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Transport Committee

The major road network

Eighth Report of Session 2009–10

Report, together with formal minutes, oral and written evidence

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The Transport Committee

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Report

1 Introduction

1. The major road network is defined by the Department for Transport as "the network of motorways, trunk roads and principal roads that serve the country's strategic transport needs."[1] We have accepted this definition for the purpose of our inquiry. Motorways and trunk roads (nationally significant A-roads)[2] managed by the Highways Agency make up approximately 20% of the major road network. The remaining 80% of the major road network consists of principal roads—other A-roads managed by local authorities.[3]

2. Roads policy and maintenance is a devolved matter apart from issues such as signage and driver training standards. The Scottish Executive, the Welsh Assembly Government and the Northern Ireland Executive are therefore responsible for roads in Scotland, Wales and Northern Ireland.[4] As a consequence, this report is concerned only with the major road network in England.

3. In total, there are 187,000 miles of roads in England, of which nearly 22,000 miles are *major* roads.[5] Just 4,500 miles of these are motorways or trunk roads, managed by the Highways Agency.[6] Local authorities are responsible for the remaining 165,000 miles of public roads, many of which are vital in connecting small communities and isolated towns with the major network.[7] The Annex sets out the Department for Transport's classification of different types of roads in greater detail, and Table 1 below provides an overview of the lengths of different types of major roads.

Table 1: Major road lengths by type

		England		Great Britain	
		Miles	% of total	Miles	% of total
Highways Agency					
Motorway		1,845	8.4%	2,186	7.0%
Dual carriageway		1,626	7.4%	2,156	6.9%
Of which:	*Urban*	*122*	*0.6%*	*165*	*0.5%*
	Rural	*1,504*	*6.9%*	*1,991*	*6.4%*
Single carriageway		1,033	4.7%	3,209	10.3%
Of which:	*Urban*	*55*	*0.2%*	*97*	*0.3%*
	Rural	*979*	*4.5%*	*3,112*	*10.0%*
Total Highways Agency		4,505	20.6%	7,551	24.2%
Local authority managed					
Motorway		25	0.1%	25	0.1%
Principal roads - dual carriageway		2,477	11.3%	2,775	8.9%
Of which:	*Urban*	*1,464*	*6.7%*	*1,644*	*5.3%*
	Rural	*1,013*	*4.6%*	*1,131*	*3.6%*
Principal roads - single carriageway		14,905	68.0%	20,873	66.8%
Of which:	*Urban*	*4,374*	*20.0%*	*4,996*	*16.0%*
	Rural	*10,531*	*48.1%*	*15,877*	*50.8%*
Total local authority managed		17,408	79.4%	23,674	75.8%
Total major roads		**21,913**	**100.0%**	**31,225**	**100.0%**

Source: Department for Transport, Road Statistics Great Britain 2008

1 Annex

2 Motorways and trunk roads are also referred to as the *Strategic Road Network*.

3 See Ev 98

4 Ev 98

5 The figure of 31,261 miles, quoted in the terms of reference refers to Great Britain rather than England.

6 Transport Statistics Great Britain 2009: Road lengths—data tables, http://www.dft.gov.uk

7 Almost all motorways are *trunk motorways* under Highways Agency control except for short lengths of *principal motorway* (25 miles in total) under local authority control. See Table 1.

4. Major roads under local authority control are the 17,408 miles of principal roads, some of which are former trunk roads which have been 'de-trunked', that is transferred from the Highways Agency to local authority control. Trunk roads came into being with the 1936 Trunk Roads Act,[8] but with the 1998 White Paper, *A new deal for transport: better for everyone,* the policy of managing all strategically important roads centrally by the Highways Agency was reversed.[9] The White Paper announced that, of the then 9,356 miles of trunk roads, around 70% had been identified as nationally important routes.[10] The remaining 30% were considered to be of greater local and regional significance, and control of these was therefore transferred to local authorities. It was intended that de-trunking would allow local transport authorities to better integrate these roads with transport policies for their areas as part of local transport plans.

5. It is now more than a decade since the publication of the White Paper. We launched this inquiry in order to assess what had been achieved since 1998, and what still needs to be done to ensure that England's major road network is as effective as possible in supporting the UK economy and meeting the travel needs of individuals, while supporting sustainable development.

6. We would like to thank those organisations and individuals who gave evidence to our inquiry. We are also grateful to our Specialist Advisers, Dr David Quarmby and Professor Jon Shaw.[11]

2 Current road policy

7. The major road network is the most important part of the UK's transport infrastructure. The evidence we received concurred in the view that a well functioning, effective major road network is vital for the UK economy and for meeting the travel needs of individual road users.

8. Since the 1998 White Paper, a number of policy and strategy documents on the major road network have emerged.[12] In 2003, the Department for Transport published *Managing our roads* which set out to identify the challenges likely to affect the road network over the next 20–30 years. This document made clear that capacity improvements to the existing road network, rather than the construction of new roads, would take priority:

> …we cannot continue to try to build our way out of all the problems we face. Instead, we should seek to make far better use of the capacity available. We must also take

8 In 1936, 30 roads were identified as trunk roads and responsibility for them passed to the then Ministry of Transport. Over time, more roads were added to the trunk road network, either through legislation or as a result of construction. In 1994, the Highways Agency was created, and responsibility for trunk roads was transferred to it.

9 Department for Transport, *A New deal for Transport: Better for everyone,* Cm 3950,1998, p 59

10 The White Paper quotes distances in kilometres, thus referring to 15,057 kilometres of trunk roads.

11 Dr David Quarmby resigned as Specialist Advisor to the Committee on 24 June following his appointment as Chairman of the RAC Foundation. Professor Jon Shaw was appointed as Specialist Advisor on 24 June. A declaration of interests made by Dr Quarmby can be found in the formal minutes of the Committee meeting on 20 May, and Professor Shaw's declaration can be found in the minutes for 24 June 2009.

12 Department for Transport, *A New deal for Transport: Better for everyone*, Cm 3950,1998

> advantage of technology as it becomes available. Both infrastructure improvements and technological change take time. We are looking over a long period, but we need to prepare now to ensure that we secure the future benefits we need.[13]

9. The Eddington Transport Study, published in December 2006, examined the potential for strategic transport decisions to affect the productivity, stability and growth of the UK economy over the next 30 years. The study recognised the "very significant environmental and social challenges facing the [transport] sector" and referred to the work of the Stern Review on the challenge of reducing greenhouse gas emissions from transport.[14] Eddington also proposed a set of principles which should govern transport investment decisions, arguing that a cross-modal approach to optimising value for money should always be used. The report argued that the investment decision-making process should be "modally agnostic" rather than declaring a particular mode of transport as intrinsically "more desirable" than other modes. Eddington concluded that relatively small investments, often favouring roads, tended to yield greater benefits, relative to costs, as compared to '*grand projets*' such as high speed rail.[15] Eddington was also sceptical of the idea that transport projects, including road building, could stimulate the economy, instead suggesting that projects focusing on areas where demand outstripped supply would have the greatest economic benefit.

10. *Roads—Delivering Choice and Reliability* was published in July 2008. This Command Paper focused on the need to reduce congestion on motorways and in cities. It committed the Government to the use of new technology and a trial of Active Traffic Management on the motorway network.[16] For congested cities, the aim was to "support innovation, both in sustainable travel and in using demand management alongside significant developments in complementary transport".[17] This document was followed in November 2008 by *Delivering a Sustainable Transport System*, which set out key aims for the transport network as a whole.[18] These aims supplemented the Eddington objectives of supporting economic growth and regional development with objectives for enhancing health, social equality, quality of life and for reducing the climate change impact of transport.

11. The latest policy document relating to the major road network was published in January 2009. *Britain's Transport Infrastructure: Motorways and Major Trunk Roads* announced that Active Traffic Management would be applied to parts of the M6, and its use would be expanded to include new sections of the M42. In addition, the document set

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13 Department for Transport *Managing our Roads,* July 2003

14 HM Treasury and Department for Transport, *The Eddington Transport Study: Volume 2: Defining the challenge: identifying strategic economic priorities for the UK transport system*, December 2006, para 2.4.1

15 HM Treasury and Department fro Transport, *The Eddington Transport Study: The case for action: Sir Rod Eddington's advice to Government*, December 2006

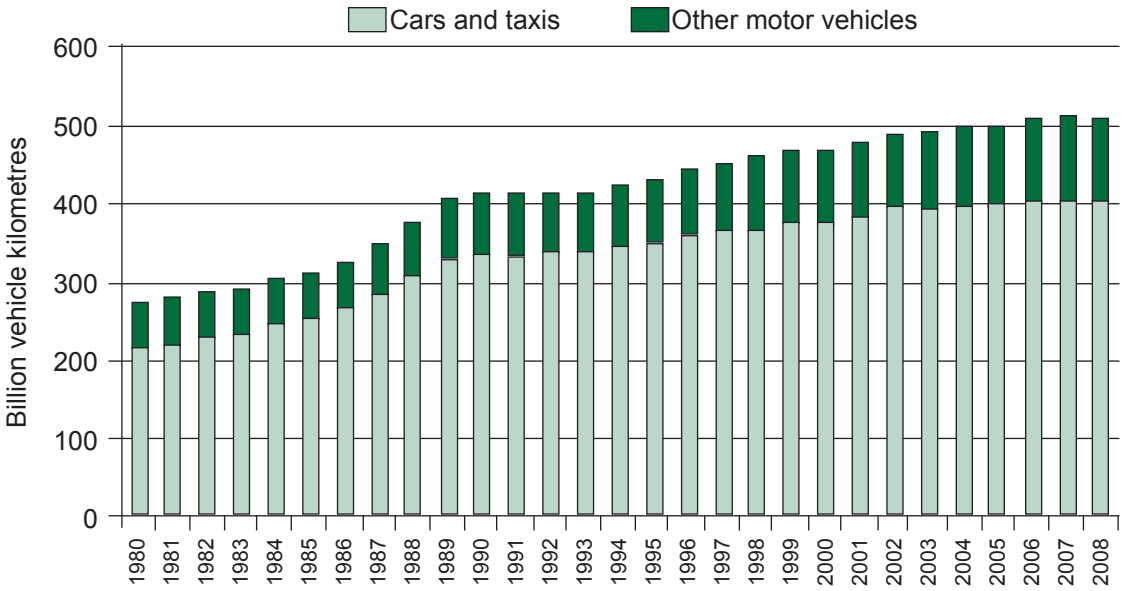
16 Active Traffic Management comprises a series of measures which are aimed at reducing congestion on major roads, primarily motorways. The two main components of ATM are hard shoulder running and variable speed limits. With the former, drivers use the hard shoulder during times of peak congestion with electronic signs above each lane to help inform and direct the traffic. Variable speed limits help to smooth the flow of traffic and prevent a stop-go pattern. Active Traffic Management was trialled on the M42 in the West Midlands from September 2006. The then Secretary of State, Rt Hon Ruth Kelly MP, reported on 25 October 2007 that the M42 trial had been successful, and that the scheme was to be extended. See HC Deb, 25 October 2007, col 20WS; See also: http://www.highways.gov.uk/knowledge

17 Department for Transport, *Roads—Delivering Choice and Reliability,* Cm 7445, July 2008

18 Department for transport, *Delivering a Sustainable Transport System*, November 2008

out the work that would be undertaken as part of the £6 billion road programme announced by the Secretary of State in July 2008. This work is scheduled to include a combination of improvements, widening and hard-shoulder running, which is designed to provide over 520 additional lane miles. The final tranche of work is due to begin by 2015.[19]

Figure 1: Motor vehicle traffic in Great Britain by vehicle type 1980–2008



Sources: Department for Transport, Road Statistics Great Britain 2008, Transport statistics Great Britain Road Traffic and Congestion in Great Britain: Quarter 2 2008

12. These policy documents have, largely, provided a consistent strategy for improving the major road network, focusing on the better use of existing roads along with some construction and road widening projects. The White Paper on High Speed Rail, published in March 2010 was emphatic in its conclusion that the strategic road network cannot compete with rail for inter-city journeys.[20] However, the policy of optimisation rather than expansion of the network has had minimal impact on traffic growth and congestion. As Figure 1 above demonstrates, with the exception of a plateau between 1989 and 1993, and in 2009, coinciding with recessions, there has been fairly steady growth in traffic over the past two decades. While in recent years the growth of car traffic may have slowed, growth of other types of traffic has increased.

