costs.[20]

16. The Agency accepted that it did not have the right mix of commercial skills and the Agency's age profile meant that a lot of people would retire in the next five years.[21] This prospect is particularly worrying given that the schemes currently in the programme were acknowledged to be more complex and bigger than those already completed. The Agency agreed that it had a challenge in getting the right people who could challenge costs and who were commercially experienced. It has relied heavily on consultants, and recognised that it needed its own people who could give assurance that consultants were doing a good job for the Agency, especially as these consultants often also work with main contractors on other schemes and so there may be a conflict of interest. The Agency was currently recruiting

19 Qq 14, 18, 19, 43, 44, 100–104; C&AG's Report, para 3.20

20 Qq 64–67

21 Qq 47, 110

two in-house commercial staff, although it remained to be seen whether this would give sufficient capacity to boost the Agency's capability.[22]

22 Qq 8, 19, 20, 113–115

Formal minutes

Wednesday 10 October 2007

Members present:

In the absence of the Chairman, Mr Alan Williams was called to the Chair

Mr Richard Bacon
Angela Browning
Mr David Curry
Mr Philip Dunne
Mr Austin Mitchell
Mr Don Touhig

Draft Report

Draft Report (Department of Transport: Estimating and monitoring the costs of building roads in England), proposed by the Chairman, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 16 read and agreed to.

Conclusions and recommendations read and agreed to.

Summary read and agreed to.

Resolved, That the Report be the Fifty-eighth Report of the Committee to the House.

Ordered, That the Chairman make the Report to the House.

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

[Adjourned until Monday 15 October at 4.30 pm.

Witnesses

List of written evidence

List of Reports from the Committee of Public Accounts 2006–07

First Report	Tsunami: Provision of support for humanitarian assistance	HC 25 (Cm 7018)
Second Report	Improving literacy and numeracy in schools (Northern Ireland)	HC 108 (Cm 7035)
Third Report	Collections Management in the National Museums and Galleries of Northern Ireland	HC 109 (Cm 7035)
Fourth Report	Gas distribution networks: Ofgem's role in their sale, restructuring and future regulation	HC 110 (Cm 7019)
Fifth Report	Postcomm and the quality of mail services	HC 111 (Cm 7018)
Sixth Report	Gaining and retaining a job: the Department for Work and Pensions support for disabled people	HC 112 (Cm 7019)
Seventh Report	Department for Work and Pensions: Using leaflets to communicate with the public about services and entitlements	HC 133 (Cm 7020)
Eighth Report	Tackling Child Obesity—First Steps	HC 157 (Cm 7020)
Ninth Report	The Paddington Health Campus Scheme	HC 244 (Cm 7076)
Tenth Report	Fines Collection	HC 245 (Cm 7020)
Eleventh Report	Supporting Small Business	HC 262 (Cm 7076)
Twelfth Report	Excess Votes 2005–06	HC 346
Thirteenth Report	Smarter Food Procurement in the Public Sector	HC 357 (Cm 7077)
Fourteenth Report	Ministry of Defence: Delivering digital tactical communications through the Bowman CIP Programme	HC 358 (Cm 7077)
Fifteenth Report	The termination of the PFI contract for the National Physical Laboratory	HC 359 (Cm 7077)
Sixteenth Report	The Provision of Out-of-Hours Care in England	HC 360 (Cm 7077)
Seventeenth Report	Financial Management of the NHS	HC 361 (Cm 7077)
Eighteenth Report	DFID: Working with Non-Governmental and other Civil Society Organisations to promote development	HC 64 (Cm 7077)
Nineteenth Report	A Foot on the Ladder: Low Cost Home Ownership Assistance	HC 134 (Cm 7077)
Twentieth Report	Department of Health: The National Programme for IT in the NHS	HC 390 (Cm 7152)
Twenty-first Report	Progress in Combat Identification	HC 486 (Cm 7151)
Twenty-second Report	Tax credits	HC 487 (Cm 7151)
Twenty-third Report	The office accommodation of the Department for Culture, Media and Sport and its sponsored bodies	HC 488 (Cm 7152)
Twenty-fourth Report	Ofwat: Meeting the demand for water	HC 286 (Cm 7151)
Twenty-fifth Report	Update on PFI debt refinancing and the PFI equity market	HC 158 (Cm 7152)
Twenty-sixth Report	Department for Work and Pensions: Progress in tackling pensioner poverty—encouraging take-up of entitlements	HC 169 (Cm 7152)
Twenty-seventh Report	Delivering successful IT-enabled business change	HC 113 (Cm 7216)
Twenty-eighth Report	ASPIRE—the re-competition of outsourced IT services	HC 179 (Cm 7216)
Twenty-ninth Report	Department of Health: Improving the use of temporary nursing staff in NHS acute and foundation trusts	HC 142 (Cm 7216)
Thirtieth Report	The Modernisation of the West Coast Main Line	HC 189 (Cm 7216)
Thirty-first Report	Central government's use of consultants	HC 309 (Cm 7216)
Thirty-second Report	The right of access to open countryside	HC 91 (Cm 7216)
Thirty-third Report	Assessing the value for money of OGCbuying.solutions	HC 275 (Cm 7216)
Thirty-fourth Report	Recruitment and Retention in the Armed Forces	HC 43 (Cm 7216)
Thirty-fifth Report	BBC outsourcing: the contract between the BBC and Siemens Business Service	HC 118 (HC 1067)
Thirty-sixth Report	Reserve Forces	HC 729 (Cm 7216)
Thirty-seventh Report	Child Support Agency: Implementation of the Child Support Reforms	HC 812 (Cm 7216)
Thirty-eighth Report	Sure Start Children's Centres	HC 261 (Cm 7216)
Thirty-ninth Report	Preparations for the London Olympic and Paralympic Games—risk assessment and management	HC 377 (Cm 7216)

Fortieth Report	Dr Foster Intelligence: A joint venture between the Information Centre and Dr Foster LLP	HC 368 (Cm 7216)
Forty-first Report	Improving procurement in further education colleges in England	HC 477
Forty-second Report	The Shareholder Executive and Public Sector Businesses	HC 409
Forty-third Report	The Restructuring of British Energy	HC 892 (Cm 7216)
Forty-fourth Report	Tackling Anti-Social Behaviour	HC 246 (Cm 7216)
Forty-fifth Report	Standard Report on the Accounts of HM Revenue and Customs: VAT Missing Trader Fraud	HC 250 (Cm 7216)
Forty-sixth Report	Ministry of Defence: Major Projects Report 2006	HC 295
Forty-seventh Report	Improving quality and safety—Progress in implementing clinical governance in primary care: Lessons for the new Primary Care Trusts	HC 302
Forty-eighth Report	The Efficiency Programme: a Second Review of Progress	HC 349
Forty-ninth Report	Introduction of e-Passports	HC 362
Fiftieth Report	Assets Recovery Agency	HC 391
Fifty-first Report	Legal Services Commission: Legal aid and mediation for people involved in family breakdown	HC 396
Fifty-second Report	The Academies Programme	HC 402
Fifty-third Report	Helping newly registered businesses meet their tax obligations	HC 489
Fifty-fourth Report	Heritage Lottery Fund	HC 502
Fifty-fifth Report	The delays in administering the 2005 Single Payment Scheme in England	HC 893
Fifty-sixth Report	Jobcentre Plus: Delivering effective services through Personal Advisers	HC 312
Fifty-seventh Report	Department for Environment, Food and Rural Affairs: Reducing the reliance on Landfill in England	HC 212
Fifty-eighth Report	Department of Transport: Estimating and monitoring the costs of building roads in England	HC 893

The reference number of the Treasury Minute to each Report is printed in brackets after the HC printing number

Oral evidence

Taken before the Public Accounts Committee

on Monday 26 March 2007

Members present:

Mr Edward Leigh, was in the Chair

Mr Richard Bacon	Mr Sadiq Khan
Mr David Curry	Mr Austin Mitchell
Mr Ian Davidson	Mr Don Touhig
Mr Philip Dunne	Mr Alan Williams
Helen Goodman	

Sir John Bourn KCB, Comptroller and Auditor General, and **Geraldine Barker,** Director, National Audit Office, were in attendance and gave oral evidence.

Marius Gallaher, Alternate Treasury Office of Accounts, was in attendance.

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL

ESTIMATING AND MONITORING THE COSTS OF BUILDING ROADS IN ENGLAND (HC 321)

Witnesses: **Sir David Rowlands KCB,** Permanent Secretary, Department for Transport, and **Archie Robertson OBE,** Chief Executive, Highways Agency, gave evidence.

Q1 Chairman: Good afternoon. Welcome to the Public Accounts Committee where we shall be looking at the Comptroller and Auditor General's Report, *Estimating and monitoring the costs of building roads in England*. We welcome back Sir David Rowlands, Permanent Secretary at the Department for Transport, and Archie Robertson, Chief Executive and Accounting Officer at the Highways Agency. Sir David, I address my first question to you, but please pass it on to your colleague if you wish. Let us start by looking at the escalating costs of the schemes and, in particular, paragraph 1.5 on page 11 of the Report. It states, "The Department told us that in many cases there is still uncertainty about these July 2006 estimates . . . The Agency is urgently reviewing its approach to estimating". We have been building roads for a long time, so why is it difficult to understand how much they will cost?

Sir David Rowlands: As the National Audit Office's Report says, it is a difficult and challenging task to get estimates right, particularly when they are made at a very early stage in the life of a road. If we look backwards, as the Report shows, we see that the estimates when adjusted for comparability have not been too off the mark, but going forward there is a problem. The problem is partly to do with inflation, which in the road construction sector is running at twice the general level of inflation. Although historically we would expect it to come down, at the moment the forecasts say that it will stay at that level through this decade and perhaps into the next. There is a problem with inflation, and an ongoing problem for complex and large schemes to arrive at a single, definitive price early in the life of a scheme. We need to address that.

Q2 Chairman: On the point about the early approval of schemes, paragraph 2.3 of the Report states that: "the earlier the schemes have been included the more likely it has been that further changes are needed to the schemes' design and design costs have increased". That is obvious, but it gives rise to the question of why schemes are approved so early.

Sir David Rowlands: It will aid understanding if I differentiate between the Highways Agency and local authorities. With the Highways Agency, there is a need to put some form of cost on a scheme, even at an early stage, so that we can decide whether it is worth developing. Certainly, it is necessary to cost a scheme by the time it gets to consultation and public inquiry. The issue is whether it is sensible at such an early stage to have a single cost for a scheme, albeit including an optimism bias, or whether it might be more sensible—I think that this is the route that we might go down—to put a range rather than a single number on the costs for schemes still in development. The difficulty for local authorities is that it is expensive for them to prepare schemes and they need to have some assurance as to the likelihood that it will be funded. That is why we ask local authorities to produce a scheme cost for programme entry, albeit at an early stage. Without that, it is difficult for authorities to get assurance from us that their scheme is likely to be funded once it has been designed and taken to market.

Q3 Chairman: You skirted over the issue of why, with all of our experience, we seem to find it difficult to estimate the cost of roads. Paragraphs 1.5 and 1.6 tell us that road schemes cost a third more than originally estimated, which is massive—it is an extraordinary state of affairs. You mentioned inflation, but I do not understand cost overruns of up to 40%. Why is it so difficult to produce a more accurate estimate? Perhaps you can help the Committee to understand that.

Sir David Rowlands: On inflation, the NAO Report says that something like 45% of costs above forecast levels are down to inflation. Separate work done for the Agency suggests that the figure might be more of the order of 50%, but there is no doubt that it is between 45% and 50%. Historically, inflation in the road construction sector has trended at the same rate as the general level of inflation in the economy. From time to time, it has departed from that rate and has then come back down, but the trend is that it stays much the same as the general level of inflation. Since the early part of the decade, construction industry inflation has departed quite substantially from the underlying rate of inflation. As the Report says, the Agency was using 2.5% as its assumed inflation level, rising to 2.7% in 2007–08. In the early part of this decade inflation in the industry has been running at 6% to 7% a year, and is forecast to stay at 4% to 6% through to the end of the decade. Paragraph 1.6 talks about the five largest schemes, which account for more than half the latest approved budget. It refers to the three big M25 widening schemes, a big scheme on the M1 and the A14 scheme, which have: "an average increase in estimate of 30%." Half of that is down to inflation, I am afraid. To be candid, the Agency did not quite catch what was going on with inflation. That that has now happened is the reason why we are now seeing much larger revised estimates. Also, estimates have risen when schemes have been costed at an early stage, when their scope has not been fully defined, and when they have been at the mercy of a public inquiry.

Q4 Chairman: You have told us why schemes cost more than expected. How do you manage to get away with delaying schemes to accommodate increases in cost? That is what you do, is it not?