3 The wider transport policy context

13. Since the publication of the 1998 White Paper, the Government has, quite rightly, recognised roads policy as only one aspect of a broader transport policy. The Government's strategic aim has been to pursue a more integrated approach to transport in an effort to achieve a more sustainable transport activity. Key objectives have been to

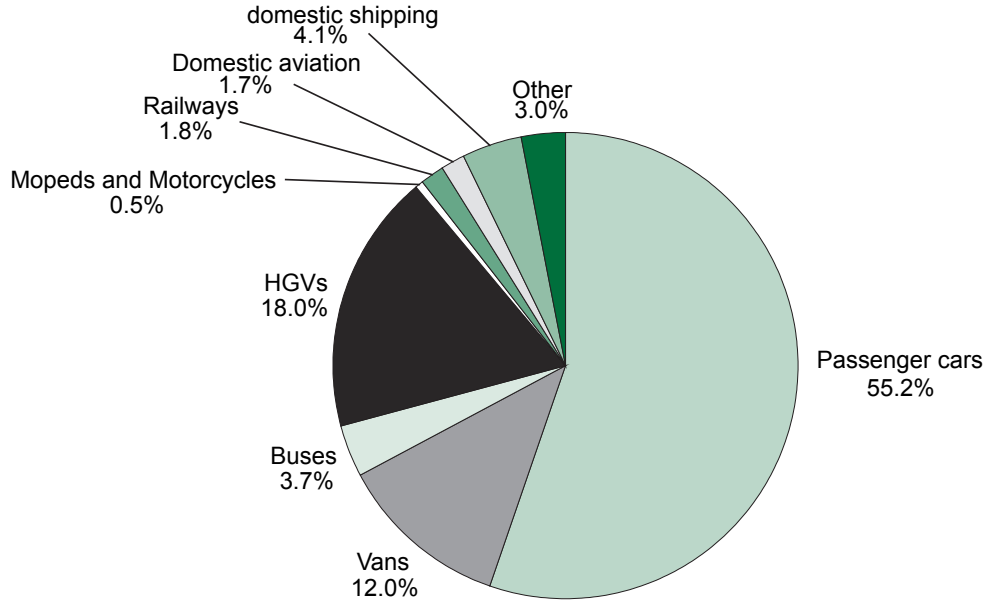
19 Department for Transport, *Britain's Transport Infrastructure: Motorways and Major Trunk Roads*, January 2009

20 Department for Transport, *High Speed Rail,* Cm 7827, March 2010; See for example para 3.16

reduce congestion and emissions. Delivering a genuinely sustainable transport system is an immense policy challenge which arguably has not yet been fully embraced by Government. However, recent announcements on the payment of bus subsidy and, more significantly, high speed rail, demonstrate the Department's commitment to public transport investment. We welcome such investment, as highlighted in our previous reports, but at the same time, believe it is essential to ensure that investment in the major road network is not overlooked, especially in times of constrained public budgets.

14. Not only did we take evidence about how to increase road capacity—through construction or better management—but we also heard from those arguing that more effort should be focused on encouraging a modal shift from cars to other transport modes such as rail and buses in order to reduce the number of vehicles on the roads. The environmental dimension is crucial. Through the Climate Change Act 2008, the UK is committed to reducing total CO_2 emissions by 80% before 2050.[21] The Minister, Chris Mole MP, told us that more than 20% of total UK CO_2 emissions currently come from transport—of which over half is from cars.[22] Altogether, road transport, including vans, lorries and buses, accounts for 92% of transport CO_2 emissions,[23] and some 90% of all greenhouse gas emissions (see Figure 2 below). The Minister also explained that there is an interim target of a 14% reduction in emissions from transport by 2020.[24] He suggested that cleaner technologies were the key to achieving this target, highlighting that "at this stage [cleaner technology] is where our priorities should be focused because we think that is where the most gain is to be made".[25]

Figure 2: Greenhouse gas emissions from UK domestic transport by source, 2008



Source: DECC, UK Emissions Statistics, 2008 final UK Figures, Table 3. Updated version of Figure 2.3 in: Department for Transport, Low Carbon Transport: A Greener Future, July 2009

21 Climate Change Act 2008, Part 1, sections 24-29; See also Explanatory Notes paras 6-8: "the Act gives the Secretary of State a duty to reduce the net UK carbon account for the year 2050 to at least 80% below the level of net UK emissions of targeted greenhouse gases in 1990" (Explanatory Notes, para 6).

22 Q 357

23 Department for Transport: *Low Carbon Transport: A Greener Future: A Carbon Reduction Strategy for Transport*, Cm 7682, July 2009, para 2.15; see also Department for Transport, *Towards a Sustainable Transport Strategy*, Cm 7226, October 2007, p 29

24 Q 357

25 Q 362

15. Other witnesses were less certain that new technologies are capable of delivering quite such reductions in emissions. Stephen Joseph OBE of Campaign for Better Transport emphasised that "new technology is necessary but not sufficient. We will also need to look at a range of other measures, including land use planning and better public transport, and also ways of making better use of road for freight".[26] Ali Clabburn of Liftshare noted that technology had become significantly cleaner over the past 20 years, and yet emissions and congestion had risen steadily during this period. Changes in travel patterns meant that reductions in vehicle emissions through cleaner technology had so far been offset by a growth in passenger transport of all kinds, and there was no reason to assume this pattern would change in the short term. Therefore, whilst we might expect cleaner technology to have a positive impact in the long term, the emphasis now needed to be on changing travel behaviour to reduce both congestion and emissions.[27]

16. We heard encouraging examples of other, low-tech, efforts to encourage more sustainable travel. John Elliot, of TAG (formerly the Transport Advisory Group), pointed to a 20% reduction in traffic at peak times in some urban areas as a result of *Smarter Choices*, a DfT initiative to encourage more sustainable travel choices. John Elliot told us about his own successful work within the Smarter Choices framework, producing a travel plan for Pfizer which had reduced car journeys among employees to and from work by 20%.[28] According to Mr Elliott, such reductions in traffic and congestion in urban areas had significant knock-on effects on the major road network, reducing traffic there also.[29]

17. It was suggested that, despite a number of success stories, particularly in some urban areas, it was unrealistic to expect a significant modal shift across the country. Alan Stilwell, representing the Institution of Civil Engineers and Institution of Highways and Transportation, argued that "it is largely in the urban areas, particularly in the metropolitan areas where there are enormous opportunities to get the package of public transport solutions right so that we can encourage people to use public transport rather than private cars". In many rural areas, people did not have such choices.[30] Outside large metropolitan areas such as London there is a clear convenience factor to choosing a car over other modes of travel. The Association of British Drivers emphasised this point in their evidence, stating that:

> Buses, coaches and trains provide alternatives to the car for some passenger movements, but they do not give the door-to-door convenience of the car. Some 85 per cent of passenger journeys are currently made by car, and it is unrealistic to believe that public transport could provide an acceptable alternative for more than a small proportion of those trips.[31]

18. In addition to the difficulty of persuading motorists to give up the convenience of their car in preference to other modes of transport, capacity constraints on other modes allow

26 Q 222 [Stephen Joseph OBE]

27 Q 222 [Ali Clabburn]

28 Q 200

29 Q 194

30 Q 20

31 Ev 61

only limited scope for modal shift. Professor Stephen Glaister, Director of the RAC Foundation, noted that capacity constraints on the railways are no less severe than those on the road network.[32] Our recent report on priorities for investment on the railways highlighted the critical importance of continued investment in the classic rail network as well as new high-speed lines.[33] The Minister acknowledged capacity problems on the railways as a result of growing passenger numbers but suggested that, for bus services at least, "capacity will respond to the demand".[34] In its recent White Paper on High Speed Rail, the Government estimates that 8% of rail passengers on HS2 will have transferred from cars. It points out that, whereas high speed rail offers the potential to radically reduce journey times between city centres, road building cannot not deliver such improvements.[35]

19. While we heard some scepticism about the possibility of transferring entire car journeys on the major road network to other modes of travel, our witnesses expressed greater optimism about the scope for improving integration between transport modes to facilitate multi-modal journeys. Professor Margaret Bell from the Institution of Engineering and Technology suggested that the integration of different modes of transport was key to persuading people to use more sustainable modes of travel.[36] The AA concurred, but argued that:

> It is disappointing that so little appears to be done to integrate the car into the public transport system—especially when compared to the European mainland. There probably never will be an alternative to the private car because it has overwhelming flexibility but […] for some journeys other modes have significant advantages. […] There is little talk these days of Britain's integrated transport system which was perhaps more an aspiration than national transport plan. The AA believes that much can still be done to exploit integration but not if transport strategies see the car as a problem rather than potential link in a multi modal transport chain.[37]

20. Several witnesses emphasised the importance of a sound land use planning policy in order to achieve successful integration of transport modes. Brian Smith of Cambridgeshire County Council told us that another key factor in encouraging the use of public transport would be to optimise the planning framework to this end. Dispersed and fragmented development made it difficult to create a quality public transport network, and this in turn had a significant impact on the travel choices people made. He suggested that where significant development is coherently planned, it is possible to work with public transport providers to achieve a high level of transport integration and good public transport services, resulting in a 10%–20% modal shift.[38] Dr Metz, former Chief Scientist at the DfT, also highlighted the importance of taking account of the projected population growth,

32 Q 121

33 Transport Committee, Third Report of Session 2009–10, *Priorities for investment in the railways*, HC 38, para 71

34 Q 378

35 Department for Transport, *High Speed Rail,* Cm 7827, March 2010, para 5.43

36 Q 213

37 Ev 132

38 Q 71

emphasising that if this growth gravitated towards existing urban centres rather than rural areas, there were "good prospects of improving public transport to meet their needs".[39]

21. Both Professor Glaister of the RAC Foundation and Edmund King of the AA suggested that there was a limit to the efficacy of planning policy in terms of halting or reversing traffic growth, and indeed in the extent to which it could be used to influence lifestyle choices, such as whether to live in urban or rural areas. Although acknowledging that land use planning policy could help reduce congestion, Professor Glaister argued that the difference it could make was limited. He suggested that the combination of restrictive planning policies in cities and increasing affluence meant that it was not possible to prevent movement out of urban centres and areas of dense population.[40]