Sir David Rowlands: As the Report says, the Highways Agency has not yet deliberately slipped a scheme to stay on budget.

Q5 Chairman: Let us look at one example. At the beginning I said that we had considerable experience of building roads. An obvious quip is that we have been building roads in this country since the Roman times, but I forswore to ask you that. However, I happen to know a Roman road near my constituency. The old Fosse Way near the A46 has been there for about 2,000 years. In section 10, appendix two, you can see a reference to the A46 Newark to Widmerpool improvement, which is in Nottinghamshire. That work was approved before April 2003. It has now been delayed until 2012–13. I put it to you that that is an example of a scheme that has been deliberately delayed to accommodate cost increases.

Sir David Rowlands: I said that there had not yet been slippage in terms of the schemes that have been delivered, although there had been benefits from some slippage. It is certainly true that in terms of the big regional schemes within the Highways Agency programme and some of the regional schemes of the local authorities, budgets have had to be prioritised and some schemes put back.

Q6 Chairman: Mr Robertson, just as an example, what has gone wrong with that A46 Newark to Widmerpool improvement? Other colleagues may mention other schemes if they wish later. The A46 is very dangerous and very narrow.

Archie Robertson: That particular scheme was one that we included in our early estimates prior to 2003. Like most of our schemes, the early estimates required quite a lot of assumption about what we would have to do in a changing world. Clearly, the development of this road, which we look forward to doing, is going to be largely online. At an early stage, my people do not know exactly what line the road will take, what structures over the rivers or what landscaping will be required, how much land-take might be required from people in the community, and whether there are drainage issues.

Q7 Chairman: Do you not have a labour scheme to accommodate cost increases elsewhere in the Department?

Archie Robertson: No. In fact, this scheme has not been delayed by the Agency. It is one of the regional schemes, has been considered under the priority process for regional funding allocation and, therefore, has been regionally prioritised. The scheme has been delayed and because of the current environment, in which inflation is driven by enormous infrastructure demand globally, a delay costs quite a lot of money.

Q8 Chairman: I was concerned to read in paragraph 3.22 that your staff are leaving. You have had difficulty recruiting staff with the necessary engineering and project management skills. Why is that? Why do you lack the commercial skills that you need and what are you doing about it?

Archie Robertson: For exactly the same reasons that the industry itself is wrestling with the skills issue right now. As I said, there is a great demand for infrastructure not just in this country but throughout the developed and developing worlds and the market for those skills is extremely tight. The Agency has identified some key posts that it needs to take forward in order to manage that risk. We are already recruiting a major projects director with commercial background. Shortly after that, we will be appointing a new Commercial Director to help us move forward. We are finding it difficult to recruit at current rates because we are out of the market. I expect that we will have to pay more to secure those people.

Q9 Chairman: The last question that I want to ask you is a pretty obvious one. It is to do with the Department and the Agency doing more to share information and good practice, referred to in paragraphs 3.29 and 3.31. Paragraph 3.31 says: "The Department has not to date actively encouraged local authorities to draw and disseminate lessons from post project evaluations." You would have thought that cost information from completed road schemes could help this process quite a lot.

Sir David Rowlands: I think that I should answer that question, as it is about local authorities. We are now getting into that business. Since the start of last year, we have required local authorities, as a condition of funding a project, to do an evaluation after the scheme is opened. You will see the reference to the Local Transport Planning Network, which was set up basically to deal with local transport planning rather than roads projects as such. We are talking to it about using the network to disseminate the lessons from those evaluations, although we may decide to do it differently. Looking back, we have not done as much as we should have; going forward, we can see clearly what we now need to do. That is why we have asked local authorities, as a condition of funding, to do a scheme evaluation every time.

Chairman: Okay, thank you for that. Don Touhig.

Q10 Mr Touhig: Sir David, in paragraph 3.14 on page 23, the Report tells us: "Under traditional contracting, works only contracts were awarded, on the basis of lowest price, to deliver an agreed design. The Agency found that contractors submitted a low bid to secure the contract", but it goes on to explain that they would hike up the price afterwards. Did that come as a surprise to you?

Sir David Rowlands: No. That is why, if you turn the page, you will see references to the Latham and Egan reviews back in the 1990s, which tried to get out of such adversarial relationships—not just in road construction but generally—in which people bid low for a job, spend half their time putting in claims and then argue afterwards about how much it has all cost. It was not a surprise.

Q11 Mr Touhig: It did not come as a surprise. Why did you let it go on so long, then?

Sir David Rowlands: I do not think that we did let it go on so long.

Archie Robertson: You will see elsewhere in the document that as the Agency, we are a chartered client. We have recognition in terms of what we do for being a progressive procurement organisation. To enlarge on what Sir David was saying, in the early 1990s, the NAO itself produced a Report that showed that in traditional procurement, costs at out-turn were more than 28% more than they had been at tender. What is more, it was taking three years of argument to settle them. By the middle of the decade, that overrun had risen to 40%. That is why the agency has been moving progressively through new procurement approaches, from design and build, to early contractor involvement. Now we are seeing much smaller overruns.

Q12 Mr Touhig: I see that they are getting smaller, but it went on for a considerable time. You allowed yourselves to be taken to the cleaners by those contractors, did you not? You knew what was going to happen; it has gone on for decades. They bid the lowest possible price and then hike it up, saying afterwards that there were all sorts of variations to the contract.

Archie Robertson: All through the period from the creation of the Agency in the mid-1990s, we have been at the leading edge. It was not that the Highways Agency or the Department for Transport were using one particular method of procurement longer or in an older sense than anybody else. In fact, we have been at the leading edge, to the point that the questions that I am usually asked are whether we are not pushing a bit bullishly.

Q13 Mr Touhig: I often think when awarding big contracts what it must have been like to be Neil Armstrong about to take off from the moon, thinking, "Yes, and this piece of kit was built by the company that put in the cheapest tender." Sometimes we must take great care. We also see in paragraph 3.14 of the Report that it often takes three years for you to discover the actual cost of a scheme after the work has been completed. Are you now totally out of that frame of operation? Is it now past and not happening any longer?

Archie Robertson: As far as the contract itself is concerned, yes. As for settling the lands claims and compensation, there are still arrangements under the Planning and Compulsory Purchase Act 2004 that mean that it can take up to 7 years after a road is opened to traffic before all claims can be settled. But that is not a matter of contracting; it is a matter of compulsory purchase law.

Q14 Mr Touhig: Does that apply to the kind of schemes that paragraph 3.14 initially referred to—the old-fashioned way of doing such things by getting the lowest possible price—or does it still apply to design and build and so on?

Archie Robertson: With the early contractor involvement contracts that we are using now, we wrap up the account within three or four months of opening to traffic.

Q15 Mr Touhig: So you have made progress.

Archie Robertson: Yes.

Q16 Mr Touhig: Good. We also see in paragraph 3.14 that you introduced design and build but then felt that you had paid a premium and often did not get the best value. Can you explain why that was?

Archie Robertson: Our view was that while design and build was an improvement on lowest-cost tender, inasmuch as we knew better how much a road would cost, the downside was that we were cashing up on the risks that existed. It was very difficult to tell how the contractor taking on those risks was evaluating them. The sense that we had from seeing the costs moving during that time was that at least some of the contractors were charging a premium for those risks to be taken on to their balance sheets. Some of them, of course, they are not very comfortable to take on to their balance sheets, so they need to—

Q17 Mr Touhig: But you identified that as a premium before you entered into a contract.
Archie Robertson: Yes. You have to decide what your contract basis is going to be in order to start negotiations. There was a period in the late 1990s when we recognised that lowest-price tender was not doing it for us and we moved on, in line with Office of Government Commerce advice, to design and build contracts. They were not satisfying in the sense that we could not bottom out what we were paying for the risk, and there was nothing to show that we were buying it cheaply.

Q18 Mr Touhig: Are you still pursuing design and build contracts?
Archie Robertson: We are pretty much through the application of design and build contracts now. There are places where they will be quite useful for us, when the risks are fairly clear and we want to incentivise somebody to get on and finish a job. Generally that will be on smaller contracts. We still use it on many of the contracts that we carry out—operational contracts for which the total sum is less than £5 million, for example. It is still an appropriate technique for that. But for big projects, we believe that ECI is the way to go—not that we have perfected it, but that it is the way to go.

Q19 Mr Touhig: Paragraph 3.14 also tells us that you often failed to obtain robust information on the cost of various elements of work. Does not that come back to the point that the Chairman made earlier about your ability to recruit? You have had a number of people retiring, which cannot have been a surprise. You must have known that people were retiring. Are you paying enough attention to recruiting people who are hungry, keen and sharp in negotiating contracts in the way that Sir David talked about, now that you are negotiating closely with contractors and getting away from the confrontation of former times?
Archie Robertson: May I split that into two? I need to emphasise an important point on contracting: the ECI contracts that we are using now are open-book. We see all the costs that are incurred. When there is a design and build contract you do not see all the component costs, so you do not have access to the granular data that help you to check your estimates as you come through. We therefore have relatively little information to fall back on from the past decade. With early contractor involvement, we see everything that gets paid for in relation to a project, and that will help us increasingly. On skills, my view is that we have come a long way forward in procurement with early contractor involvement, but it is not a procurement technique that obviates the need to have good commercial people chasing good deals, understanding how to negotiate, understanding the other person's position and continually looking for better value for money.

Q20 Mr Touhig: Paragraph 3.22 makes the point that you are having difficulty in recruiting. Is that a major priority for the Agency?
Archie Robertson: That is why yesterday in *The Sunday Times*—I wish it had been earlier—we announced that we were advertising for a new major projects director with particular skills and a background in commercial negotiation to work on the contracting side of the business. We also intend to appoint a Commercial Director who will report to that director, who will then be able to support the project managers as they develop their projects. They will also be able to identify actions to take forward from the review of the skills and capabilities of my work force during this year and continue to build on good practice by using the centre of expertise to ensure that knowledge is shared in the organisation.

Q21 Mr Touhig: My time is almost up. I have one further question: in my constituency in south-east Wales, the Sirhowy Enterprise Way was a private finance initiative project. It came in under budget and opened three months early. Are you using a lot of PFI projects for some of your contracts?
Archie Robertson: We are using PFI projects. We are heading towards 13 of them. We have just issued a tender for a PFI for the widening of the M25—the northern half—and we are working with other schemes also using the PFI. They are good value for money, particularly for the larger schemes because we need to do a lot of work on those schemes. An individual contractor will find that his balance sheet has limits and he sees the bigger scheme as a big risk, so by going for a PFI with a separate funding competition as we shall in this case, we should gain access to the benefits of scale and a successful transfer risk.

Q22 Helen Goodman: Will you explain what rates of return you are looking for on the road programme? That did not come out clearly in the Report.
Sir David Rowlands: In general terms, whether it is a local authority road or a Highways Agency road, we shall assess the scheme at a number of points for value for money. That is a basic benefit-cost ratio calculation. The stated position for all transport projects is that we will do no projects that are poor value for money. We will do few, if any, projects that are low value for money—that is a BCR of between 1 and 1.5. We will do many, but not all, projects with medium value for money, which is 1.5 to 2 and, subject to affordability, we would expect to do all projects eventually that show high value for money, which have a BCR of at least £2 for every £1 we spend. I ought to say that that is a value for money calculation; it is not a narrow BCR calculation done just on the basis of cost and obvious benefits, say, to the motorist. We are increasingly trying to quantify environmental benefit and disbenefit. To the extent that we cannot put a quantified number on an environmental benefit or disbenefit, at least we take a qualitative judgment, such as whether the environment damage would be so bad that it would shift the basic BCR calculation. It is within that framework that we decide whether a scheme is progressing. Despite the problems with cost increases, no scheme has gone into construction

either as a local authority scheme or a Highways Agency scheme that was not defined as value for money.

Q23 Helen Goodman: Of the schemes that are described, how many are in different categories?
Sir David Rowlands: Roughly speaking, most of the roads will offer high value for money, so it is a benefit cost ratio of more than 2:1. Occasionally, some schemes have not met that test, two of which spring to mind. For those with quite a long memory, the A43 at Silverstone required a Ministerial Direction because the scheme was speeded up to have it open in time for the then British Grand Prix. The additional cost was not value for money in transport terms, though it was in terms of the generality of the well being of the United Kingdom and the motor sport industry. Similarly, another example that springs to mind is the High and Low Newton scheme on the edge of the Lake District, which is only low value for money. The presumption is that we do not do many such projects, but Ministers took the view that it was sufficiently regionally strategic for it to proceed even with low value for money. Mostly these are high value for money.