22. **Some sustainable travel initiatives, such as Smarter Choices, have delivered tangible and encouraging results in terms of modal shift and integration of different modes. Whilst we recognise that private cars are likely to remain the preferred mode of travel for a significant number of people due to convenience, we urge the Government to intensify its efforts to encourage sustainable travel as part of an integrated transport policy.**

23. **Apart from initiatives such as Smarter Choices, a range of technological improvements as well as improved land-use planning and better co-ordination between developers, transport planners and other parties could make it easier for many people to be less reliant on cars. Such measures are not necessarily costly, and the benefit to cost ratio can be very positive. Whilst the direct impact tends to be greater in urban areas, the knock on effect in terms of reduced congestion and emissions on the major road network is significant also. No single policy instrument will encourage travellers out of their cars. The Department for Transport therefore needs to show greater leadership in bringing together all the disparate professions and bodies to work together to harness the significant benefits of a co-ordinated policy implementation.**

4 The current road network

Coverage and capacity

24. The majority of our witnesses suggested that, overall, the geographical coverage of the major road network—the roads connecting regions, towns and cities—is adequate. A few expressed concerns that certain areas of the country were not well served by the existing major road network. Mick Laverty of Advantage West Midlands suggested that the north-south bias of much of the current road network posed unhelpful restrictions. He argued that east-west connections such as Hull to Liverpool could help reduce congestion on the major road network as a whole as well as benefitting the areas linked.[41] Professor Bell, Science City Professor of Transport and the Environment, Newcastle University, also

39 Q 35

40 Q 128

41 Q 170

suggested that the east-west road network needed improving. She told us that "There are areas, certainly an east-west cross route north of the M62 and in the north towards Scotland, where there needs to be considerable investment".[42]

25. A small minority of our witnesses argued that a much more extensive major roads network was required. The Association of British Drivers claimed that "the UK's motorway network is one-third the EU average in relation to the size of its economy" and that it was in desperate need of expansion.[43] **This country has one of the lowest motorway densities in Western Europe. This puts England at an economic and competitive disadvantage. The remedy for this should include some new initiatives to construct and upgrade motorways.**

26. The 2006 *Eddington Transport Study* concluded that the connectivity of the current road network in the UK is broadly right.[44] Professor Glaister of the RAC Foundation endorsed this conclusion, arguing that: "Plainly, things are connected to each other. The difficulty [Eddington] identified is that in some places there is not enough capacity. There is a road, but you cannot use it reliably".[45] The focus should be on optimising the capacity and efficiency of roads that already exist, although a strategy which focuses exclusively on the maximisation of capacity on existing roads, for example through the use of hard-shoulder running, could be storing up problems for the future on some very busy sections of the network.[46] **The Secretary of State has effectively rejected the main reasoning and arguments in the Eddington report by agreeing to High Speed Two. We recognise that the major problems facing the road network relate to capacity and coverage.**

The standard of major roads

27. There was some concern that the existing major road network is not always of a sufficient *standard* to cater adequately for the needs of road users. Edmund King of the AA, pointed to East Anglia, the A1 north of Newcastle and parts of the South West that lack dual carriageways.[47] Apart from the 1,845 miles of motorway, about 60% of the roads managed by the Highways Agency (motorways and trunk roads) in England are dual carriageway.[48] The Highways Agency explained that roads managed by them—strategic roads—were normally required to be at least dual carriageway to allow overtaking and ensure safe traffic flow at higher speeds.[49] As illustrated in Table 1 above, 14,905 miles of the principal road network in England, i.e. major roads that are managed by local authorities rather than the Highways Agency, are single carriageway, whilst 2,477 miles are dual carriageway.[50] **While we accept that for some stretches of road, dual-carriageways**

42 Q 188

43 Ev 61

44 HM Treasury and Department for Transport, *The Eddington Transport Study: Volume 2: Defining the challenge: identifying strategic economic priorities for the UK transport system*, December 2006

45 Q 94

46 Qq 111 and 112

47 Q 94

48 1,626 miles of non-motorway trunk roads are dual carriageway, as against 1,033 miles of single carriageway; See Department for Transport, *TSGB 2009: Road lengths—data tables,* http://www.dft.gov.uk

49 Q 16

50 All mileage figures are converted from kilometres using the rate of 0.621371192 miles per kilometre.

will not be feasible, this type of road offers benefits for both road safety and journey times. While not every A-road needs to be dual-carriage, the Highways Agency has acknowledged that dual-carriageways should be the minimum standard for the strategic road network that it manages. Over 900 miles of trunk roads are currently single carriageways. Wherever possible the Highways Agency should ensure that these roads are upgraded to dual-carriageways.

Management and maintenance

28. In 2000, the Government set itself a target to eliminate the road maintenance backlog by 2010.[51] Given the importance of the major road network to businesses and individuals alike, it is vital that it is maintained effectively. The Highways Agency is responsible for maintenance on motorways and trunk roads while responsibility for the rest of the road network falls to local highway authorities. Commenting on the way funds for maintenance of the major roads network are prioritised, the Department for Transport told us that the aim is to minimise:

> the whole life cost of the infrastructure to achieve a balance between the cost of construction and maintenance and the benefits delivered by the road. This whole life cost calculation will vary for different roads depending on the type of road and the composition of the traffic using it. Maintaining the whole network in an "as new" condition does not represent optimal efficiency.[52]

This policy is reflected in the Highways Agency Business Plan 2009–2010 which states that the Agency aims "to maintain the network in a safe and serviceable condition in line with the principle of minimising whole life costs".[53]

29. Most witnesses were satisfied with the standard of maintenance on Highways Agency roads. The AA told us that "the motorways and many trunk roads are well maintained by the Highways Agency".[54] However, there were concerns from a number of witnesses about the maintenance of major roads managed by local authorities. The AA claimed that "maintenance sometimes seems to be regarded a secondary concern—especially at local authority [A-road] level".[55] The Highways Agency and local authorities set maintenance standards for their roads based on factors such as traffic speed, traffic flow and HGV volume. As a result, standards are highest for motorways, which is appropriate.

30. It was suggested by a number of witnesses that funding constraints were leading to inadequate maintenance on local authority maintained roads. Alan Stilwell, of the Institution of Civil Engineers and Institution of Highways and Transportation, highlighted that problems were being stored up because maintenance tended to be reactive rather than proactive. He told us that this is, in part, a by-product of the funding mechanism. With reference specifically to principal roads, managed by local authorities, he told us that:

51 Department for Transport *Transport 2010*, 2000

52 Ev 94

53 Highways Agency, *Business Plan 2009–2010*, p 22

54 Ev 132

55 ibid

> … over many years, investment levels have been too low. Although that has been partially addressed, there is still an estimate that the shortfall is something like £7.5 million per local authority in terms of investment. […] there should be a ring-fenced additional allocation to local authorities to address that backlog to deal proactively with the maintenance issues which remain on the local network and eliminate, as far as it is possible to do so, this unbalanced emphasis on reactive maintenance which is creating some quite serious problems.

Councillor Sparks of the Local Government Association agreed that there was a maintenance backlog. He told us that there was "an incredible backlog of repairs which need to be made. The estimate is £8.6 billion backlog".[56] Brian Smith of Cambridgeshire County Council argued that financial constraints in local authorities were to blame. Given the shortage of funding, very difficult decisions had to be made, and some work was left undone.[57] The problem is compounded by the fact that some local authorities are spending substantially less on maintenance of roads and bridges than their indicative allocation—on average about 50%.[58]

31. Chris Mole MP, Parliamentary Under Secretary of State, Department for Transport, told us that he had not seen any evidence that the maintenance of local authority controlled parts of the major road network was a "particular problem".[59] However, Martin Jones, Head of Strategic Roads Division at the Department for Transport acknowledged that "the Department has been monitoring the condition of the local authority road network. Over past years there has been a declining level of condition of the road network but that appears now to have been reversed".[60] Mr Jones also told us that the Department had provided funding for local authorities to monitor the condition of their roads. The Department notes that the funding for local authority road maintenance in England outside London has increased by 160% between 1997/98 and 2007/08.[61] The funding is provided to local authorities in two parts: an allocation for road and bridge maintenance within the Local Transport Capital Settlement and an element within the authority's revenue support grant (RSG). These grants are not ring fenced and local authorities can set their own spending priorities.

32. A particular problem raised during the inquiry was the prevalence of emergency, or reactive, maintenance work being undertaken. Properly planned, proactive maintenance is not only more cost effective but also allows better management of disruptions to the road network. The Institution of Civil Engineers and the Institution of Highways and Transportation told us that:

> Reactive maintenance is extremely inefficient yet levels are rising. The ideal proportion of annual budgets dedicated to reactive maintenance is 16% in England,

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56 Q 60

57 Q 66

58 Transport Committee, *The impact of flooding on bridges and other infrastructure in Cumbria*, Oral and written evidence, HC 473, Q33

59 Q 308

60 ibid

61 Ev 94

> 14% in London and 20% in Wales. However, the average spend in 2007 were 26%, 32% and 23% respectively. […] reactive work costs as much as 10 times more than a planned maintenance programme. Reactive work rarely tackles the underlying cause of damage, will likely need to be repeated regularly and fails to prolong the life to the road. Planned preventative programming provides a far better value for money and is much more efficient.[62]

33. We are concerned about the maintenance backlog and problems on the local authority maintained part of the road network. We are also concerned that not all Best Value indicators feature in the new National Indicator set[63] and this has led to some road condition surveys being abandoned. **We urge the Department to ensure that local authority road condition reports and National Road Maintenance Condition Surveys are closely monitored to ensure that they provide a reliable picture of the condition of all major roads. Although we support budgetary flexibility for local authorities, the Government must ensure that the condition and safety of the major road network is not compromised. Given a real terms increase in funding, it should be possible to maintain the major road network adequately in most areas. Local authorities need to be more transparent about the funding being made available for roads maintenance, and the way in which it is used. The Government and local authorities need to work together to ensure that the proportion of emergency maintenance on the major road network is reduced. If funds do not suffice for the maintenance and repairs required in a particular area, councils need to be open and transparent about it, and they need to take responsibility for rectifying the problem in collaboration with the Government.**

34. Maintenance work can cause congestion. This cannot be entirely avoided, but comprehensive and up-to-date communication with motorists to explain what work is being done is essential. We discuss this issue on on page 23 below.

De-trunking

35. De-trunking—the transfer of trunk roads from Highways Agency to local authority control—was intended to allow local authorities to integrate roads important to the local area into their own transport plans in a way the Highways Agency could not, due to their narrower role of managing the national network. When deciding which roads would be de-trunked the following criteria were used to assess which roads were of national importance. One or more of the criteria had to be met in order for roads to be considered nationally important:

a) a road links main centres of population and economic activity;

b) it provides access to major ports, airports and rail intermodal terminals;

c) it joins peripheral regions to the centre;

d) it provides key cross-border links to Scotland and Wales, and

62 Ev 89

63 From 1 April 2008, 198 National Indicators (the National Indicator Set) replaced Best Value Performance Indicators and the Performance assessment Framework as the measures against which the performance of local government is judged.

e) it is classified as part of the UK Trans-European Road Network.