Q24 Helen Goodman: Obviously the question that I am going to ask you is, with these massive cost overruns—27% and so on—aren't things slipping from high to medium or from medium to poor value for money?
Sir David Rowlands: No, because quite a lot of the schemes that I said that are better than 2:1 are at 3, 4 or 5:1 in terms of benefit to cost. Even where costs have gone up, the expectation is that they will remain high value for money. I said that that was tested at various stages, which now include the final stage at which we know the price from the market and have the contract price. If there is not value for money at that stage, it does not fly.

Q25 Helen Goodman: What sort of returns do you get on rail investment?
Sir David Rowlands: It depends. To take the obvious example of Crossrail—there is no presumption whether it is happening in a given time scale—it offers a benefit-cost ratio of more than 2:1.

Q26 Helen Goodman: Would you conclude that despite the large cost overruns, there is still an appropriate balance of public investment between roads and rail? Do the big overruns not cause you any qualms in that respect? Obviously they cause you qualms because we are spending too much money.
Sir David Rowlands: May I separate out my answer? In my formal position as an Accounting Officer, none of this gives me any qualms because the projects clearly represent value for money. Coming out of the work that Sir Rod Eddington did for my Department and the Treasury last year was a clear recommendation on policy direction. Sir Rod identified three key areas for transport investment to support productivity and economic growth: inter-urban, congested urban and international gateways. His review essentially said: decide on the question before you decide on the answer. So if you are concerned about an inter-urban flow, do not immediately leap to the road or the railway as an answer. Decide what the problem is that you are trying to solve, then begin to consider possible answers on an option basis—say between a road and a railway. Going forward, we will not necessarily leap to a road or rail solution as the answer to a question. We will first decide what the question is.

Q27 Helen Goodman: I will follow your advice. The question is obviously how to get from A to B as cheaply as possible but also with minimal environmental costs. Will you say again whether you have taken environmental costs into account in your classifications and whether you will modify the way in which you take them into account?
Sir David Rowlands: I have not checked, but I believe that the Highways Agency either has just published or is about to publish on its website the appraisal summary tables for more than 100 of its road schemes—basically the ones that are in the NAO Report. They will set out quantitatively and qualitatively all the aspects taken into account in appraising each of those roads, including the environmental benefits and disbenefits. You will see information on carbon, noise, biodiversity and severance. We are increasingly quantifying those factors rather than just handling them qualitatively; for example, we are beginning to price carbon.[1]

Q28 Helen Goodman: So the truth is that up to now you have not put prices on the environmental costs of the projects that have been appraised.
Archie Robertson: Yes, we have in the agency schemes—not on carbon but on other environmental impacts. Some environmental requirements are just a yes or no, but such things as environmental degradation in landscape value and outlook are valued in the benefit-cost ratio and are among the things that bring schemes such as High and Low Newton down to the value for money that it represents.
Sir David Rowlands: We are expecting, probably in May, to put out guidance on handling carbon impacts in terms of scheme appraisal.

Q29 Mr Khan: Sir David, you have appeared before many Committees, I know. One of the things that helps me when I come to this Select Committee is to decide whether a Department has been caught with its pants down by the NAO, because the NAO and the Comptroller and Auditor General are far too courteous to use such language. The obvious things that I look for are phrases like, "The Department . . . are taking steps to improve monitoring and control of costs". Another giveaway line is, "The Agency has moved away from". Another is this: "Only in December 2006 when the NAO's Report was well advanced did the Agency issue guidance." On your watch, has your Department been caught with its pants down?

[1] www.highways.gov.uk/roads

Sir David Rowlands: No.

Q30 Mr Khan: You are pretty happy with your programme of building roads and the taxpayers' money that you are spending building them?

Sir David Rowlands: I am happy, as I said, that the road schemes represent value for money. I am not happy going forward that our way of handling the sort of risk and uncertainty to which the Report draws attention will be robust enough, with much higher levels of inflation in the construction industry and with the schemes. Remember that the early schemes are the simple ones; the ones to come are the more complicated and bigger schemes, and we need to change the way that we do business.

Q31 Mr Khan: Are all the changes that have been highlighted by the NAO and that you have now adopted and taken on board things that you would have done anyway?

Sir David Rowlands: Actually, we are going to make a quite fundamental change in the way that Highways Agency schemes are developed and appraised that does not quite fit with what the NAO has set out, although I do not think that it is necessarily distraught at what we are doing. It flows from the Nichols report, which my Secretary of State commissioned back in July of last year when we could see that there was a problem.

Q32 Mr Khan: Because you are spending too much on building roads. It should be a lot cheaper than it is.

Sir David Rowlands: No, there is no suggestion that the roads are any more expensive than they were ever going to be. The problem was whether we estimated the costs properly in the first place.

Q33 Mr Khan: There are two explanations. You are underestimating how much a road costs, or you are overspending. The NAO identified both and needs explanations for your underestimation and overspending compared with the original cost.

Sir David Rowlands: If we look at what the Report says about the Highways Agency and the schemes that it has completed—the NAO considered 36 schemes—and do an apples-with-apples comparison, the out-turn is about 6% more than the initial estimate.

Q34 Mr Khan: How do you deal with this? "The Department has not adequately held the Agency to account for its delivery of the roads programme." Apples with apples?

Sir David Rowlands: I think that I said that going back, it is not too bad, but going forward, it is not good enough. We need to change the way that we do it.

Q35 Mr Khan: Mr Robertson, I know what the Department for Transport is supposed to do. In a sentence, what is the Highways Agency supposed to do? What is your job description as an agency?

Archie Robertson: The Highways Agency's role is to protect and do what it can to improve travel on the strategic road network. That includes implementing new road schemes at the places on the network that are most congested and pressured, making better use of the existing network with the tools that we are using now—better technology, the traffic officer service and regional control centres—and playing our role in what I call demand management.

Q36 Mr Khan: In the context of demand management and building new roads at the price for which they are supposed to be built, are you fit for purpose?

Archie Robertson: In terms of demand management, yes, I think so. The things that we are doing on demand management include the construction of two high-occupancy vehicle lanes, which are currently in build.

Q37 Mr Khan: Sorry—in the context of the roads programme, the cost at which you estimate that they will be built and the cost at which they are eventually built?

Archie Robertson: As Sir David and our reports have said, the roads programme is value for money.

Q38 Mr Khan: Let me put this to you, then: "The Agency set a target in 2002 to reduce the time taken to deliver new road schemes to between five and seven years"—that seems a reasonable target to me—"but does not measure whether it is achieving that target." Also, "the Agency has been able to absorb the cost increases that have occurred"—the Chairman asked whether delays were deliberate—"because of slippage on schemes and changes being made to the programme to delay other schemes". Also, the: "Agency is not reporting progress on schemes sufficiently clearly. The Agency is not required to identify or report on the proportion of a scheme it has delivered for the expenditure it incurs". One of two things occur to me about that. Either the Department has not been robust in the checks and balances it employs in respect of you, or you are unfit for purpose.

Archie Robertson: I monitor and target the Agency and it is monitored and targeted by the Department on a number of criteria, two of which are actual spend against budget—the issue of whether we are delivering what we say we will in the business plan—and the performance target that we use, which is referred to in the Report as progress points. Those are set up to deliver scheme progress that is consistent with the ability to achieve speeded-up delivery. We are setting tougher targets on delivery, and they are being achieved. However, as others have observed, early contractor involvement is at an early stage as regards schemes delivered to outcome.

Q39 Mr Khan: From 1998 to 2021, which countries in the western world will build more roads than we do?

Archie Robertson: Most of them, I believe.

Q40 Mr Khan: I am sure that you have examined examples from overseas of road programmes and estimates versus roads built. As a layperson—someone with no expertise of road building—I suspect that design modifications are not unusual and that they happen with all road building. I also suspect that construction cost inflation is not unique to British builders and that compensating for land and other liabilities is not unique to the UK. If the NAO were to go and look at projects overseas where, according to you, far more roads are built, would it see an equal level of inaccuracy—a cost overspend of between 27% and 31%?
Archie Robertson: The NAO Report commented on benchmarking, which is very important. Although it was not aware of this, I have been talking to my European colleagues in the past year about setting up benchmarking of the type that would help me understand—

Q41 Mr Khan: It is fine if you do not know the answer, but do you?
Archie Robertson: The pressure on infrastructure and the inflation arising from it can be seen everywhere in the developed world. I cannot tell you in detail about individual matters because, for example, different countries have different compensation arrangements—
Sir David Rowlands: I can tell you—the Netherlands' road-widening programme has come to a complete stop for environmental reasons.

Q42 Mr Khan: I was going to ask you about the figure of 45% of costs that is factored in when estimating the cost of roads—we could call it a contingency fund or whatever. Should it be 45%?
Archie Robertson: Yes.

Q43 Mr Khan: For some reason, we do not allow local authorities such a contingency fund because we think that it would act as a disincentive to be prudent with their expenditure. Will British builders use the built-in figure of 45% to have you over a barrel?
Archie Robertson: No, because the projects that we are delivering are now done on an open-book basis, so we can see exactly what expenditure is for. We know where the money is going.

Q44 Mr Khan: That goes back to my earlier question. Hitherto, were your pants pulled down? Were you caught out by the builders?
Archie Robertson: We moved away from the design and build form of contracts for major contracts because we were not comfortable about whether the taxpayer was getting the best value for money in terms of the transfer of risk to contractors.

Q45 Mr Khan: My time is almost up. Sir David, do you know what *consultantitis* is?
Sir David Rowlands: No, but I am sure that you are going to define it for me.

Q46 Mr Khan: I am. *Consultantitis* refers to a situation in which an organisation lacks significant expertise or confidence, and is not brave enough to take tough decisions, and so looks for scapegoats and hires consultants, at disproportionate cost, to take such decisions. I will give you an example. You have employed consultants to check the reasonableness and robustness of each scheme cost estimate. You have employed consultants to help challenge and check the cost estimates produced by the early involvement scheme contractors. You have seconded more consultants to perform additional checks on the cost estimates and you have employed consultants from the Agency to examine potential saving on three big schemes. Why can that not be done in-house?
Sir David Rowlands: Some 20 years ago, as a matter of policy, the then Government privatised the Highways Agency's road construction units. All consulting engineering expertise largely left the Agency and, as a result, the Agency now buys in that capability when it needs it.

Q47 Mr Khan: That leads me to my next point. It is hardly surprising that the National Audit Office said that the agency lacked suitably skilled staff if you continue to use consultants. It is a chicken and egg situation. How will you ever have the expertise in-house if you continue to go out of house because you lack the expertise?
Sir David Rowlands: I find it very difficult to see this or any other Government Department setting themselves up as a substitute for Atkins or Arup or any other consulting engineers of that quality. There is an issue about the Highways Agency's own project management capability, particularly with its age profile because quite a lot of people will retire in the next five years. That is about being a really good, intelligent customer and client for those people. You make them deliver what you want them to deliver.

Q48 Chairman: Mr Khan mentioned the important point of benchmarking. Would you like to look at the first two sentences of paragraph 3.32? What does it say?
Archie Robertson: Yes, I think that I accepted that the NAO did not find any examples.

Q49 Chairman: It says that you do not benchmark and that the Office of Government Commerce recommended in February 2004 that you should. You still do not do it. You have an absolutely appalling record on cost over-runs. With your record, it is so obvious that you should go to the French, the Germans and other people to find out what they are doing, and you have not done that.
Archie Robertson: That is not correct. That is exactly what I did with my Irish colleague a year ago. We agreed that we would do some benchmarking and we have been pulling data together in the meantime.

Q50 Chairman: With your Irish colleague?
Archie Robertson: With European colleagues. A couple of us decided that we should be doing something to get this going.

Q51 Chairman: Okay, so when did you decide to do that?
Archie Robertson: In the spring last year.

Q52 Chairman: So, what has been the outcome of all this?
Archie Robertson: We had a look at it in the autumn. We did not have a lot of feedback from our colleagues. The data is not good enough. What it told us at that point was that it was very difficult to do this when land costs are so very different everywhere. We resolved to take this forward again and we will be talking about it when we have our next meeting.

Q53 Chairman: It all seems rather lackadaisical. We are not a million miles away from France or Germany, are we? We all travel on the superb autoroutes in France, the autobahns in Germany and the autostradas in Italy, and we are immensely impressed with what is going on. We find it difficult to understand why you do not seem to want to learn lessons from those people.
Archie Robertson: That is exactly why I and my colleague are trying to get other colleagues across Europe to agree that there is something for us in doing that. I shall relay your enthusiasm.
Chairman: Okay, fair enough. I hear a colleague of mine taking me to task about Italian roads. Perhaps I should not have mentioned the autostradas, but certainly the autobahns and the autoroutes.

Q54 Mr Dunne: I would like to ask some questions in relation to the local authorities in your primary client base. When you look at the initial stage of an estimating process, do you estimate the duration of a project?
Archie Robertson: I am not involved in local authority schemes. However, for the Highways Agency schemes, we look at what the progress of the scheme is likely to be and also when it might go to tender and construction because those are significant commercial factors.

Q55 Mr Dunne: If I understand it correctly, you have introduced a contingency into your estimating relatively recently. Paragraph 7 of page 29, which is about the study methods used, talks about the contingency arrangements that have been introduced. Do you consider a cost per period, such as a rate per week, of any overrun when estimating a contingency?
Archie Robertson: No. The contingency for optimism bias, as it is known, essentially takes account of knowledge and experience of such schemes that have been done before. It is largely driven by the size of the scheme, so it is a percentage of that; it is also driven by the complexity of the scheme. Some of our contingency is a result of that. We also consider the extent to which a risk assessment has been performed, which might enable risk reduction to take place.

Q56 Mr Dunne: The reason I ask is that in paragraph 3.23 of page 25, the first sentence of the final bullet point says: "In 2006, the Agency started to develop a database of unit costs for different types of projects such as average cost per mile for new roads, road widening and major maintenance schemes." I was surprised that that was not absolutely standard practice. Until last year, you had not worked out average costs for different types of project. Was that a surprise to you when you came to the Agency?
Archie Robertson: I have asked for it to be done. I am extremely keen on benchmarking and it will be very useful to us. Part of the reason for it not having been done—

Q57 Mr Dunne: This is not benchmarking; this goes to the heart of estimating. How can you estimate without having a standard unit cost, quite apart from the unit costs in other countries?
Archie Robertson: I understand where you are coming from now. Estimates are built up on the views of the engineers, estimators and quantity surveyors of what quantities of each material will be required to build a bridge or a stretch of a particular type of road in a particular environment, for example. That is how estimates are built up. I want to see them checked with reference to what a mile of widened motorway should cost. By comparing the top-down benchmark with the bottom-up calculation, we will get more assurance about how our productivity is moving.

Q58 Mr Dunne: How is this project going?
Archie Robertson: We now have benchmark costs for most of our high-level activities. It is being taken forward by the team that we set up last year to get down to a lower level of granularity. It is beginning to help me in the sense that as those schemes come through to tender, I can see whether they are in the ball park that I expected, given that they all have slightly different junctions and so on. It is beginning to help. It is not something about which you will say, "Today it is all there, it is fine. We can do it all from there." It will be a continuous development.

Q59 Mr Dunne: Have you gone back in time to analyse the completed projects, to assess the reasonableness of your estimate?
Archie Robertson: We have done some retroactive calculation, particularly on what it has cost to widen motorways. That is where the big budget is of the Highways Agency capital programme. We believe that when we deflate the actual cost—the out-turn—to 2001 levels, we see improvements in the unit cost of motorway-widening provision, through the use of innovation and better techniques.

Q60 Mr Dunne: In the limited experience that I have of dealing with the Agency—I regret to say that my constituency has not a single project referred to in the document, as rural areas are always under-served—the main challenge to cost pressures appears to be from delay caused by extraneous events, particularly third-party utility providers

being unable to do what was expected. The weeks of delay add considerably to the cost, because all your machinery is left hanging around idle. What provision do you make when estimating for unforeseen third-party events? Is that a contingency that you might account for?
Archie Robertson: Diversions and statutory undertakers' work have been rightly identified by the NAO as difficult areas for us. At an early stage in the estimates, we go to the statutory undertakers and explain what we think is likely to be required in the way of diversions. As we do not have all the details, we cannot specify that terribly closely. Frankly, the statutory undertakers, which are busy trying to make money, do not show that much enthusiasm for where we are, so when we come back later to say, "Here is what has to be done, and we need you to do this by that time," the cost can change quite significantly, and there can be pressure on delays. That is why we believe that the way forward is to ensure that we make best use of the New Roads and Street Works Act 1991 and to establish formal relationships with those partners so that they give us attention when we are taking schemes forward.

Q61 Mr Dunne: Were you surprised that the inflation rate that you had been using for the past five years needed to be doubled last summer?
Archie Robertson: We saw a particular jump in inflation at the time of the Iraq war, when component costs were pressured by rising oil prices, but increasingly—

Q62 Mr Dunne: Sorry, I have to stop you on that. Paragraph 13 on page 29 of the study appendix says that you were using 2.5% in your assumptions from 2001–02, which is when the Iraq war began, until 2007–08, and then you increased it—it doubled. That had nothing to do with the Iraq war.
Sir David Rowlands: Yes, we were surprised. That is the honest answer.
Archie Robertson: As soon as I identified that the costs were increasing, I went to the specialist consultants who give us advice on what inflation will be and asked them to do some work on inflation going forward. That is what they told me that I should be assuming, and that is what I have applied.

Q63 Mr Dunne: It should be monitored constantly.
Sir David Rowlands: It is. Perhaps it would help if I said that historically, the Highways Agency—and my Department centrally for local authority schemes—has relied at least in part on the Department of Trade and Industry's Roadcon index, as it is known in the jargon. It is an index of road construction prices, which you would expect to be helpful. The truth is that for the first four or five years of this decade, it went nowhere—up and down by the odd percent. The underlying position is going up.

Q64 Mr Dunne: I am sorry, but I am being notified that I have very few minutes left. I appreciate the explanations. Mr Khan mentioned *consultantitis*. You have 14 employers or agents, as I understand it. Does the contractual arrangement with them incentivise them to reduce costs or to prolong projects, thereby increasing their own reward?
Archie Robertson: They are paid for the work that they do and the time they take to do it, but in addition to that—

Q65 Mr Dunne: So if they take longer, they get paid more.
Archie Robertson: I am sorry, I was not finished. In addition to that, they, like other participants in early contractor involvement contracts, are incentivised on the outcome achieved.

Q66 Mr Dunne: Are they paid for by you or, where you have contributions from local authorities, by the local authority?
Archie Robertson: Where it is an Agency scheme, they are paid for by the Agency.

Q67 Mr Dunne: And paid more the longer they work, as a rule?
Archie Robertson: Yes, we pay for their time.

Q68 Mr Dunne: Have you estimated the impact on your costs of the aggregates tax increase announced last week in the Budget?
Archie Robertson: Not yet. Our objective in any case is always to minimise aggregates use in our schemes.

Q69 Mr Dunne: What proportion of the cost of raw materials is accounted for by the aggregates tax to the Government?
Archie Robertson: Very little, although minerals and materials will be about a third of the total cost of a scheme.
Sir David Rowlands: It may help to offer to write to the Committee with the detail.[2]

Q70 Mr Dunne: In that letter, could I ask you to cover the cost of the agency in payments to Government for VAT, which is non-recoverable, aggregates tax, landfill tax and stamp duty?
Sir David Rowlands: Yes.

Q71 Mr Dunne: I appreciate that very much. I have a final question. I notice on page 16 in paragraph 1.21 that the West Midlands is one of two regions that have substantially fewer schemes allocated to them than were provisionally allocated. Is there a particular bias against the West Midlands?
Sir David Rowlands: No, there is no bias. Appendix five shows two regions that appear substantially under programme: the south-east and the west midlands. The south-east was under programme because it gave the Department a prioritisation only for the first five years of the programme. It has now given one for the second five years, so it is no longer under programme. The West Midlands is still under programme. We will be having another round of consultations with the regions in 2008 and we expect the West Midlands to come forward with schemes to fill up the space available. I do not expect the West

[2] Ev 22–23

Midlands not to utilise the funding allocation fully. Nor, I hasten to add, is there any bias on the part of my Department against the West Midlands.

Q72 Mr Davidson: In the past, contractors used to bid low and then make their money out of changes. I am not entirely convinced that we have moved far away from that. I wish to clarify whether the process of derisking projects is up to the standard that there has been in some projects from the Ministry of Defence.
Archie Robertson: I am afraid that I am not too familiar with the projects of the MoD, but—

Q73 Mr Davidson: I am sorry, but can I just ask you about that? The MoD has put a lot of work into derisking and trying to avoid cost overruns. Have you not been made aware of that?
Archie Robertson: I am sure that there is a network of procurement—

Q74 Mr Davidson: So you know about it then, do you?
Archie Robertson: I know about the network.

Q75 Mr Davidson: Do you know about the derisking work that has been done by the MoD? You said no earlier.
Archie Robertson: Not specifically.

Q76 Mr Davidson: Sir David, surely you are aware of it. Why are you not ensuring that the Highways Agency is aware of it?
Sir David Rowlands: I am very happy to go and look at it. I need some convincing that buying Eurofighter and building a road involve quite the same thing in derisking. The important point, which I am sure Mr Robertson will stress, is that the move to early contractor involvement is a deliberate open-book approach, designed to allow the derisking of projects.

Q77 Mr Davidson: Right, but what I am interested in pursuing is a comparison of lessons learned across government. Would it be fair to say that you have not picked up much about ordering and purchasing in big projects and so on from the rest of government, which seems to have moved forward much more than you?
Archie Robertson: That would not be correct. We work closely with the Office of Government Commerce, one of whose roles is to draw together such lessons. We are working with a lot of—

Q78 Mr Davidson: Okay, but may I ask the NAO, in that case, whether it is its impression that the Highways Agency and the Department are at the cutting edge on these matters?
Sir John Bourn: Not at the cutting edge, no.

Q79 Mr Davidson: Fine. That is what I thought. Why do you think they are not as good as some other Departments?
Sir John Bourn: That is a hard question to answer. On the Ministry of Defence, Sir David said that estimating risk for Eurofighter is not the same as estimating risk in relation to road construction, and of course that is right. As you say, the MoD has put a lot of time and effort into the business of derisking its equipment projects, perhaps because of the encouragement of the PAC to do so. There is a point to be made about the methodology for such assessments, which the Treasury has been anxious to propagate throughout Whitehall. Certainly different Departments can learn from that and improve, and that applies to the Department for Transport. I do not want to say or imply as a consequence that, even if it is not cutting edge, it is absolutely hopeless.

Q80 Mr Davidson: I think that I will accept that: you are not absolutely hopeless. We will try to make sure that that comes up in your appraisal. Not absolutely hopeless: I think perhaps that we are at fault for not concentrating on the Department for Transport and its works in the way that we have concentrated on the Ministry of Defence. Clearly, we have moved the Ministry of Defence forward in a way that has not been done elsewhere. Can I come back and seek to clarify the point that you made about having links with your colleagues in Ireland? As I understand it, you do not have links with anybody else, but the Office of Government Commerce recommended that in February 2004 and all that you have done is speak to a chap from Ireland. Clarify that for me.
Archie Robertson: Yes, of course. I am not quite sure what you are talking about in 2004.

Q81 Mr Davidson: It is in paragraph 3.32 of the Report that you have agreed. It says, "The Office of Government Commerce recommended in February 2004 that the Agency should take forward work to identify realistic and relevant comparators." That is the point that you talked about with the chap from Ireland that you met.
Archie Robertson: I should explain that the group that I work with is the equivalent of Highways Agency chiefs from all the European roads agencies.

Q82 Mr Davidson: So you have done comparators then?
Archie Robertson: We have programmes that we run together and we meet together as a governing board twice a year. At those boards, I was looking for somebody to be an ally in taking forward a piece of work that said, "Let's do some benchmarking together." The Irish Government have a very extensive roads programme and my Irish colleague was interested in being able to benchmark his costs. We therefore decided that we would work together to try to persuade a number of other European countries to do the same.

Q83 Mr Davidson: It is a bit lackadaisical, is it not? It does not inspire confidence, does it? Surely you do not have to get the French to agree to co-operate with you in order to get the figures to make comparisons yourself. You could have done some of

this work on your own, and if the French were not willing to co-operate with you, there are Australians, New Zealanders, Canadians and Americans. The fact is that the Office of Government Commerce made a recommendation in February 2004, and all you seem to have done is have a chat with an Irish chap. That does not inspire us with confidence, and Sir David does not seem to have chased it up.
Archie Robertson: I am doing my best to get something done. We have contacts with other countries, and that is also a possibility.

Q84 Mr Davidson: Can I just clarify something? On the question of the decisions being made about whether or not they are value for money, I understood the process that you described, Sir David. I am not clear whether you go back at the end of this and clarify whether, had you known at the end the basis on which you were taking the decisions, you would still have proceeded. There must be situations where schemes are moved from one category to another as the result of the actual costs, as distinct from the predicted costs.
Sir David Rowlands: May I split the answer into two? There are Mr Robertson's roads and local authority roads. The position with the Highways Agency's roads is that three months after their opening, it runs a review of their cost and the timetabling side of the roads. I think that 12 months after opening we look at the benefits—in other words, is the traffic flow what has been predicted? On the local authority side, as I said earlier, they are now required themselves as a condition of funding to carry out a post-evaluation review and supply those results.