36. Our witnesses were divided on the merits of de-trunking, not only in terms of road maintenance but also in terms of management and policy more generally. Both the Highways Agency and local authority representatives expressed satisfaction with the current split of trunk and non-trunk roads. Councillor Sparks of the Local Government Association went further and suggested that "there should be more de-trunking where appropriate", bringing a greater share of the major road network under local government control.[64]

37. The Minister supported the current allocation of responsibilities for roads. He noted that the de-trunking process had been completed in March this year, with the transfer of some 1,850 miles of roads along with significant resources to local authorities. He concluded that the balance was now right: "those roads which have been de-trunked are ones which essentially are of regional and local importance in terms of the traffic that is on them".

38. However, this view from local and central government was not shared by all our witnesses. The Institution of Civil Engineers and the Institution of Highways and Transportation suggested that the management and operational structures controlling the major road network were fragmented.[65] Road user groups in particular suggested that some re-trunking should be considered. Edmund King of the AA believed that the reduction in the proportion of roads managed by the Highways Agency was problematic because "the strategic road network should serve all towns, villages, ports, airports in the country". A network serving all towns and villages is clearly beyond what is currently considered to be a strategic network and we cannot agree that any sensible definition of 'strategic' would include links to every town and village. Edmund King suggested that because there are no other demands on Highways Agency budgets, the quality of roads maintained by the Agency was greater.[66] However, it is also self-evident that higher maintenance standards for such roads are simply necessary. It would be both inefficient, and inappropriate use of funds for all major roads in the country to be maintained to the same standard as motorways.

39. Evidence from the Mersey Gateway Project, a project to build a new toll bridge over the Mersey between Runcorn and Widnes supported the view that local needs could sometimes be better served by having major roads under local authority control. They told us that although their local relationships with the Highways Agency were generally good there could be tensions. In the early stages of the project, the local need for new road infrastructure had come into conflict with the Highways Agency's desire not to have traffic redistributed onto their network.[67]

40. Evidence from Mick Laverty of Advantage West Midlands supported this point, explaining that the Highways Agency was a good partner, but that there was an inherent

64 Q 88

65 Ev 89

66 Q 97

67 Q 65

conflict in its role. Whilst it aims to create and manage an effective national network, it also has to try:

> to ensure that what they do joins into regional plans, regional employment opportunities and tries to address regional issues. So I think they try, as best they can, with the funding they have to balance those two things very well, but they are two very different objectives potentially and […] when push comes to shove their oversight of the national network is the most important thing they do.[68]

41. While de-trunking is supported by both the Highways Agency and local authorities, some tension between the needs of the national network and the needs of local communities remains. **Tensions between national and local needs and priorities are inevitable. On the whole, the process of de-trunking has reduced the frequency and intensity of such tensions because ex-trunk roads have been integrated into local planning processes. We commend the efforts of the Highways Agency and local authorities to minimise conflicts of interests and ensure that they have productive working relationships. However, where a de-trunked road continues to meet the criteria for trunked roads and local conditions imply remedies outside the local resources available, the Department should consider the merits of re-trunking or providing additional resources to the local authorities responsible for managing and maintaining the road.**

Strategic oversight

42. Apart from proposals that some de-trunking should be reversed, we heard suggestions that the role of the Highways Agency should be expanded in other ways. Professor Glaister of the RAC Foundation questioned whether the portfolio of the Highways Agency was adequate "if we all believe there is such a thing as a strategic road with a national interest".[69] He suggested that a new body was needed with "the ability to make charges and use the charges to invest in the system", based on the model of Network Rail. In his view, such a body would be able to take strategic decisions that were currently not being made.[70] He suggested that a body, set up specifically to manage and invest in the road network, may find it easier to win acceptance for policies such as road pricing because the link between charges and the maintenance of the road network would be clearer to road users.

43. Responsibility for the strategic development and oversight of the major road network is shared between the Highways Agency and the Department for Transport. The Minister, Chris Mole MP, described the distribution of labour thus:

> the [Highways] Agency would have the expertise to know what can be done and where it can be done, but the Department would take the responsibility for looking at the national infrastructure as a whole and ensuring that where there were areas that needed reinforcing we were ensuring that that could happen.[71]

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68 Q 154

69 Q 95

70 Q 135

71 Q 340

44. While we accept the Minister's view that the strategic development of the major road network should remain a responsibility shared between the Department and the Highways Agency, we are concerned about the common perception that the Department is failing to lead from the front. **The Department for Transport must provide clear and timely leadership in terms of the strategic development of the road network.**

5 Investment and funding

The financial climate

45. Transport has enjoyed a 2.25% real-terms annual growth in funding throughout the current Comprehensive Spending Review period (2007–2011). However, in the current financial climate, it seems unlikely that this growth rate will be maintained beyond that period. In his December 2009 Pre-Budget Report, the Chancellor noted that significant spending restraint would be required in subsequent years—with public spending expected to grow by just 0.8% annually between 2011–2014 compared to a 1.5% real-terms annual growth between 2007–2011.[72] The Pre-Budget Report brought forward certain planned capital investments to 2010–11, including investment to increase motorway capacity, in order to support economic growth and competitiveness.[73] Commenting on the PBR, the Institute for Fiscal Studies (IFS) stated that:

> In the absence of new measures to reduce spending on benefits and tax credits, we estimate that spending on public services and administration would have to be cut in real terms by 3.0% a year on average in 2011–12 and 2012–13 and by 2.7% a year on average in 2013–14 and 2014–15.[74]

46. The Government has promised to protect certain priority spending areas—health, schools and overseas aid. The IFS estimates that such protection would require average cuts of 12.9% in other departmental budgets in the two years 2011–13. The Minister told us that "we will be waiting for a Comprehensive Spending Review (CSR) in order to assess any impact [on spending by] departments. In the first instance we have our long-term spending profile and we are working within that."[75] The next CSR is widely expected in the second half of 2010.[76]

47. The recent White Paper on High Speed Rail states unambiguously that, whilst existing programmes will seek to maximise capacity on the existing major road network, the Government sees high-speed rail as the best way to increase capacity and reduce journey

72 HM Treasury, *Pre-Budget Report 2009: Securing the recovery: growth and opportunity,* Cm 7747, December 2009, see for example para 1.38; See also: http://www.hm-treasury.gov.uk/bud_bud09_press01.htm

73 HM Treasury, *Pre-Budget Report 2009: Securing the recovery: growth and opportunity*, Cm 7747, December 2009, para 4.27

74 The Institute for Fiscal Studies (IFS), *The IFS Green Budget*, February 2010, p 183

75 Q 310

76 The Guardian, *Treasury plans to set out £11bn government spending cuts*, 4 March 2010; see also The Sunday Telegraph, *Budget 2010: Labour to put off spending cuts until after the general election*, 13 March 2010.

times on city-to-city travel.[77] The announcement on high speed rail was most welcome, and indeed overdue, but with a total price tag of up to £30 billion, there is a risk that savings will be made elsewhere on the transport budget to compensate. As construction is not expected to start until 2017, and to be phased over some 10 years, the Government has implied that spending on high speed rail will not impact on other areas of transport investment in the short to medium term. However, it is possible that short-term spending reductions will be made to compensate for increased spending later.

48. **We accept that difficult funding decisions will have to be made in the coming years, but we urge the Government to ensure that the safety and maintenance standards of the major road network are not compromised. As the Eddington study demonstrated, transport infrastructure is critical to the generation of economic growth. It is therefore important that investment in, and maintenance of, basic infrastructure, such as our major road network, is not put on stand-by. With vast—and very welcome—funds likely to be invested in high speed rail over the next two decades, the Government must guard against the temptation to neglect the major road network to reduce costs. The major road network serves a wide range of needs and communities, and it is only a relatively small proportion of journeys on our major roads that could be transferred to rail, let alone high speed rail.**

Rates of return and assessment methods

49. *The Eddington Transport Study: The Case for Action* states that "national government should take a rigorous and systematic approach to policymaking, by focusing on objectives and delivering high return schemes, rather than modes or technologies".[78] The report concludes that funding should be allocated to projects providing the best rate of return, and advocates that social and environmental costs be included in the calculations of costs and benefits. Accordingly, the case for the proposed north-south high speed rail network is based on a calculation that it offers better value for money than "all but the smallest packages of road developments".[79] Once environmental costs are added to the mix, the case for high speed rail becomes even more persuasive.[80]

50. That is, of course, easier to state as an objective than it is to realise. There are numerous estimates of rates of return and we have heard conflicting evidence about this. The RAC Foundation and the AA both argued that spending on road building and improvement had the highest rate of return. Edmund King of the AA told us that "if you look at some of the missing links in the road network they give returns of 10 to 1, and indeed higher, and many of them are much higher than rail schemes or tram schemes."[81] The RAC Foundation provided estimated average Benefit Cost Ratios (BCRs) of different types of transport projects, as set out in Table 2 below.

77 Department for Transport, *High Speed Rail,* Cm 7827, March 2010, pp 12–13

78 HM Treasury and Department for Transport, *The Eddington Transport Study: The case for action: Sir Rod Eddington's advice to Government*, December 2006, p 7

79 Department for Transport, *High Speed Rail,* Cm 7827, March 2010, para 2.48

80 Department for Transport, *High Speed Rail,* Cm 7827, March 2010, para 2.61

81 Q 17

Table 2: Estimated average Benefit Cost Ratios on capital investment

Type of infrastructure for investment	Benefit Cost Ratio
Highways agency roads	4.66
Local roads	4.23
Heavy rail schemes	2.83
Light rail schemes	2.14
Local public transport schemes	1.71

Source: RAC Foundation, Rates of Return on Public Spending on Transport, Report Number 09/103, June 2009, Table 2 (drawing on data from the Eddington Study)

51. Not all of our witnesses believed that the true benefits of road schemes outweighed costs so favourably. John Elliot of TAG[82] did not agree that road building had the best rates of return, and he suggested that the Department's modelling used to calculate rates of return was sometimes less robust than assumed. He suggested that modelling processes were highly volatile, and what came out of the models depended entirely on what one chose to put into them. Indeed:

> There are so many assumptions in the modelling that have created these economic values and I think they are pretty suspect. I am not saying we do not need something to assess between different schemes but at the moment I think the system is very suspect.[83]

52. We understand the conclusion of *The Eddington Transport Study,* that the Government should focus investment on transport schemes that produce the highest rates of return, irrespective of mode, taking account of emissions. Securing the best possible value for money has never been more important than in the current economic climate. However, whilst rates of return are helpful in making marginal choices between similar options, they do not on their own provide a coherent, long-term strategy. There will be times when wider policy objectives will also influence investment decisions. Environmental and social concerns and strategic vision must also be taken into account alongside the economic impact of particular transport policies. It is important the Government is clear when decisions are being made to meet wider policy objectives. Where this is the case, it needs to ensure that the impact of investment is monitored to ensure that the objective is being met. The trade-off between economic benefits and other benefits should be transparent and in accordance with stated policy aims.