Q85 Mr Davidson: That is an interesting answer, which contradicts the document here that you have agreed to. It says, "Until recently its post-project evaluations of major road schemes cover their impact on traffic volumes, travel times and accidents, but not whether they have been delivered to time and cost, or the reasons for cost increases or delays." You only introduced new procedures in December 2006, presumably only after the NAO had come sniffing around. We often find that and it is quite welcome.
Sir David Rowlands: We introduced new arrangements for local authorities before the NAO came "sniffing around", to use your phrase. However, it is true that for the Highways Agency side, that formal new approach only came into place at the end of December 2006, but that is not to say that they were not already looking at schemes. I do not know whether Mr Robertson wants to say anything.
Archie Robertson: We have used the OGC gateway process as a source of information, and we have used it in full.

Q86 Mr Davidson: Could we have a note from you giving the value for money calculations based on the original costings for a number of schemes, with a re-examination in light of the actual costs? And could the NAO check the calculations to see whether schemes end up being moved between categories or whether schemes might not have been proceeded with had we known when the go-ahead was first given what we knew in the end?
Archie Robertson: Yes.[3]

Q87 Mr Davidson: Good. Thank you very much. Let me pick up the question of optimism bias. I recall that you made the quite interesting statement, Sir David, that the estimates were okay except when they were wrong.
Sir David Rowlands: I am sure that I never put it quite like that.

Q88 Mr Davidson: That was the gist of it. The estimates were correct except when they suffered from over-optimism—which is when they were wrong. If somebody was floating a public company or operating on the market, they would end up in jail for that kind of thing. How do you consistently manage to get away with it? The fact that you have an official term for it—"optimism bias"—is a hoot. Or rather, it would be funny if it was not so tragic.
Sir David Rowlands: That is not my term; it is the Treasury's, but I shall not embarrass anyone from the Treasury. The term comes from the Treasury Green Book of 2003, which said very starkly that there was evidence for a systematic, worldwide bias in projects in the public and private sectors. Promoters underestimate the costs and the timetable and overestimate the benefits, and one way to deal with that is to put a percentage on top as projects go through the stages of their lives. That was described by the NAO as a contingency factor, and in the Treasury it is known as optimism bias. The table on page 29 sets out the percentages that the Highways Agency applied in 2003.

Q89 Mr Davidson: But, in effect, no wise Member of Parliament should believe anything that you say to us on costs, timing or anything else, because the predictions suffer from such a level of optimism bias as to be meaningless. Is that a fair assumption?
Archie Robertson: No, I do not think so. Having come to my current role from the private sector, I can say that exactly the same approach is used to make sure that private sector organisations give themselves headroom to achieve their project objectives.

Q90 Mr Davidson: Yes, we already know that we should not believe the private sector, but we expected some degree of veracity from yourselves. On timing, paragraph 1.15 says, that: "the Agency stated that it was a priority to deliver projects more quickly and set a target in 2002 to reduce the time taken". It continues, "The Agency does not monitor whether it is achieving this target." Even when I was in a local authority, we used to have slippage charts and so on for school buildings. Are you saying that you do not make measurements? From what we heard earlier, I can understand why slippage is a key

[3] Ev 23–24

part of the programme, because without it you would not be able to get a quart into a pint pot. Not measuring things is ludicrous, however.
Archie Robertson: Every project has a timetable and my business plan sets out what will be delivered on each scheme.

Q91 Mr Davidson: Did you agree to the sentence that I quoted?
Archie Robertson: There is not a specific measure against which one can monitor slippage, but a number of things take place and those include the setting of the progress points to that ensure that delivery is achieved.

Q92 Mr Davidson: The Report says, "The Agency does not monitor whether it is achieving this target." The target is the one concerned with delivering projects more quickly and on time, and you agreed with that statement. In those circumstances, how can we have any confidence?
Archie Robertson: I monitor what happens on every project, and I monitor the delivery of progress through the use of the progress points target. In my view, those are good surrogates for the measure that we are discussing, but I accept that they do not specifically correspond to the measure to which the NAO referred.

Q93 Mr Davidson: Can I ask for clarification from the NAO on the questions of "Proceed or not proceed" and of gateways? Is the situation in the roads department equivalent to that in, say, the Ministry of Defence, where things will not be proceeded with if they are seen to be not worth the money, given what is known and the process of risk that has been gone through, or are we in a situation with roads where they have a momentum and life of their own, and roll on regardless and that, beyond the initial stage, there is not really any meaningful stop-go decision-taking point?
Geraldine Barker: Our main criticism is that, at the moment, you cannot measure what progress is being made for the amount of money that you spend. It is therefore quite hard to see whether sufficient progress has been made.

Q94 Mr Davidson: I understand that point, but although there is a clear "Go or not go?" stage in the MOD—and we are just getting to that stage with the aircraft carrier—I am not clear whether there is an equivalent here, whereby you have a process of estimates, derisking and then a final "Go or not go?" estimate.
Sir David Rowlands: Perhaps I can help. The position is absolutely clear in terms of the guidelines set out by my Department. At that final point—when you know the price of the scheme and therefore its value for money—if it is poor value for money, as I said to Mrs Goodman, it may not go to the Ministers without the agreement of the Permanent Secretary as Accounting Officer. If the scheme is low value for money, it may not go through to Ministers for final approval without the agreement of the Director General concerned.

Q95 Mr Davidson: Can I just be clear about that, then? Once that is decided, do I take it that there are no subsequent cost increases?
Sir David Rowlands: This is at the point at which the contract has been to market and let, and you know the price to plus or minus 5%.

Q96 Mr Davidson: Am I therefore right in saying that the cost does not suffer from optimism bias at that stage?
Sir David Rowlands: No, because by then you have gone to market. You have a fully designed scheme and you have had a price bid back to you, and that is basically the cost.

Q97 Mr Davidson: So the optimism bias is out. Are you therefore saying that from stage onwards there are no cost increases?
Sir David Rowlands: If I may take you back to the table in appendix 1 of the NAO Report, you will see that at the works commitment stage—that is, when the contracts have been let and the risk assessment has been done—all that is being added on is 3%. There are a few variables left in the cost of a road—for instance, we do not know what the compensation costs will be.

Q98 Mr Davidson: Finally, what percentage of the cost of the project has on average been spent by that stage?
Sir David Rowlands: At the point at which you have gone to market and let a contract, you will have spent about 10% in preparatory and scheme design costs.

Q99 Mr Davidson: So, it is credible in those circumstances to block the project—it is not as if you have spent so much money that that is inconceivable.
Sir David Rowlands: That is right.

Q100 Chairman: You mentioned early contractor involvement, which you said was delivering benefits. Mr Robertson, would you like to look at paragraph 3.20, on page 24? Six years after this apparently wonderful scheme was introduced in 2001, we are still waiting for a proper evaluation. Why is that?
Archie Robertson: We are evaluating every scheme as it comes through, but this is fairly new, in terms of the way in which it is being applied.

Q101 Chairman: Fairly new? 2001?
Archie Robertson: If you take on board a contractor for early contractor involvement, you are taking him on board well before the point at which construction starts. He is coming on to take you through the public inquiry and that whole process of orders, and he then does his target cost, so there is quite a lead-time before you have enough projects—
Sir David Rowlands: The answer, Chairman, is on page 14, where you will see the scheme progress across the target seven-year period. You will see that on this schema, early contractor involvement

contracts are awarded after one year and five months, so we are still about five years away from actually opening to traffic.

Q102 Chairman: When do you think we are going to be able to evaluate the project then?
Archie Robertson: The recommendation of the NAO is that we should evaluate it this year. That is entirely fine with me, because I think that we will have enough schemes through by then to be able to make a judgment about the success of ECI. I frankly doubt whether there are any other ways of doing contracting, given the way in which we have moved forward and how we can use ECI better.

Q103 Chairman: This is key finding five, is it? What is the view of the NAO on this? When can they do this, do you think?
Geraldine Barker: As we said, we think that it will be possible to start doing this this year.

Q104 Chairman: So you are happy with that, are you?
Geraldine Barker: Yes.
Chairman: All right. Thank you very much, that is fine.

Q105 Mr Mitchell: Sir David, I was a bit flabbergasted when you suddenly chucked Eurofighter in. I wonder why you did that. Was it a touch of petulance because you do not like being in the headmaster's study being told that you are naughty, or was it a feeling of guilt in the sense that you have been naughty but other people are naughtier?
Sir David Rowlands: I do not think that it is guilt. I am owning up to the fact that we need to do better going forward. Relatively speaking, and this is a dangerous thing to say to the Committee of Public Accounts, I am not too concerned with the past—you can see the evidence on that in the NAO's Report—I am concerned about going forward. The schemes that are now on the table at the Highways Agency are different from those that it has largely completed. They are much more complex, much bigger and more challenging. I think we have to move, as we will in the course of 2007, to a world where in the early stages of a Highways Agency scheme's life we do not try to put a single number on the proposal together with some percentage for optimism balance. The agency is working through the risk and the uncertainty, so a scheme in development should probably have a price range rather than a single number that will narrow with time as the scheme design work goes on.

Q106 Mr Mitchell: Okay. We have to accept that the past was a bit of mess, do we not? The Report is about the past. That comparison makes you both look like recovering alcoholics, in the sense that there is a debauched stage, which is found at paragraph 1.3, when schemes are submitted to Ministers for approval and entered into a programme that excludes value added tax and inflation. Paragraph 1.4 states that you add 2.5% for inflation, and inflation costs in the construction industry are substantially higher than that, so it is a belated, perhaps little, recovery. Having come through the debauched stage with no contingency for underestimating costs, which range from 3% to 45% depending on each scheme's stage of development, after a session with "Overspenders Anonymous" you then produce the recovery stage. As Mr Khan says, there are all kinds of professions of good behaviour: "I will not have my pants pulled down"; "I will not mess up in future"; "We will be good and urgently review our 'approach to estimating and will produce revised estimates for all current schemes'."; and even that, "The Agency will only seek Ministerial approval of these increases when it has reviewed them to identify efficiencies, is satisfied that the latest estimate is accurate and cannot be reduced further and that in the view of the Department and the Agency the scheme still offers good value for money." Those are all promises, are they not? They are professions of good behaviour in the future. There is no guarantee of any of it.
Sir David Rowlands: Can I start with the past, where we are not quite as debauched as perhaps you are suggesting? If you go back to paragraph 1.3, it states that the scheme estimate did not include value added tax and did not include the then numbers being used for inflation.

Q107 Mr Mitchell: Just like the Olympics.
Sir David Rowlands: No. We have not forgotten about value added tax and about inflation. The proper provision was made but it was held at programme level for all the programme and not actually taken down to scheme level. The NAO has helpfully broken down the provision at programme level back down to the scheme so that you do an apples and apples comparison, which is why they say—

Q108 Mr Mitchell: These are your explanations for having a few drinks in the past. Are your professions of virtue going to materialise?
Sir David Rowlands: Yes.

Q109 Mr Mitchell: Okay. You have promised us that. It is good to hear that definitely. Let me ask a more sympathetic question. How much of the problem is due to the fact that roads programmes tend to be feast and famine? We came in as a Labour Government and our priorities in public spending were education and the National Health Service, and so the road programme did less well. We were very virtuous, too. We did not like petrol engines, new fangled things like that and pollution. The roads programme, therefore, ran at a fairly low level. Are we paying the price for that? Suddenly it was boosted, four years ago, or whenever the green and environmental groups began to protest about the road problem. Are we paying the price for cutting back on the road programme? I see that you did not have the skilled staff to challenge the costs of the contractors as necessary and that you had difficulties retaining and recruiting staff with the necessary engineering and project management skills.

Furthermore, the Valuation Office did not have the professional qualifications or skills to give you effective valuations. Is that because the staff were run down in the famine stage and then when you wanted to build it up again you found that you could not recruit people?
Sir David Rowlands: The size of the roads programme has gone up and down over the years. Back in 1990, it was £17 billion—in 1997 money—and by 1997, it was down to about £6 billion. It went right down, but has come back up.

Q110 Mr Mitchell: Did you lose staff during that phase?
Sir David Rowlands: The Agency certainly shed some staff to downsize and fit the programme. I must be very careful now: I cannot remember who said that civil servants complaining about politicians is rather like a ship's captain complaining about the sea. It is the job of civil servants to deliver the programme that Ministers want, whatever the size. There might have been a challenge in running numbers down, and there was certainly a challenge in not simply running numbers up, but in dealing with the retirement bulge and ensuring that the Agency had the skills on its side of the table for early contractor involvement contracts. Although they are not leading edge—my personal interpretation is "bleeding" edge, if you are not careful—they are towards the front of doing business. That requires some really good people on the agency's side.

Q111 Mr Mitchell: So you got rid of good people in the famine stage?
Sir David Rowlands: Certainly, some good people went.

Q112 Mr Mitchell: Why can you not get them back again? Are you not paying enough? Are they getting paid too much elsewhere?
Archie Robertson: My challenge is not quantity. We have the people who we need. The challenge is to ensure that—

Q113 Mr Mitchell: But it says in the Report that you have not got the people you need in order to challenge.
Archie Robertson: We need people who can challenge and who are commercially experienced. They will have to come from the commercial market.

Q114 Mr Mitchell: In other words, you have got to buy them in as consultants, rather than employ them?
Archie Robertson: No, I mean that we need people in the organisation who can be sure to know that the consultants are doing a good job for us and can operate as an intelligent client, but not do everything. That requires commercial skills currently available only in the marketplace. I have to buy them at the market rate.

Q115 Mr Mitchell: But you have not got them, have you?
Archie Robertson: I don't have what I need now. That is why I am in the market right now for a new major projects director and why I shall shortly be in the market for a Commercial Director.

Q116 Mr Mitchell: And what about valuation staff?
Archie Robertson: On the valuation staff, we need to take note of the comments made by the National Audit Office. It is not the purpose of the valuation staff to do valuations. That information is also procured from the market. For every land acquisition, we procure two valuations, which the valuation staff integrate with other things.

Q117 Mr Mitchell: The agency uses the valuation office to estimate the cost of land and compensation claiMs So you need valuation staff in that agency to do that job, but you do not have them.
Archie Robertson: May I clarify? The Valuation Office referred to there is not the valuation agency, but the Valuation Office of the Government. We are relying on their advice.

Q118 Mr Mitchell: So you cannot rely on it?
Archie Robertson: We can rely on it, but with the complex road programme we must ensure that we are taking the minimum amount of land to be valued and that we are co-ordinating it in the best possible way in order to decide whether a compulsory purchase order or a commercial deal with the landowner is appropriate. Those are the sort of tactical considerations that go beyond valuation that I expect my people to take.

Q119 Mr Mitchell: Okay, but without your having the qualified staff to contest the contractors' estimates, they are in a position to run rings round you.
Archie Robertson: They would be if no skill were there, but there is skill and we want to build it up. It is not correct to say that we do not have skills at the agency.

Q120 Mr Mitchell: But you do not have enough skills to challenge their estimates effectively.
Archie Robertson: I do not agree with that. I want to move forward and make sure that we continue to have the skills to be able to challenge in an increasingly demanding environment. As I have said, the infrastructure market is very, very hot and we shall look back on this period as one of considerable development not just in roads, but other forms of transport, sports stadiums and everything else. The market is tight—in people terms

Q121 Mr Mitchell: You promise that you will toughen up, but so far in response to this kind of problem and the need to toughen discipline, the only response has been to juggle the programme and to either postpone schemes or accept delays, thus keeping within somewhat unrealistic targets. That is juggling; it is not control.
Archie Robertson: I have not been juggling the programme.

Q122 Mr Mitchell: Who is juggling the programme?
Archie Robertson: The only change that has been made to the programme is the consequence of regional bodies being invited to identify their priorities for roads, alongside the other priorities that they have.

Q123 Mr Mitchell: Delays in schemes mask the impact of cost increases. The Report says that the Agency has been able to absorb the cost increases that have occurred because of slippage on schemes and changes being made to the programme to delay other schemes. That is what you are doing. It is set out in paragraphs 1.15, 1.16 and 1.20.
Sir David Rowlands: Perhaps it would help if I said that the NAO was quite clear in its Report that the Agency has not deliberately slipped any schemes to stay within its three-year budget. You may argue with some justice that it is serendipity that other factors forced the schemes to slip to stay within budget, but the agency has not deliberately slipped anything. Going forward, the implicit question is whether the agency or the Department needs to be slipping some further schemes because of the cost increases, to which the genuine honest answer is that I do not know because we have to await the outcome of the comprehensive spending review 2007. We do not know what provision the Department will have going forward to 2010-11. When we see that, we shall be able to take a view about what the Highways Agency programme will look like going forward.

Q124 Mr Mitchell: Recovering alcoholics cannot rely on serendipity, which is what you seem to be doing. I wish to question the schemes for improving contracting arrangements. Paragraph 3.23 reads like fun, and states: "From 2004, it has subjected scheme designs with a significant forecast cost overrun to peer review". "Peer review" is like the Mafia being asked to review the St Valentine's day massacre and report on the effectiveness of bullets and the cost of its machine guns. A peer review—in this industry?
Sir David Rowlands: We are in a bit of trouble now because if we hire a consultant to do this, you will criticise us for using a consultant and, if we use our own resources for a peer review, you would be worried about that as well. The sensible place to be is that, in this case, the agency should itself be subjecting its proposals to detailed scrutiny and challenge. My Department at the centre, as a customer for the Agency's programme, should be similarly doing so and, where appropriate, it should be bringing in outside consulting engineering expertise to help out. It is a mixture of all of that.

Q125 Mr Mitchell: You also have one or two-day—not long—engineering and value management workshops, and: "all Targeted Programme of Improvement schemes are subject to cost challenge annually." The workshops have not involved independent expert challenge and have typically lasted half an hour. What is that? It is a joke.
Archie Robertson: That is one of the reasons why we have established the programme for going forward and why we find the Nichols report helpful in terms of working out how we can take those things and make them better. But the essential premise of the engineering profession is that people compare notes with each other and do that challenge.

Q126 Mr Mitchell: Do you think that the system is effective?
Archie Robertson: Whether they are able to identify anything from that challenge and whether they think that if they sit there for four hours they will have done something better than having sat there for half an hour—
Mr Mitchell: I will stop you there because the Chairman has just told me that I have to recover from the exuberance of my own verbosity. I am sorry; thank you.
Chairman: You are not drunk on words are you, Mr Mitchell? The last questioner is Mr Bacon.

Q127 Mr Bacon: Mr Robertson, I would like to ask you about one particular Highways Agency scheme in the area of Norfolk County Council—the junction of the A11 and the A47 at Thickthorn roundabout, about which we have been in correspondence. One of the things that you say in your letter to me is that the site clearance work started on 1 August 2005. Can you tell me why you wrote that?
Archie Robertson: Because that is what I was informed by people on the ground.

Q128 Mr Bacon: I have a letter from the Norfolk County Council cabinet member for planning and transportation, who tells me that site clearance work at Thickthorn roundabout started in February 2005. When I compare the letters that I have had from you with those that I have had from him, a number of things simply do not tally. Another is the cost estimate. In your letter you say: "Regarding the cost increases, I suspect that your figure of 120%. comes from comparing the estimate of £1.4 million with the present out-turn of £3.05 million". Then you go on: "We have no record of the cost estimate of £1.4 million. The earliest design estimate our consultants have on file is £1.915 million. When the scheme was put to the contractor, their cost estimate was £2.2 million, slightly higher than the original." I think that I am right in taking it that you are saying that the original cost estimate was £1.9 million, that it rose slightly to £2.2 million—subsequently, it rose further to more than £3 million—and that you have no record of the cost estimate of £1.4 million. However, the letter from the country council says clearly: "The county council's project manager does have a copy of an estimate spreadsheet provided by the Highways Agency"—it was April 2004—"with a figure of £1.35 million, and this includes Atkins' fees." How do you account for that difference? Have you had a problem with filing?

Archie Robertson: I cannot account for that because I have not seen the letter that you refer to—

Q129 Mr Bacon: Well, you wrote it.
Archie Robertson: You are talking about the local authority letter.

Q130 Mr Bacon: No, you wrote the letter to me that said that you had no record of the cost estimate of £1.4 million. It says "Highways Agency Chief Executive" at the top—that is you is it not?
Archie Robertson: Sorry, but you are comparing that with the letter from the county council.

Q131 Mr Bacon: Yes; obviously you have not seen the county councillor's letter. You are saying that you do not have any record of an earlier cost estimate; the county council say that it does and that it is from you and your agent Atkins. I come back to my question: do you have a problem with filing?
Archie Robertson: Well, it may be that we do as far as that particular one is concerned. I am more than happy to look into it, but I do not have a generic problem with filing. I am sorry about this one, and I would like to look into it.

Q132 Mr Bacon: When you say that you have no problem with filing, do you mean that you do not have any objection to it?
Archie Robertson: Generally, when I ask a question about something that has happened in the past, I get the answer that I want. It is always disappointing to have to write that we do not have a record of something and it is preferable to get to the bottom of it.

Q133 Mr Bacon: I am not clear about a number of things from the two accounts that I have had. Rather than take up the Committee's time, would it be possible for me to write to you through the Committee Clerk with some specific questions? Would you then send the Committee a note with the answers?
Archie Robertson: Of course.[4]

Q134 Mr Bacon: That would be very kind. I have one other question for Sir David. It is a more generic question about how the funding process works—in particular the regional funding allocations. From their own areas, most Members will be familiar about how the regional funding allocation helps prioritise schemes according to their regional importance. What interests me is the effect that that has on schemes that are plainly not of regional importance, but may be of huge local importance. The example I have in my mind is the A140 which used to be a trunk road. Most people would acknowledge that it is not a "regional priority". It is not of strategic regional significance, although with the growth of Yarmouth one might begin to contest that at some point in the future. But that is not the point. No one really contests that, but it is of huge local importance. It is the artery between two county towns: Norwich in Norfolk and Ipswich in Suffolk. At the moment every morning there are literally three mile tail-backs through Long Stratton, one of the main villages in my constituency. Yet under no circumstances would it ever qualify under the regional priority. It is as if a funding formula has been devised that would ensure that such schemes that are of huge local importance would never get built. Are you aware of this problem? I hope that you are because I went in to see the Roads Minister some time ago with a group of people from the area and she seemed to think that it was a problem. She has since resigned. Whether that was in despair at not being able to help me, I am not sure. Could you just comment on this, Sir David. It is obviously something that affects a lot of people in different parts of the country and is a generic problem.
Sir David Rowlands: Can I make two comments? I believe, my Department believes and my Ministers believe that the regional funding allocation process represents a genuinely worthwhile step forward by comparison with what used to be the arrangements. To oversimplify it slightly, London was deciding priorities rather than the regions. We are consulting with the regions about how to improve the funding allocations. There are probably at least two essentially interesting dilemmas for the regions. One is the one that you describe. I have had that put to me directly on some of the regional visits that I have been on. Small schemes, which are locally important, do not figure in the great scheme of regional priorities, so how will they ever get built? Part of the answer may be to increase the size of schemes which we allow to be funded through the integrated transport bloc rather than through the regional funding allocations. That is one set of questions to which we need to consider whether the answer needs to be slightly different. There is another dilemma known as the whales in the pond. For example, there is the Chairman's problem with the A46. These are very large schemes. There is a dilemma as to how one fits those within regional funding allocations. It is a worthwhile step forward, but there are two dilemmas. One is the very small schemes and whether they will ever figure in regional priorities and the second is very large schemes which are difficult to fit within the regional funding allocation. We are talking to the regions now about how we can further develop the RFA mechanism. I think that my Ministers will want to look at both of those elements. But that is not promising you an answer. It is promising you that we look at it.

Q135 Mr Bacon: No, I realise that this is straying rapidly towards policy, but you are essentially saying that we should not be astonished if there are further refinements in this process.
Sir David Rowlands: I should not be astonished if either there are some further refinements to the process or even if some regions come back because we are going to talk to them about their priorities again in 2008 and perhaps reshape some of the existing priorities. They are not committed to every

[4] Ev 24

last dot and comma of what they have already told us since this goes out to 2015. If they want to come back and tell us that they have changed one or two of the priorities, provided that that fits within the funding allocation that we suggested they have, that is fine, because the essential position for my Ministers is for the regions to tell us what their priorities are and we will be guided by them. We made very few changes after we got back the RFA priorities from the regions.

Q136 Mr Bacon: I am not a region. However, I cannot resist the opportunity to tell you what our priorities are, which is to get the A140 built. Just for the record, may I tell you that all the planning work is done? It is completely oven-ready and it could go the moment you provided the funding.

Sir David Rowlands: There it is.

Q137 Chairman: I think that concludes our hearing. Whatever the reason, the fact is that your costings are off by a mile. There is slippage to the right of these projects. The Comptroller and Auditor General is usually very careful about his summing up of agencies. To have him say that your record is not absolutely hopeless is, frankly, pretty damning, despite the courageous efforts of Sir David to act as an air raid shelter for you. That leads me to thank you, Sir David, as I believe that this is your last hearing.

Sir David Rowlands: Unless you call me back, yes, and I am not leaving a forwarding address.

Chairman: On behalf of the Committee, I thank you for your outstanding record of public service and your long career, for which we are most grateful.

Sir David Rowlands: Thank you.