53. At the national level, the main mechanism for appraising potential investment in transport before funding is allocated has been the New Approach to Appraisals (NATA) system.[84] NATA is designed to allow "the costs and benefits of schemes to be appraised against the contributions that they make to our national transport goals".[85] The five

82 Formerly known as the Technical Advisors Group.

83 Q 199

84 Now incorporated into WebTAG.

85 Ev 94

Government aims for transport: environment, safety, economy, accessibility and integration are all taken into account through the appraisal. However, some witnesses were highly critical of the system. John Elliot of TAG[86] told us that NATA was:

> ...a very complicated black box that I think has been taken too far away from the political system. It is not understandable by the average person. It is hardly understandable by people that have used it and you get very silly answers. The whole methodology of the assessment I think is suspect.[87]

54. **The Government must clarify the basis on which it assesses and allocates funding to infrastructure projects. Mechanisms for allocating funding to transport schemes should be transparent and give greater weight to economic benefit.**

Funding mechanisms

The national level

55. With the publication of *Building Britain's Future*, in June 2009, the Government announced that a new body with strategic oversight of infrastructure development would be established. Infrastructure UK will have responsibility for identifying:

> the country's long term infrastructure needs across a 5–50 year horizon, take stock of where current plans are taking us in the long term and analyse where more could be done, considering the interdependencies between different types of infrastructure.[88]

In July 2009, the Chief Secretary to the Treasury, Liam Byrne MP, announced that Lord Davies of Abersoch would lead the development of Infrastructure UK.[89] The December 2009 Pre-Budget Report stated that Infrastructure UK would be based within HM Treasury and "bring together [the Infrastructure Finance Unit] TIFU, HM Treasury's Public-Private Partnership (PPP) policy team and the capabilities within Partnerships UK (PUK), which support the delivery of major projects and programmes". The aim is for Infrastructure UK to be operational in the course of 2010, and one of its earliest objectives is to help develop a funding model for the development of the new high speed rail line between London and the West Midlands.[90]

56. The Department for Transport seemed uncertain about the impact of the new body, Infrastructure UK, on transport planning and investment.[91] Martin Jones, Head of Strategic Roads Division, pointed out that "we are at a relatively early stage in government in establishing how that organisation will operate and what its remit will be".[92] **We are**

86 Formerly known as the Technical Advisers Group.

87 Q 197

88 *Building Britain's Future*, June 2009, Cm 7654, Para 36

89 HC Deb, 21 July 2009, c1349W; at the time of the publication of *Building Britain's Future*, a tighter timeline had been outlined (p51).

90 HM Treasury, *Pre-Budget Report 2009: Securing the recovery: growth and opportunity*, Cm 7747, December 2009, see for example para 4.32

91 Q 350

92 Q 351

concerned that the Department for Transport appeared not to be involved in discussions about the remit of Infrastructure UK at the initial stages. Infrastructure UK could have a critical impact on strategic transport investment. It will have the opportunity to improve the co-ordination of infrastructure decisions across Government, facilitating more coherent and strategic decision-making. We look forward to hearing, in the course of 2010, precisely how Infrastructure UK is going to achieve this and how it will improve decision making on transport investment.

The regional level

57. The main funding mechanism for transport schemes at a regional level is through the Regional Funding Advice and Allocation process. Department for Transport policy is that budgets and investment decisions should be devolved to the level of government where the economic impact of the decision taken is felt most—be it national, regional or local authorities—"with local authorities and regions given the power to respond to local challenges and improve economic outcomes".[93] Each region can submit their priorities—advice—for regional investment in areas including transport, housing and regeneration. The Regional Funding Allocations for regions forms part of the Comprehensive Spending Review.[94]

58. There was some support among witnesses for the aims of the Regional Funding Allocation process. Mick Laverty, of Advantage West Midlands, told us that within the financial means available, the funding allocation mechanism ensures at least some degree of co-ordination between local development in terms of housing and jobs and transport infrastructure.[95] However, Jack Semple of the Road Haulage Association claimed that "the current system is not working", something he believed would develop into a bigger issue in the future, as large regional schemes swallowed the majority of RFA funding, pushing other important schemes further back.[96]

59. The Minister, Chris Mole MP, strongly supported the Regional Funding Advice process, saying "the RFA mechanism is the most robust way of informing ministers in the Department of the priorities that exist within a region, whether that is between roads, rail or public transport schemes."[97] **No method of allocating finite funds will satisfy everyone. However, we are pleased that there seems to be general support for the Regional Funding Allocation process. We welcome the introduction of a mechanism which has allowed regions a bigger say in what infrastructure investments should be prioritised and which looks across the transport modes.**

93 Ev 94

94 http://www.communities.gov.uk

95 Q 159

96 Q 159

97 Q 322

6 Congestion and capacity

60. Throughout our inquiry, witnesses described congestion on the major road network as the major problem on the roads. Councillor Sparks, of the Local Government Association, told us that:

> The reduction of congestion is a very, very high priority in relation to local authorities, not just from a transport point of view but because it is indicative of a lot of other problems which need to be addressed because of climate change, economic competitiveness, et cetera. It is a number one priority.[98]

Other witnesses pointed to the inconvenience to businesses and individuals, the cost to the economy as well as the environmental cost arising from road congestion as reasons for tackling it as a high priority. The AA who, in conjunction with Populus, run monthly surveys for their 45,000 members panel, found that "Congestion and unreliable journeys are a significant concern for motorists and business."[99] The Minister broadly agreed, arguing that congestion:

> is one of the key challenges over the coming period and it is a view that we think is shared by the general public, who will refer to congestion in surveys as a concern that they have along with the concern about the reliability of journey times, which is another thing they put very highly. We know that congestion is the primary cause of significant delays […] at a number of pinch points in the strategic road network.[100]

61. Edmund King told us that congestion often happened when two unrelated incidents on the road network happened at the same time: "it could be a broken down truck in one of the lanes and then an accident further ahead—that leads to gridlock".[101] We also heard that on local authority roads, work on utilities pipes could cause serious and sometimes unpredictable delays.

62. Several witnesses suggested that the main problem with congestion was the uncertainty over journey times that it caused. Professor Glaister told us that "for the public it is not so much about speed, it is about reliability. So if you can use speed [controls] to increase reliability, that is acceptable".[102] The idea of regulating speed to reduce congestion is one that several witnesses mentioned. It is currently used on sections of the motorway network, notably some parts of the M42 where speed limits in conjunction with hard-shoulder running have reduced congestion. Reducing the overall speed limit reduces stop-start traffic flow so that while the optimal total journey time may be lower it is more predictable. However, Mick Laverty, Chief Executive of Advantage West Midlands cautioned against focusing solely on journey time reliability. In his view,

98 Q 61

99 Ev 132

100 Q 346

101 Q 93

102 Q 138

> the number one issue [is] journey time reliability, but I believe it is a bit like Maslow's Hierarchy of Needs. If you can get the reliability sorted, the next issue should be the absolute length of the journey and whether that was acceptable. So I think reliability is the number one issue, but if that was sorted people would quickly move on to, "is the amount of time on this journey acceptable?"[103]

Maintenance work and congestion

63. As indicated in Chapter 4 above, maintenance work often causes congestion. Whilst this is often unavoidable, it is important that the authorities communicate carefully and effectively to motorists what work is being done. It is particularly frustrating for motorists when they experience delays without seeing any sign of work being carried out, and have no idea why they were delayed. Graham Dalton, Chief Executive of the Highways Agency, told us that, as well as carrying out a large percentage of maintenance work at night, the Highways Agency also tried to manage maintenance to cause as little disruption as possible. He said that work is often in progress even "where the public do not see something happening. As a rule that is for a very good reason."[104] Maintenance work on bridges, for example, is rarely visible to passers-by. **We fully accept that maintenance work on the road network is likely to cause delays and that the safety of staff carrying out this work must be safeguarded. However, local authorities and the Highways Agency must minimise disruption and road closures as much as possible and they should consider ways to improve the way they communicate with road users to explain disruptions caused by maintenance.**

Cost of congestion

64. Many of the witnesses we heard from focused on the cost of congestion to the UK economy as a pressing reason why it should be prioritised. Mick Laverty from Advantage West Midlands, representing England's Regional Development Agencies, ERDA, told us that:

> ...there is congestion on the network which is quite a big drag on the economy. I have attempted to estimate how much that is, something approaching 1.2% of GVA in 2005 as a result of road congestion, and I think the projections are that that congestion is going to get worse and that will have an increasing impact on the competitiveness of this country.[105]

65. Jack Elliot of the British Chambers of Commerce told us that, using the results of their Annual Transport Survey, the BCC estimate for the cost of congestion was £23 billion per year. The *Eddington Transport Study* came to a similar conclusion with a figure of £22 billion.

66. However, Stephen Joseph, of the Campaign for Better Transport, suggested to us that these high figures for the cost of congestion originated from an estimate from the CBI in

103 Q 174

104 Q 54

105 Q 148; GVA—Gross Value Added—is defined by the Office for National Statistics as "the contribution to the economy of each individual producer, industry or sector in the United Kingdom"

the 1980's which had calculated 1–1.5% of GDP at the time and suggested that this figure was the cost of congestion. Mr Joseph went on to tell us that:

> These figures are, I think, slightly artificial and if you ask in surveys how important people think congestion is, they say congestion is a problem for the country, not necessarily in sums. Where it does impact is on reliability and predictability and I think this does bear examination because the Department for Transport's appraisal process gives priority to time savings, sometimes very small time savings aggregated up and then discounted over 60 years, whereas what matters to businesses, to National Express and to the members of the British Chambers of Commerce is reliability and predictability.[106]

67. The Parliamentary Under Secretary of State, Chris Mole MP, suggested that there was no "direct answer" to the question of how much congestion cost. He did, however, refer us to "the £22 billion figure which splits 50/50 between the cost to business and the cost to individuals of lost time anticipated from congestion that would grow as a result of the projected forward traffic volumes".[107] When asked about the reliability of this figure he told us that "it is the best figure that anyone can give you at the minute".[108]

68. As our report *Taxes and charges on road users* states, the Department for Transport estimates that "the average marginal external cost of driving a car an additional kilometre is 15.5p".[109] 13.1p of this is the cost of congestion. In the DfT's calculations, the costs of congestion vary from 0p/km on quiet rural roads to £1.95/km for the busiest urban roads. *Taxes and charges on road users* also highlights work done by the Campaign for Better Transport, using the DfT figures. They estimate that the total cost of congestion is between £70 billion–£95 billion per annum, with congestion being the major component.