Memorandum submitted by the Council for National Parks

1. The Council for National Parks (CNP)[1] understands that the Committee of Public Accounts is meeting on Monday 26 March to discuss the National Audit Office (NAO) Report[2] on estimating and monitoring the costs of building roads in England. We hope that the following points are helpful to the Committee's consideration of this important issue.

2. The costs in the NAO Report were based on July 2006 figures with the Mottram Tintwistle Bypass (MTB)[3] estimated at £106 million.

3. However, a report[4] by Mike Nichols, Chairman and Chief Executive of the Nichols Group, on cost estimating and the management of the Highways Agency's major roads programme was published on 14 March, the day before the NAO Report. This has a ministerially approved figure of £184 million for the MTB.

4. Meanwhile, there is an imminent public inquiry (expected early summer 2007) into the line orders for the MTB. Due to the large scale opposition to the plans the inquiry is expected to be lengthy and expensive. This opposition includes various statutory bodies, such as the Peak District National Park Authority, Natural England and local authorities, as well as CNP and others.

5. The Regional Funding Allocation (RFA) has the scheme programmed for funding and construction in 2013. This week the Executive Board of the North West Regional Assembly will be considering the RFA, which has to be reviewed within two years of the original allocation (June 2006). Estimates of costs for the MTB have escalated dramatically, as revealed by both the NAO and the Nichols Reports, and the RFA in the North West is now significantly over-budget.

6. Considered alongside the conclusions from the Eddington Report[5], these reports should lead to a fundamental questioning of the value for money of such schemes.

7. Given the above, CNP questions whether a lengthy and expensive inquiry for the MTB line orders is a wise use of public funds.

Ruth Chambers
Acting Chief Executive

21 March 2007

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[1] CNP is the national charity that works to protect and enhance the National Parks of England and Wales, and areas that merit National Park status, and promote understanding and quiet enjoyment of them for the benefit of all.

[2] National Audit Office, *estimating and monitoring the costs of building roads in England*, March 2007.

[3] The MTB is a scheme that would cause adverse impact to the Peak District National Park.

[4] Review of Highways Agency's Major Roads Programme, Mike Nichols, March 2007 http://www.dft.gov.uk/pgr/roads/nicholsreport/

[5] Transport's role in sustaining the UK's productivity and competitiveness, Rod Eddington, December, 2006 http://www.hm-treasury.gov.uk/independent_reviews/eddington_transport_study/eddington_index.cfm

Memorandum submitted by Transport 2000

1. Introduction

1.1 Transport 2000 is an independent campaigning and research body that represents the key transport interests of around 40 environmental groups, transport organisations and transport unions. Transport 2000's mission is to find sustainable solutions to transport problems, solutions that reduce the social and environmental impact of transport.

1.2 Transport 2000 contributed to the National Audit Office inquiry into *Estimating and monitoring the costs of road building in England*, as did Road Block, which is now part of Transport 2000.

1.3 The *Review of Highways Agency's Major Roads Programme*, report to Secretary of State by Mike Nichols (the Nichols report), published the day before the NAO Report on 14 March 2007 included the latest Highways Agency cost estimates as February 2007. This showed that many scheme cost estimates had substantially increased since costs data was collected for the NAO Report in July 2006. For instance the M1 widening costs had increased £1.421 billion (or 38%) in the eight months between the Reports (see below and the spreadsheet on page Ev 21).

1.4 Transport 2000 notes the steps that the Department says it is taking to tackle cost increases, but believes that these measures are not effective enough, and do not address cost increases with any sense of urgency or at the appropriate stage. The NAO and Nichols reports are evidence to show that ministers are reluctant to withdraw funding for road schemes that go over budget, and have so far approved all cost increases (with the exception of A303 Stonehenge, which is under review). This is in contrast to the numerous tram schemes that have had their funding withdrawn.

1.5 Costs increases are also examined too late, at the end of the process, after statutory procedures have been gone through, when large amounts of public money have been spent on progressing the schemes through the planning processes. Decisions on cost increases must come sooner, and must be transparent with a willingness to remove funding. Transport 2000 is not convinced that the 3-approval stage processes the DfT have in place are adequate to deal with cost increases and will not prevent wastes of public funds.

2. Cost Increases Since the NAO Report

2.1 The ministerially approved costs in the NAO Report were correct as of July 2006. However the Nichols report has the latest estimated costs of Highways Agency schemes, as from February 2007. Costs of some local authority roads have also significantly increased since the NAO Report was published (see below).

2.2 Most significantly in Annex 12 of the Nichols report[6], it was revealed that the estimated costs of the M1 widening contracts had risen to £5.125 billion which is £1.421 billion up from the ministerially approved costs of £3.704 billion in the NAO Report of July 2006, or 38% increase. A full spreadsheet of costs (including TPI programme entry costs) is attached.

M1 widening	*Ministerially approved cost in NAO report as of July 06—£m*	*Latest estimated cost in Nichols report as of Feb 06—£m*	*Increase from NAO to Nichols—£*	*Increase from NAO to Nichols—%*
J21—J30	1,915	2,521	606,000,000	32
J34N—J37	246		See below	
J37—J39	224		See below	
J34N—J39 (combined above two contracts)		744	274,000,000	58
J10—J13	382	625	243,000,000	64
J39—J42	202	301	99,000,000	49
J6a—J10	289	289	0	0
J32—J34S	139	235	96,000,000	69
J30—J31	135	178	43,000,000	32
Junction 19	123	152	29,000,000	24
J31—J32N	29	68	39,000,000	134
J31—J32	20	12	−8,000,000	−40
Totals	£3,704,000,000	£5,125,000,000	£1,421,000,000	38%

[6] Review of Highways Agency's Major Roads Programme, Report to Secretary of State by Mike Nichols, 14 March 2007—http://www.dft.gov.uk/pgr/roads/nicholsreport/nicholsreport

2.3 There were other cost increases in the Nichols report (this time ministerially approved) which were not included in the NAO Report. The latest ministerially approved budget for the extremely controversial A628 Mottram to Tintwistle Bypass has increased from £910 million at programme entry in 2003, to £106 million in the NAO Report in July 2006, and up to £184.31 million in Feb 07 in the Nichols report—a doubling in cost since programme entry four years ago with the scheme about to go through an expensive public inquiry (see below). Similarly the A46 Newark—Widmerpool scheme has increased from £82 million at programme entry, to £2210 million in the NAO Report, to £317 million latest estimate in the Nichols report.

3. Impact of Government Inaction on Cost Increases

3.1 **Highways Agency schemes**—The Highways Agency's A628 Mottram to Tintwistle Bypass outlined above is progressing as it was included in the North West region's Regional Funding Allocation in January 2006 with the region proposing a delay to the programmed start of works until 2013. This delay was accepted by the Secretary of State for Transport in July 2006[7]. However it was prioritised in the RFA by the region and the Secretary of State at the old £106 million cost, and its position in the RFA has not been reconsidered in the light of the significant cost increase.

3.2 Now that the costs have doubled it is now about to enter a major public inquiry. The inquiry will be lengthy and expensive due to the controversial nature of the scheme, passing through the Peak District National Park. The expense of the inquiry will not only fall on the national taxpayer, who will pay for the Highways Agency and the inquiry running expenses (estimated to be around £2 million), but other bodies funded by the taxpayer will be objecting to the scheme—such as the Peak District National Park Authority, Natural England, Environment Agency, and local authorities. Significant expenses will also be incurred by the National Trust, Council for National Parks, CPRE and other bodies, who are all objecting. The cost increase represents the ideal opportunity to pull back from an expensive public inquiry when the scheme is not programmed to be funded and start work until 2013, and to investigate lower cost alternatives.

3.3 **Local authority schemes**—There are significant impacts of DfT inaction on cost increases of local authority road schemes. The NAO highlighted a new approval stage in the DfT's approval process—Conditional Approval[8]. This stage comes after the statutory procedures but before tenders come back and final approval is given. Between first approval—Programme Entry—and Conditional Approval there is a four to six year period where the scheme is progressed through the statutory procedures and the DfT are aware of cost increases and yet do nothing about them. This means that local authorities go through the expense of public inquiries and gaining planning permission, without knowing whether the funding will be available at the Conditional Approval stage. Since this new approval stage was introduced in April 2005, not one road scheme has had its cost increases rejected at this stage, whilst tram schemes have had funding withdrawn. Transport 2000 believes that it is unlikely that funding will be withdrawn at such a late stage after such a lengthy process and so much money has been invested in progressing a scheme, and political momentum has built up. Cost increases must be examined robustly and transparently when they occur.

3.4 When granting Programme Entry for schemes, the DfT will always include in its settlement letter to the local authority conditions such as: "Ministers accept the case for the scheme . . . and will be prepared to fund up to £47.1210 million of the scheme's costs with the following provisions: The gross and net costs of the scheme remain unchanged."[4]

The DfT is therefore covered legally if it wanted to withdraw funding for schemes. The above wording is taken from the settlement letter from GOSE to East Sussex County Council for the Bexhill to Hastings Relief Road, which has just doubled in cost from £47.12 million at Programme Entry, to £89 million in February 2007[10]. This scheme was included in the NAO report at a cost of £51.65 million. Under the present arrangements however, the cost increase will not be examined until some years later, after the scheme has gone through the statutory procedures, and comes back for Conditional Approval. This process could take four years and cost taxpayers over £2 million.

3.5 Similarly the Weymouth Relief Road has increased from £54.567 million at Programme Entry to £77 million just two years after approval. Yet the DfT has said that they will not decide on the cost increase until the scheme comes back for Conditional Approval which could be several years:

> "*Dorset will be producing a Major Scheme Business Case following the requirements of our draft major scheme guidance for local authorities seeking conditional approval (a copy of which can be found on our website). We're expecting them to submit this in the first half of next year. This will provide the basis for considering the cost increase. A decision on Conditional Approval would follow assuming Dorset secure statutory powers to deliver the scheme.*"[11]

[7] http://www.dft.gov.uk/pgr/regional/strategy/rfa/response/lettertothenorthwestregional3775

[8] Para 3.8 of NAO Report.

[9] GOSE LTP settlement letter to East Sussex County Council, Dec 2004—http://www.dft.gov.uk/pgr/regional/ltp/capital/ltpsdec2004/southeast/eastsussex

[10] East Sussex County Council press release, 12 February 2007.

[11] Email from Mike Biskup, DfT, to Rebecca Lush of Transport 2000, 12 Dec 2006.

The scheme is facing significant objections from Natural England and others, and is likely to be called-in, and so will face another lengthy and expensive public inquiry without the cost increase examined by DfT, despite knowing about it since November 2005.

3.6 These costs are not insignificant. Several schemes were not prioritised in the recent Regional Funding Allocations. Two of the local authorities involved—Wiltshire and Cornwall County Councils—are now attempting to recover some of the costs of progressing these schemes through the statutory procedures. It is reported that Wiltshire's costs for the aborted Brunel Link and Harnham Relief Road amount to some £1.75 million, which will have to be paid for by the local taxpayer.

4. Conclusions

4.1 Costs have increased hugely since the NAO Report, as revealed in the Nichols report and knowledge of local authority schemes. M1 costs have increased 38%—£1.421 billion alone.

4.2 DfT decision making on cost increases is not transparent, and comes too late in the process. Assessing cost increases only at the Conditional Approval stage means that over budget schemes are taken at great expense through lengthy statutory planning processes, with cost increases "sat-on' and no action taken.

4.3 Cost increases must be examined when they occur, and decision making must be transparent, with a willingness to withdraw funding.

4.4 Regional Funding Allocations do not deliver robust analysis of cost estimates, and rely on scheme promoter's own estimates (which are known to be frequently under estimated).

Rebecca Lush FRSA
Roads and Climate Campaigner
Transport 2000

26 March 2007

M1 NICHOLS REPORT

Scheme	*Date of TPI Entry*	*Cost TPI entry £m*	*Cost July 2006 NAO Report £m*	*Cost February 2007 Nichols Report £m*	*Increase NAO to Nichols Report £m*	*Increase NAO to Nichols Report Percentage*	*Increase TPI Entry to NAO Percentage*	*Increase TPI Entry to Nichols Percentage*
M1 J21–30	Apr 2004	1,915	1,915	2,521	606	32	0	32
M1J34N to J37 Widening	Mar 2005	246	246					
M1 J37 to J39 Widening	Mar 2005	224	224					
Combined total M1 J34N to J39 Widening		470	470	744	274	58	0	58
M1 J10 to J13 Widening	Jul 2003	382	382	625	243	64	0	64
M1 J39 to J42 Widening	Mar 2005	202	202	301	99	49	0	49
M1 J6a to J10 Widening	Jul 2003	241	289	289	0	0	20	20
M1 J32 to J34S Widening	Mar 2005	139	139	235	96	69	0	69
M1 J30 to J31 Widening	Mar 2005	135	135	178	43	32	0	32
M1 J19 Improvement	Feb 2003	100	123	152	29	24	23	52
M1 J31 to J32 Northbound Collector/Distributor	Mar 2005	29	29	68	39	134	0	134
M1 J31 to J32 Widening	Mar 2005	20	20	12	−8	−40	0	−40
TOTAL		**3,633**	**3,704**	**5,125**	**1,421**	**38**	**2**	**41**

Supplementary memorandum submitted by the Highways Agency

Question 69 (Mr Philip Dunne): *Cost of Agency payments to HM Treasury for VAT, which is non recoverable, aggregates tax and stamp duty*

The figures provided in this response are dependent on the life and scale of projects we are carrying out which vary over time.