69. **We are sympathetic to the Minister's point that congestion is a complex issue. However, while some of our witnesses may have questioned the exact figure for the cost of congestion, it is clear that congestion does have a significant cost to the UK economy. Given the scale of the cost, we support effective investment in the road network to reduce congestion.**

70. In order to make sensible decisions about future spending to relieve congestion, the Government needs to understand the extent of the problem in social, environmental and economic terms. Much of the evidence we heard, referred to earlier, suggested that the most pressing problem caused by congestion was the uncertainty it introduced over journey times. Having to allow extra journey times to take account of possible congestion is not an effective use of time for individuals or businesses. **The Government should prioritise schemes which reduce the uncertainty over journey times that congestion causes.**

106 Q 235

107 Qq 342-343

108 Q 344

109 Transport Committee, Sixth Report of Session 2008–09, *Taxes and charges on road users,* HC 103, Para 46

Forecasting traffic growth

71. Predicted traffic growth is another widely used figure which was subject to challenge from some of our witnesses. The Department for Transport's Transport Trends report predicts traffic growth of 29% by 2015.[110] This was supported by the Institution of Civil Engineers and Institution of Highways and Transportation who said that "Forecasts for levels of road traffic in England predicted 29% and 38% increases for 2015 and 2025 respectively from the level in 2000."[111] Professor Glaister of the RAC Foundation told us that the Department's figures are:

> …soundly based, sensible and they take proper account of what is known about demographic features, the location of housing. […] I have separately done some work on much longer distances into the future forecasts, up to 2041, which are entirely consistent with the Department's own shorter-term forecast up to 2025, following the same kind of logic […] traffic will be something like 40% higher than it is today unless there is some major policy change in between.[112]

72. However, we also heard evidence from Dr Metz who suggested that traffic growth predictions were flawed because they did not take into account what had been generating traffic growth. He told us that, looking at car traffic rather than vans or lorries:

> … on average the amount of time we all spend travelling is about an hour a day and [this] has not changed in 35 years. On average we make about 1,000 journeys a year and, again, that has not changed over this period. What has changed is the distance that we travel. In the early 1970s on average we travelled 4,500 miles a year and now we travel 7,100 miles a year.[113]

While traffic growth has historically been linked to population growth and people travelling greater distances rather than people spending more time travelling, Dr Metz suggested that the distances of car journeys had not increased over the last five years. According to Dr Metz, the forecasts from the Department for Transport are based on an assumption that "the long-running historic trend in the relationship between economic growth and traffic growth will continue into the future. […] that is not necessarily so." Therefore, he believes, the traditional assumptions on which traffic growth forecasts are made need to be re-examined.[114]

73. Although Edmund King of the AA accepted that "some of the growth has slowed down" both he and Professor Glaister of the RAC Foundation argued that the plateauing of distance travelled by car would still be affected by factors such as population growth and the increasing number of journeys by other types of vehicle.[115] The Minister told us that although there had been "a relative slowing in the growth in car traffic compared with other vehicular modes" the Department was still "anticipating that by 2025 […] we are

110 Department for Transport, *Transport Trends: 2007 Edition,* 2007

111 Ev 89

112 Q 100

113 Q 31

114 Q 31

115 Qq 141-142

looking at something like a 32% growth in traffic volumes".[116] When asked about the type of vehicle that would make up this growth Martin Jones, Head of Strategic Roads Division at the Department for Transport, told us that "I do not think the forward modelling makes too much of a distinction between different vehicle types, it just gives overall traffic levels".[117] **The predominant view at present is that population growth and the increasing number of vans and other non-car vehicles on the road make it unlikely that traffic volume has reached, or is nearing, a plateau at this stage. However, it is important that the Government's forecasts do not simply map past growth patterns onto predictions for the future. The growth in car traffic, for example, has slowed considerably in the past decade and there has been a rapid rise in mileage by vans.**

74. It is clear from our evidence that the growth in car traffic is being outstripped by the growth in other vehicle traffic. Given that different road users will have different patterns of use and requirements it would seem sensible to differentiate between different groups of users in future models and forecasts of traffic levels on the major road network. **We are concerned that the Department is unable to disaggregate traffic growth predictions in order to establish how it expects roads to be used by different population groups in the future. This information is of critical importance—without it, planning is, at best, guesswork—and we urge the Department to look at how to improve these forecasts**.

To build or not to build

75. The evidence we received from road user groups strongly advocates building more roads and increasing the capacity of the existing road network. The RAC Foundation suggest that, in order to meet demand from road users, an extra 600 lane kilometres of road per year would have to be built between now and 2041.[118] Some road user groups who submitted evidence to this inquiry questioned the extent to which modal shift and Active Traffic Management (ATM) could reduce congestion simply through reductions in traffic volume and a more effective management of road capacity. Nonetheless, they also recognised that road building should be just one of a range of approaches taken to improve the major road network. Mick Laverty of Advantage West Midlands supported this view. He told us that road building is:

> one of a number of things you might want to look into. It is not exclusively the answer. There are things around smarter ways of working, better use of technology in the vehicle and the roadside, targeting hotspots, funding, and focusing on public transport. I think it is one of the measures you might want to consider, but it is not the only one you might want to consider.[119]

76. Sustainable transport and environmental groups were against road building. Ralph Smyth of the Campaign to Protect Rural England argued that road building "would simply lead to more traffic and more congestion".[120] Dr Metz also suggested that "traffic has

116 Qq 314-315

117 Q 316

118 Q 120; this is equivalent to 373 lane miles.

119 Q 151

120 Q 239

essentially expanded to fill the network".[121] Even Professor Glaister of the RAC Foundation accepted that "When you put the new bit of road in you reduce the cost of getting from A to B for the people who use the road, so more people do it".[122] Professor Glaister did, however, argue that this was mainly due to pre-existing demand being met rather than additional demand being generated by new roads.

77. John Elliot of TAG went even further than opposing additional road building. He told us that:

> I think in some areas we might have an excess of infrastructure and this has encouraged too much road movement and particularly car commuting movement on the strategic road network, which cannot be matched in the urban areas. […] I am not saying that we do not need more access roads, but, for instance, adding to the M25 I think is quite big public money that would make matters no better at all within a very short space of time.[123]

78. This phenomenon, of widening congested stretches of road, was identified as futile by a number of witnesses. Mr Elliot, along with some other witnesses, also suggested that increasing capacity on the major road network caused worse conditions on surrounding local roads resulting in poorer overall journey times. Stephen Joseph, representing Campaign for Better Transport concurred, explaining that the benefits of road building were sometimes overstated because they did not take into account the effect on surrounding roads. He suggested that even if a road such as the A1(M) was widened to the point where there was no congestion on it, "the amount of traffic that that would generate would completely congest the entire local road network and […] overall end-to-end journey times would get worse if you did something like that".[124]

79. While this inquiry has focused on the major road network we acknowledge that the major road network does not exist in isolation. **The Government and the relevant transport authorities must consider the impact on surrounding local roads of any increased capacity on the major road network, whether through construction, widening or hard-shoulder running. We have to acknowledge that, whilst we recognise in some instances such schemes could have a beneficial effect by relieving the pressure on local roads, there can be no assumption that a reserve of unexplored capacity exists which can be used indefinitely. It is also important to consider the sustainability problems with using road construction as a significant part of easing congestion.**

80. One issue that has been raised alongside discussions of road building is road pricing. We have recently concluded a major inquiry into taxes and charges on road users and do not intend to retread arguments about road-pricing in general in this report. However, in relation to the major road network, a number of road user groups promoted road-pricing as part of a solution to congestion in conjunction with some road building and widening. Professor Stephen Glaister of the RAC Foundation told us that, to tackle congestion, "is not

121 Q 39

122 Q 119

123 Q 189

124 Q 223

just to find more capacity […] but to have a package which involves a new pricing regime as well as a new capacity regime".[125] The Road Users' Alliance, while more cautious about road-pricing, agreed it could be part of the solution to congestion as long as it was not "seen simply as a means of reducing demand for road space but as a means of managing it by challenging the value placed on particular journeys at particular times and optimising the use of all available capacity".[126]

81. In our report on *Taxes and charges* on *road users* we concluded that:

> The Government's research into road pricing has been underway for a long time, with apparently little to show for it […] The Government should clarify its position on road pricing research: what has been learnt, what key steps remain to be identified, and when it is likely to be in a position to make a decision on implementation.[127]

This remains our position. We also note that some road user groups, who have expressed concern about the possibility of road pricing, accept that road pricing should be part of the package accompanying any large-scale road building projects. Before any national road-pricing scheme can be contemplated, it is essential that the Government demonstrates clearly how existing taxes and charges on road users will be replaced by such a scheme.[128]

82. The Government's position is to recognise "the close relationship between capacity and demand":

> a theoretical case could be made for building significantly more new road capacity. We recognise that, in the longer term, further expansion of the road network will be necessary in some places, as Sir Rod Eddington said, but large-scale road-building would be environmentally damaging, harmful to people's quality of life and financially unaffordable.[129]

83. **There are some areas, we heard evidence of such from the North East of England, that are underprovided for in terms of major roads. It is unacceptable that some parts of the country are discriminated against in terms of transport investment.**

Using the existing road network more effectively

84. Some witnesses proposed Active Traffic Management (ATM) and other new technologies as possible alternatives to road building. Kapsch TrafficCom UK suggested that "Advanced traffic management, hard shoulder running and the 'managed motorway' can all use existing space more efficiently at a lower cost than constructing new roads".[130] The Department for Transport has recently completed a trial of ATM on the M42. As well as hard shoulder running at peak times, variable speed limits were used to regulate traffic

125 Q 114

126 Ev 179

127 Transport Committee, *Taxes and charges on road users,* Para 116

128 Transport Committee, *Taxes and charges on road users,* Para 116

129 Ev 94

130 Ev 66

flows. In *Britain's Transport Infrastructure: Motorways and Major Trunk Roads* published in January 2009, the Department announced that Active Traffic Management would be rolled out to further sections of the M42 as well as sections of the M6 and M40.

85. Professor Stephen Glaister of the RAC Foundation gave his qualified support for the use of Active Traffic Management, arguing that the M42 trial had demonstrated the potential for ATM to yield substantial improvements to traffic flow and reduced rates of accidents. However, such positive outcomes depended on very careful management and continuous resource commitments: "active traffic management is going to require considerable money year after year to make sure it is properly managed." Nonetheless, both the RAC and the AA cautioned that ATM could only be part of a solution and that additional measures would be necessary to reduce congestion.

86. With the gradual rollout of Active Traffic Management, the Department is beginning to use new and flexible methods to improve the efficiency of the major road network. However, Professor Bell suggested that traffic management technology has not so far been utilised to its full potential. Ramp metering was an example of a technology which held significant potential because it could be used to control access and behaviour on motorways.[131] The system could also help to collate information and disseminate it to the public and thereby help to maximise the number of vehicles on the road, and eventually to reduce traffic.[132] Sharon Kindleysides from Kapsch TrafficCom, suggested that certain technologies were under-utilised as a result of a lack of political will and leadership.[133]

87. Support for Active Traffic Management was not, however, universal. Jack Semple, of the Road Hauliers Association, suggested that the M42 trials had been rushed and that, particularly when it came to hard shoulder running through junctions, there were "some concerns at the extent of commitment to that without it apparently being tested."[134] Edmund King of the AA also sounded a note of caution saying that "I think the problem at the moment is that it [hard shoulder running] is kind of seen as widening on the cheap and I think that is a problem which will leave us with more problems in the future".[135] In its recent White Paper on High Speed Rail, the Government acknowledged that "the scope for incremental improvements [i.e. hard shoulder running] to continue to offer high value for money is finite, with returns from such packages decreasing substantially as they grow in size and cost".[136]

88. **We welcome Active Traffic Management (ATM) as an example of the Government employing innovative solutions to congestion. ATM has the potential to reduce congestion on the major road network, although it will not resolve the problem of congestion on its own. However, we are concerned that the focus of the current ATM roll out appears to be on hard shoulder running as a substitute for motorway widening**

131 Ramp metering is a system designed to reduce delays and congestion at junctions. Sensors in the road monitor the congestion and, during busy periods, signals prevent more than a few vehicles being released onto the road. Information from the sensors is used to adjust the timing of the signals.

132 Q 203

133 Q 207

134 Q 179

135 Q 112

136 Department for Transport, *High Speed Rail,* Cm 7827, March 2010, para 2.47

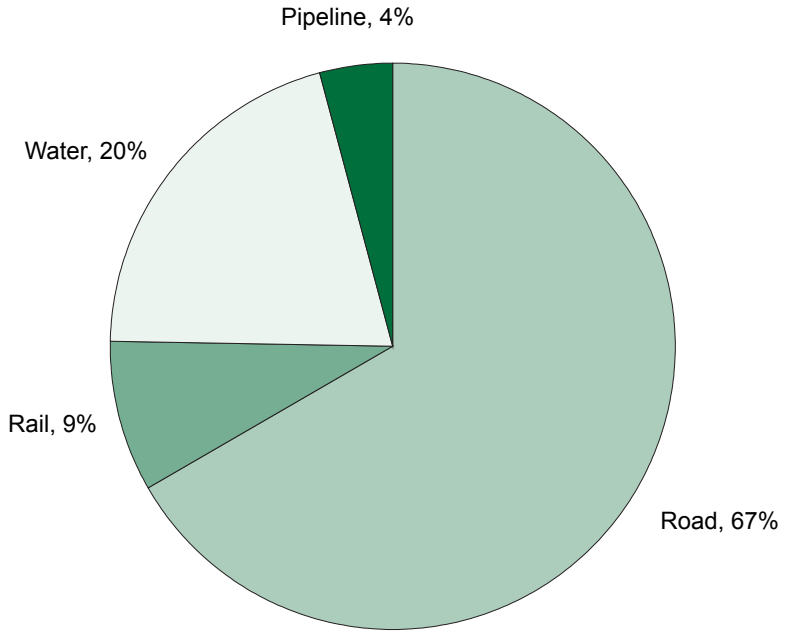
rather than as part of a package of measures to regulate traffic flow. Hard shoulder running must not be separated from the other elements of Active Traffic Management, such as speed controls, needed to ensure it is a safe and effective measure.

89. We are concerned that Active Traffic Management techniques, for example speed limits to control traffic flow, are poorly understood by the public and can lead to frustration. This situation must change if it is to be an effective tool in improving the flow of the major road network. **The Government must ensure the public is well informed about the benefits of Active Traffic Management techniques, such as hard shoulder running and flexible speed restrictions, and how it works. This is the only way road users are likely to accept such new arrangements, and indeed help to make it as effective as possible**.

Freight

90. One option we looked at was the possibility of encouraging modal shift in the freight industry, from road to rail and water. As illustrated in Figure 3 below, approximately 67% of 'freight miles' in the UK are carried by road, whilst rail accounts for just 9%.[137] Alternatives to road freight, such as short sea shipping and rail freighting have been suggested as an option for reducing congestion on the major road network. As we stated in our report, *Freight Transport* "Freight and logistics […] play an important part in meeting all four of the Department for Transport's strategic objectives".[138]

Figure 3: Mode share (%) of domestic freight activity, goods moved (billion tonne km), 2008



Source: DfT, Transport Statiistics Great Britain, 2009, Table 4.1

137 Department for Transport, *Delivering A Sustainable Transport System: The Logistics Perspective*, December 2008, Figure 1.4

138 Transport Committee, Eighth Report of session 2007-08, *Freight Transport*, HC 249, para 1

91. The Department for Transport offers grants to help with the capital and operating costs of using rail freight or short-sea shipping to transport goods. However, even Alan Stilwell of the Institution of Civil Engineers and Institution of Highways and Transportation, organisations which support efforts to encourage more rail freight and short sea shipping acknowledges that "There are limited opportunities, partly because of the capacity on the rail […] but also because rail lines do not always go exactly where you would like them to go."[139]

92. We also heard that the cost of rail freight made it unlikely that there would be a significant shift towards rail freight. In 2003, the Royal Mail saved £90million by replacing rail freight with road freight.[140] The Strategic Freight Network (SFN) which we discussed in our recent report, *Priorities for investment on the railways,* is an excellent initiative, and with funding of £200 million, the Government has made a good start. It is vital that the momentum is maintained, and that the Government co-ordinates environmental and transport policies so as to encourage modal shift. **While we welcome the Government's commitment to promote and support rail and water-borne freight, it is unlikely that this will provide a solution to road congestion. Tangible steps, such as the development of the Strategic Freight Network, are required to encourage modal shift for freight. This in turn will help to reduce congestion and pollution on the major road network. This is beneficial for road users, the environment and the national economy alike.**

7 Conclusion

93. The major road network is a crucial element of the UK's transport system and, as such, major roads policy should form part of a broader and integrated strategy for transport that ensures all regions and nations are properly and efficiently interconnected. Since 1998 this is generally the approach taken by Government, although, as demonstrated by evidence gathered for this report, there is a range of views as to whether or not the balance in this strategy is the right one. Notwithstanding the multi-modal nature of an integrated, or sustainable, transport strategy, the major road network is the most important part of the UK's transport infrastructure. As such, and especially in the light of very significant expenditure and increasing policy attention devoted to other modes such as High Speed Rail, it is important not to lose sight of the significance of the major road network. Our report has identified both constraints and opportunities for the management and delivery of an improved major road network, better able to serve the requirements of the UK's economy and carbon reduction obligations.

94. We do not support a significant expansion of the major road network but do identify means of improving capacity through a combination of measures, including active traffic management and demand management measures, as discussed in our previous report, *Taxes and charges on road users*. We have concerns about maintenance practices, especially at local level. Strategic oversight of the network also requires the Department for Transport

139 Q 26

140 Transport Committee, Eighth Report of session 2007-08, *Freight Transport*, HC 249, para 55

to take the lead in taking difficult decisions, although regional input is important. With the prospect of a sharp decline in public spending, the Department must ensure value for money from the transport projects it funds. While roads projects often show good value for money compared to other schemes under current appraisal methods, wider policy objectives will also influence decision making and clarity and transparency are vital in justifying departmental spend. Further examination of the appropriateness of current appraisal techniques might also be considered.

95. **Given the significance of the major road network in relation to economic, environmental and social policy objectives, the Government must be clear both on what it sees as the future role of major roads and how best to deliver the policies and infrastructure necessary to fulfil that role.**

Conclusions and recommendations

The wider transport policy context

1. Some sustainable travel initiatives, such as Smarter Choices, have delivered tangible and encouraging results in terms of modal shift and integration of different modes. Whilst we recognise that private cars are likely to remain the preferred mode of travel for a significant number of people due to convenience, we urge the Government to intensify its efforts to encourage sustainable travel as part of an integrated transport policy. (Paragraph 22)

2. Apart from initiatives such as Smarter Choices, a range of technological improvements as well as improved land-use planning and better co-ordination between developers, transport planners and other parties could make it easier for many people to be less reliant on cars. Such measures are not necessarily costly, and the benefit to cost ratio can be very positive. Whilst the direct impact tends to be greater in urban areas, the knock on effect in terms of reduced congestion and emissions on the major road network is significant also. No single policy instrument will encourage travellers out of their cars. The Department for Transport therefore needs to show greater leadership in bringing together all the disparate professions and bodies to work together to harness the significant benefits of a co-ordinated policy implementation. (Paragraph 23)

The current road network

3. This country has one of the lowest motorway densities in Western Europe. This puts England at an economic and competitive disadvantage. The remedy for this should include some new initiatives to construct and upgrade motorways. (Paragraph 25)

4. The Secretary of State has effectively rejected the main reasoning and arguments in the Eddington report by agreeing to High Speed Two. We recognise that the major problems facing the road network relate to capacity and coverage. (Paragraph 26)

5. While we accept that for some stretches of road, dual-carriageways will not be feasible, this type of road offers benefits for both road safety and journey times. While not every A-road needs to be dual-carriage, the Highways Agency has acknowledged that dual-carriageways should be the minimum standard for the strategic road network that it manages. Over 900 miles of trunk roads are currently single carriageways. Wherever possible the Highways Agency should ensure that these roads are upgraded to dual-carriageways. (Paragraph 27)

6. We urge the Department to ensure that local authority road condition reports and National Road Maintenance Condition Surveys are closely monitored to ensure that they provide a reliable picture of the condition of all major roads. Although we support budgetary flexibility for local authorities, the Government must ensure that the condition and safety of the major road network is not compromised. Given a real terms increase in funding, it should be possible to maintain the major road network adequately in most areas. Local authorities need to be more transparent about the

funding being made available for roads maintenance, and the way in which it is used. The Government and local authorities need to work together to ensure that the proportion of emergency maintenance on the major road network is reduced. If funds do not suffice for the maintenance and repairs required in a particular area, councils need to be open and transparent about it, and they need to take responsibility for rectifying the problem in collaboration with the Government. (Paragraph 33)

Investment and funding

7. Tensions between national and local needs and priorities are inevitable. On the whole, the process of de-trunking has reduced the frequency and intensity of such tensions because ex-trunk roads have been integrated into local planning processes. We commend the efforts of the Highways Agency and local authorities to minimise conflicts of interests and ensure that they have productive working relationships. However, where a de-trunked road continues to meet the criteria for trunked roads and local conditions imply remedies outside the local resources available, the Department should consider the merits of re-trunking or providing additional resources to the local authorities responsible for managing and maintaining the road. (Paragraph 41)

8. The Department for Transport must provide clear and timely leadership in terms of the strategic development of the road network. (Paragraph 44)

9. We accept that difficult funding decisions will have to be made in the coming years, but we urge the Government to ensure that the safety and maintenance standards of the major road network are not compromised. As the Eddington study demonstrated, transport infrastructure is critical to the generation of economic growth. It is therefore important that investment in, and maintenance of, basic infrastructure, such as our major road network, is not put on stand-by. With vast—and very welcome—funds likely to be invested in high speed rail over the next two decades, the Government must guard against the temptation to neglect the major road network to reduce costs. The major road network serves a wide range of needs and communities, and it is only a relatively small proportion of journeys on our major roads that could be transferred to rail, let alone high speed rail. (Paragraph 48)

10. The Government must clarify the basis which it assesses and allocates funding to infrastructure projects. Mechanisms for allocating funding to transport schemes should be transparent and give greater weight to economic **benefit.** (Paragraph 54)

11. We are concerned that the Department for Transport appeared not to be involved in discussions about the remit of Infrastructure UK at the initial stages. Infrastructure UK could have a critical impact on strategic transport investment. It will have the opportunity to improve the co-ordination of infrastructure decisions across Government, facilitating more coherent and strategic decision-making. We look forward to hearing, in the course of 2010, precisely how Infrastructure UK is going to achieve this and how it will improve decision making on transport investment. (Paragraph 56)

12. No method of allocating finite funds will satisfy everyone. However, we are pleased that there seems to be general support for the Regional Funding Allocation process. We welcome the introduction of a mechanism which has allowed regions a bigger say in what infrastructure investments should be prioritised and which looks across the transport modes. (Paragraph 59)