VAT (Unrecoverable)

The impact of unrecoverable VAT has been assessed for the years requested as follows:

Year	*Annual Expenditure £Millions*	*Unrecoverable VAT £Millions*	*% unrecoverable*
1997–1998	£1,138.2	£38.8	3.4%
1998–1999	£980.7	£35.0	3.6%
1999–2000	£1,182.1	£41.5	3.5%
2000–2001	£1,483.1	£51.0	3.4%
2001–2002	£1,577.2	£56.2	3.6%
2002–2003	£1,698.3	£54.1	3.2%
2003–2004	£1,532.7	£68.3	4.5%
2004–2005	£1,704.8	£62.4	3.7%
2005–2006	£1,990.0	£61.4	3.1%

The Agency has recorded separately unrecoverable VAT since the introduction of a new Oracle accounting system in May 2002. Prior to this the unrecoverable VAT was not identified as a separate expenditure item and as such the amounts shown are estimated based upon the average post-May 2002. The values shown relate to programme expenditure only.

The annual expenditure is sourced from the Agency annual accounts for the years 1998 to 2006 with the 1997–98 figures being estimated resource amounts based upon the appropriation accounts for that year. Each year reflects the total expenditure excluding resource non-cash items (mainly cost of capital and depreciation).

The large increase in the percentage of unrecoverable VAT in 2003–04 was caused by a change to the accounting treatment of capital lands provisions, adjusting for this would see the percentage drop to 3.9%.

Aggregate Levy

This tax was introduced in the March 2000 Budget Statement with effect from 1 April 2002. The impact of the Aggregate Levy has been deduced for the years requested as follows:

2002–03	£4.5million
2003–04	£4 million
2004–05	£3.5 million
2005–06	£5 million

The impact of the 2007 budget increase in the Aggregate Levy has been assessed to be within the range £20 million to £30 million depending on the detailed implementation of the future programme.

The Agency does not make direct payments to HM Treasury or purchase aggregates directly from aggregate suppliers. Payments for this levy are made through our supply chain.

The Agency encourages the use of recycled aggregates in a wide range of uses which are exempt from the Levy. As long as the performance of the recycled material meets our specification requirements, we do not record its precise origin, ie that it is recycled or a primary aggregate. Accordingly we can only estimate the amount being paid through the supply chain for the Aggregate Levy. The shortage of suitable recycled aggregate available is likely to result in a similar price to the ex-works price for primary aggregate plus the Aggregate Levy.

Landfill Tax

The impact of the Landfill Tax has been deduced for the years requested as being within the range of:

		Standard Rate	Lower Rate
1996–97	£0.5 to £1million	£7 per Tonne	£2 per Tonne
1997–98	Less than £0.5 million	£7 per Tonne	£2 per Tonne
1998–99	Less than £0.5 million	£7 per Tonne	£2 per Tonne
1999–2000	£0.05 to £0.1 million	£10 per Tonne	£2 per Tonne
2000–01	£0.4 to £0.8 million	£11 per Tonne	£2 per Tonne
2001–02	£1.0 to £2.0 million	£12 per Tonne	£2 per Tonne
2002–03	£3.0 to £6.0 million	£13 per Tonne	£2 per Tonne
2003–04	£2.5 to £5.0 million	£14 per Tonne	£2 per Tonne
2004–05	£2.2 to £4.5 million	£15 per Tonne	£2 per Tonne
2005–06	£3 to £6 million	£18 per Tonne	£2 per Tonne

There are two rates of landfill tax the standard and lower rate. The lower rate applies to inactive waste such as rocks and soil with the standard rate applying to all other waste.

The payments for Landfill Tax are not paid directly to HM Treasury by the Agency but again are made through our supply chain as a result we do not record a breakdown of the two rates.

Stamp Duty

The Secretary of State is not liable to pay stamp duty in relation to the properties acquired as part of his roads related activities.

Question 86 (Mr Ian Davidson): *Value for money calculations based on the original costings for a number of schemes, with a re-examination in light of the actual costs. And could the NAO check the calculations to see whether schemes end up being moved between categories or whether schemes might not have been proceeded with had we known when the go-ahead was first given what we knew in the end*

This response provides an analysis of the benefits to cost ratio of schemes post construction compared to the estimate at the point when the scheme entered the TPI. We undertake a preliminary estimate of the benefits one year following the opening of schemes and a final evaluation after five years. The Agency introduced Post Opening Project Evaluations (POPE) in 2005 and are continuing to develop its application. The following table shows the results from the one year Post Opening Project Evaluations (POPE). The benefits identified from this review are subject to confirmation with more data after five years:

TPI No	Scheme	BCR at TIP entry	BCR from POPE process
19	A27 Polegate Bypass	2.8	3.4
22	A43 Silverstone Bypass (A43 M40 - B4031 Dualling)	4.5	6.2
23	A43 Whitfield Turn - Brackley Hatch Improvement (A43 M40 - B4031 Dualling)	2.8	3.8
12	A6 Clapham Bypass	2.0	2.2
9	A6 Great Glen Bypass	2.0	2.0
7	A5 Nesscliffe Bypass	2.4	4.3
25	A46 Newark - Lincoln Improvement	2.6	2.4
11	A6 Rothwell - Desborough Bypass	3.2	0.6
10	A6 Rushden & Higham Ferrers Bypass	9.5	1.8
21	A41 Aston Clinton Bypass	3.0	3.0
35	A1033 Hedon Road Improvement	6.6	2.2
13	A6 Alvaston	3.5	4.0
34	A650 Bingley Relief Road	2.3	2.5
26	A63 Selby Bypass	4.8	2.8
20	A34 Chieveley/M4 J13 Improvement	3.8	2.0
14	A10 Wadesmill Colliers End	4.5	4.0
66	A1 Stannington Junction	N/A	2.9
4	A2 Bean - Cobham Phase 1 Bean - Tollgate	1.5	21.8

All but one scheme have a benefit to cost ratio (BCR) in excess of one which means that the benefits are greater than the cost of the scheme. All but two schemes have a BCR in excess of two which is considered high value for money. The A2 Bean Cobham scheme has a BCR substantially higher than the estimate at TPI entry.

The scheme which has a BCR below 1 is the A6 Rothwell—Desborough bypass. Despite some cost increases on this scheme the prime reason for the reduced BCR is because the planned reduction in accident rate has not yet happened. However, the current BCR is only based on one year's accident statistics.

The A2 Bean Cobham scheme has a substantially higher BCR than planned which is due to the scope of the project being revised to focus on those parts which generated the greatest benefits. In addition the scheme has had a positive impact on Journey Time Reliability across the wider network which was not fully factored into the original assessment.

The results demonstrate that we would still have gone ahead with schemes had we known the final outturn costs prior to TPI entry as virtually all schemes would still have shown high or good value for money. The National Audit Office has been given these figures to check as requested.

Question 133 (Mr Richard Bacon): *A11 junction and the A47 at Thickthorn roundabout*

A letter has not been received so the following is offered in response to the issues raised in the discussion. These were around the date site clearance began and the difference in cost estimates provided by the Agency and Norfolk County Council.

This scheme was undertaken by Norfolk County Council under a Section 6 Agreement with the Agency and was completed in 2006. Some site clearance was undertaken in February 2005 but this was limited because works were not permitted prior to the publication of the Environmental Record of Determination. Extensive site clearance at this stage would have been in breach of our environmental objectives and environmental legislation and so the main site clearance work started in August 2005.

Richard Bacon queried the statement in a letter from Archie Robertson of 23 August 2006 that the Agency held no record of a cost estimate for the scheme of £1.4 million, when Norfolk County Council had said they had received an estimate of £1.35 million from the Agency's consultants WS Atkins in April 2004. A subsequent review of Atkins' files has revealed that there was a record of the £1.35 million figure. It is not clear why the Agency did not have that information to hand at the time of the letter and apologises for this confusion. The Agency makes every effort to provide accurate information and there was no intention to mislead anyone.

The figure of £1.35 million is not the earliest estimate, hence the Agency's references to the earlier estimate of £1.915 million. This figure was reduced to the £1.35 million through changes to the scheme design requested by Norfolk County Council (largely by the removal of retaining walls on the roundabout which reduced the estimate by £0.5 million). For the reasons explained in the correspondence from Archie Robertson to Richard Bacon MP of 23 August 2006[12] and 4 December 2006[13], a direct comparison between the final outturn cost (current estimate £3.05 million) and the initial estimates provided by Atkins is not valid.

Letter from Permanent Secretary, Department for Transport to Mr Philip Dunne MP

Thank you for your letter of 27 March following the Public Accounts Committee hearing on Estimating and monitoring the costs of building roads in England. Your letter asks a few questions which you were unable to ask during the hearing.

1. *Is the Highways Agency able to pass on all its costs to local authority clients for road schemes commissioned by a local authority, irrespective of the cause of the cost over-run.*

2. *Does the Highways Agency notify a local authority client whether a project would attract recoverable or irrecoverable VAT.*

In relation to your first two questions, I should start by explaining that the Highways Agency has no direct responsibilities for the delivery of road schemes proposed by local authorities on the local road network. This is defined as all non-trunk "A" roads, all other public roads (including "B" and "C" roads) and a small number of short, motorway-standard "A" roads in major urban areas are the responsibility of the local highway authority in which they are situated.

[12] Evidence received, not printed.

[13] Evidence received, not printed.

Local highway authorities are responsible for the delivery of improvements to the local road network. This includes scheme design, obtaining the necessary statutory powers, tendering and procurement, construction supervision and monitoring. It is only in a small number of cases that the Highways Agency becomes involved in the construction of a local major road scheme.

Such cases occur, however, where a local road scheme connects with, and requires improvements to, a section of strategic road network for which the Highways Agency is the highway authority. One example of this is the Markham Vale scheme in Derbyshire. The scheme is designed to improve access to this major regeneration area, a 200-acre business/industrial park at a former colliery in Markham. To achieve this, a new motorway junction on the M1 (junction 29A) is to be constructed, as well as a new principal road linking the A619 to Chesterfield.

In such cases as this the Highways Agency will enter into an agreement with the local highway authority on the works to be carried out and the funding arrangements for the improvements on the Highways Agency's strategic road network. Any VAT implications will also be taken into account in the agreed funding arrangements. However, for the large majority of road schemes delivered by local authorities, the Highways Agency has no involvement in either scheme delivery or the VAT implications.

3. *In paragraph 3.6 of the NAO Report (page 22) it states: "the Department will only fund 50% of any of the contingency used" in relation to under-estimates of local authority projects. Does this mean the local authority has to bear the balance of any cost over-run if not funded by the Department.*

Your final question refers to paragraph 3.6 of the National Audit Office Report and asks whether a local authority has to bear the balance of any cost-overrun if not funded by the Department. Local authorities bidding for funds for Local Tranport Plan major projects are expected to include an allowantce for contingencies in the cost of their scheme, For the larger proposals this is based on a full Quanified Risk Analysis (QRA). Schemes are approved on the basis that costs will not exceed the original total for the project.

Requests for additional funds to meet cost increases are considered on a case by case basis, but the Department looks to establish whether these could have been foreseen and prevented by the authority, and what local contribution they could expect to make.

The Department has consulted on proposed changes to the way we approve major local projects, Under these proposals the contingencies for all schemes will be based on a QRA which is proportionate to the scale and risk of the projects. This will continue to be part of the total cost of the scheme that the Department approves. However, we have also sought to recognise the tendency for some promoters to be overly "optimistic" in calculating cost. Currently an additional contingency for this "optimism bias" is added to the scheme cost for the appraisal of the scheme but not for funding purposes. We are proposing in the future the contingency for "optimism bias" would be included in a "risk layer" on top of the agreed budget. It is proposed that 50% of any cost increase within the "risk layer" would be funded by the Department with the remaining 50% funded locally. The Department is currently considering responses to this, and other proposals following the end of the consultation.

Sir David Rowlands KCB
Permanent Secretary, Department for Transport

16 April 2007

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