Congestion and capacity

13. We fully accept that maintenance work on the road network is likely to cause delays and that the safety of staff carrying out this work must be safeguarded. However, local authorities and the Highways Agency must minimise disruption and road closures as much as possible and they should consider ways to improve the way they communicate with road users to explain disruptions caused by maintenance. (Paragraph 63)

14. We are sympathetic to the Minister's point that congestion is a complex issue. However, while some of our witnesses may have questioned the exact figure for the cost of congestion, it is clear that congestion does have a significant cost to the UK economy. Given the scale of the cost, we support effective investment in the road network to reduce congestion. (Paragraph 69)

15. The Government should prioritise schemes which reduce the uncertainty over journey times that congestion causes. (Paragraph 70)

16. The predominant view at present is that population growth and the increasing number of vans and other non-car vehicles on the road make it unlikely that traffic volume has reached, or is nearing, a plateau at this stage. However, it is important that the Government's forecasts do not simply map past growth patterns onto predictions for the future. The growth in car traffic, for example, has slowed considerably in the past decade and there has been a rapid rise in mileage by vans. (Paragraph 73)

17. We are concerned that the Department is unable to disaggregate traffic growth predictions in order to establish how it expects roads to be used by different population groups in the future. This information is of critical importance—without it, planning is, at best, guesswork—and we urge the Department to look at how to improve these forecasts. (Paragraph 74)

18. The Government and the relevant transport authorities must consider the impact on surrounding local roads of any increased capacity on the major road network, whether through construction, widening or hard-shoulder running. We have to acknowledge that, whilst we recognise in some instances such schemes could have a beneficial effect by relieving the pressure on local roads, there can be no assumption that a reserve of unexplored capacity exists which can be used indefinitely. It is also important to consider the sustainability problems with using road construction as a significant part of easing congestion. (Paragraph 79)

19. There are some areas, we heard evidence of such from the North East of England, that are underprovided for in terms of major roads. It is unacceptable that some

parts of the country are discriminated against in terms of transport investment. (Paragraph 83)

20. We welcome Active Traffic Management (ATM) as an example of the Government employing innovative solutions to congestion. ATM has the potential to reduce congestion on the major road network, although it will not resolve the problem of congestion on its own. However, we are concerned that the focus of the current ATM roll out appears to be on hard shoulder running as a substitute for motorway widening rather than as part of a package of measures to regulate traffic flow. Hard shoulder running must not be separated from the other elements of Active Traffic Management, such as speed controls, needed to ensure it is a safe and effective measure. (Paragraph 88)

21. The Government must ensure the public is well informed about the benefits of Active Traffic Management techniques, such as hard shoulder running and flexible speed restrictions, and how it works. This is the only way road users are likely to accept such new arrangements, and indeed help to make it as effective as possible (Paragraph 89)

22. While we welcome the Government's commitment to promote and support rail and water-borne freight, it is unlikely that this will provide a solution to road congestion. Tangible steps, such as the development of the Strategic Freight Network, are required to encourage modal shift for freight. This in turn will help to reduce congestion and pollution on the major road network. This is beneficial for road users, the environment and the national economy alike. (Paragraph 92)

Conclusion

23. Given the significance of the major road network in relation to economic, environmental and social policy objectives, the Government must be clear both on what it sees as the future role of major roads and how best to deliver the policies and infrastructure necessary to fulfil that role. (Paragraph 95)

Annex: Classification of road types

Figure 4: Department for Transport roads classification scheme

Major roads: Include motorways and all class 'A' roads. These roads usually have high traffic flows and are often the main arteries to major destinations.

Motorways: major roads of regional and urban strategic importance, often used for long distance travel. They are usually three or more lanes in each direction and generally have the maximum speed limit of 70mph.

'A' Roads: Can be trunk or principal roads. These are often described as the 'main' roads and tend to have heavy traffic flows though not as high as motorways.

Trunk roads: Most motorways and many of the long distance rural 'A' roads are trunk roads. The responsibility for their maintenance lies with the Secretary of State and they are managed by the Highways Agency in England, the National Assembly of Wales in Wales and the Scottish Executive in Scotland (National Through Routes).

Strategic Road Network (SRN): Consists of motorways and trunk 'A' roads (dual and single carriageway) in England that are managed by the Highways Agency, as well as the M6 Toll.

Non-trunk roads: Roads for which local authorities are highway authorities. The Secretary of State, the Scottish Government, and the Welsh Assembly Government have power to classify non-trunk roads in agreement with the local highway authority. Non-trunk roads are therefore either classified or unclassified, the former being of two types, principal and non-principal. The classified principal roads are class 'A' roads, except for a few local authority motorways, and are of regional and urban strategic importance. The non-principal roads are those which distribute traffic to urban and regional localities. The non-principal classified roads are sub-divided into 'B' and 'C' classes. Unclassified roads are those in the least important categories, i.e. local distributor and access roads.

Principal roads: Major roads are maintained by local authorities. These are mainly 'A' roads, though some local authorities do have responsibility for some motorways).

Minor Roads: These are 'B' and 'C' classified roads and unclassified roads (all of which are maintained by local authorities).

Source: Transport Statistics Great Britain 2009: Road lengths—Formal Minutes

Formal Minutes

Wednesday 24 March 2010

Members present:

Mrs Louise Ellman, in the Chair

Mr David Clelland	Sir Peter Soulsby
Rt Hon Jeffrey Donaldson	Graham Stringer
Mr Philip Hollobone	

Draft Report (*The major road network*), proposed by the Chair, brought up and read.

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

Paragraphs 1 to 24 read and agreed to.

Paragraph 25 read as follows,

"A small minority of our witnesses argued that a much more extensive major roads network was required. The Association of British Drivers claimed that "the UK's motorway network is one-third the EU average in relation to the size of its economy" and that it was in desperate need of expansion. **The coverage of the major road network is broadly satisfactory, and we do not consider that there is a case for significant increase of the number of road miles. There may be areas of the country where new major road connections could be beneficial, but these are likely to be comparatively short 'bridging' schemes or upgrades of existing smaller roads rather than major new routes.**"

Amendment proposed, in line 4, leave out from "expansion" to end of paragraph and insert "**This country has one of the lowest motorway densities in Western Europe. This puts England at an economic and competitive disadvantage. The remedy for this should include some new initiatives to construct and upgrade motorways.**" .—(Graham Stringer.)

Question put, That the Amendment be made.

The Committee divided.

Ayes, 4	Noes, 1
Mr David Clelland	Sir Peter Soulsby
Rt Hon Jeffrey Donaldson	
Mr Philip Hollobone	
Graham Stringer	

Paragraph, as amended, agreed to.

Paragraph 26 read, amended and agreed to.

Paragraphs 27 to 29 read and agreed to.

Paragraph 30 read, amended and agreed to.

Paragraphs 31 to 40 read and agreed to.

Paragraph 41 read, amended and agreed to.

Paragraphs 42 to 53 read and agreed to.

Paragraph 54 read, amended and agreed to.

Paragraphs 55 to 78 read and agreed to.

Paragraph 79 read, amended and agreed to.

Paragraphs 80 to 82 read and agreed to.

Paragraph 83 read, amended and agreed to.

Paragraphs 84 to 92 read and agreed to.

Paragraph 93 read, amended and agreed to.

Paragraph 94 read as follows,

"There is general agreement that the coverage of the UK's major road network is adequate, although there concerns over its capacity in numerous places. We do not support a significant expansion of the major road network but do identify means of improving capacity through a combination of measures, including active traffic management and demand management measures, as discussed in our previous report, *Taxes and charges on road users*. We have concerns about maintenance practices, especially at local level. Strategic oversight of the network also requires the Department for Transport to take the lead in taking difficult decisions, although regional input is important. With the prospect of a sharp decline in public spending, the Department must ensure value for money from the transport projects it funds. While roads projects often show good value for money compared to other schemes under current appraisal methods, wider policy objectives will also influence decision making and clarity and transparency are vital in justifying departmental spend. Further examination of the appropriateness of current appraisal techniques might also be considered."

Amendment proposed, in line 1, leave out from "There" to end of sentence.—(Graham Stringer.)

Question put, That the Amendment be made.

The Committee divided.

Ayes, 4	Noes, 1
Mr David Clelland	Sir Peter Soulsby
Rt Hon Jeffrey Donaldson	
Mr Philip Hollobone	
Graham Stringer	

Paragraph, as amended, agreed to.

Paragraph 95 read and agreed to.

Annex agreed to.

Resolved, That the Report, as amended, be the Eighth Report of the Committee to the House.

Ordered, That the Chair 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.

Written evidence was ordered to be reported to the House for printing with the Report.

[The Committee adjourned.

Witnesses

Wednesday 20 May 2009

Wednesday 24 June 2009

Wednesday 8 July 2009

Monday 20 July 2009

List of written evidence

List of Reports from the Committee during the current Parliament

The reference number of the Government's response to each Report is printed in brackets after the HC printing number.

Session 2009–10

First Report	The future of aviation	HC 125–I and –II *(HC 388)*
Second Report	Work of the Committee in 2008–09	HC 262
Third Report	Priorities for investment in the railways	HC 38
Fourth Report	The performance of the Department for Transport	HC 76
Fifth Report	The proposal for a National Policy Statement on Ports	HC 217
Sixth Report	The new European motorcycle test	HC 442
Seventh Report	Update on the London Underground and the public-private (PPP) partnership agreements	HC 100
Eighth Report	The major road network	HC 505

Session 2008–09

First Report	Work of the Committee in 2007–08	HC 211
Second Report	School Travel	HC 351 *(HC 561)*
Third Report	Appointment of the Chair of the Office of Rail Regulation	HC 433
Fourth Report	The effects of adverse weather conditions on transport	HC 328 *(HC 957)*
Fifth Report	The use of airspace	HC 163 *(HC 996)*
Sixth Report	Taxes and charges on road users	HC 103 *(HC 995)*
Seventh Report	The enforcement activities of the Vehicle and Operator Services Agency (VOSA)	HC 39 *(HC 1057)*
Eighth Report	Rail fares and franchises	HC 233 *(HC 1004)*

Session 2007–08

First Report	Galileo: Recent Developments	HC 53 *(HC 283)*
Second Report	The London Underground and the Public-Private Partnership Agreements	HC 45 *(HC 461)*
Third Report	Work of the Committee in 2007	HC 248
Fourth Report	The future of BAA	HC 119 *(HC 569)*
Fifth Report	Ticketing and Concessionary Travel on Public Transport	HC 84 *(HC 708)*
Sixth Report	The Blue Badge Scheme	HC 475 *(HC 1106)*
Seventh Report	Department for Transport Annual Report 2007	HC 313 *(HC 1102)*

Eighth Report	Freight Transport	HC 249 *(HC 1103)*
Ninth Report	The Draft Marine Navigation Bill	HC 709 *(HC 1104)*
Tenth Report	Delivering a sustainable railway: a 30-year strategy for the railways?	HC 219 *(HC 1105)*
Eleventh Report	Ending the Scandal of Complacency: Road Safety beyond 2010	HC 460 *(HC(08–09)136 & HC(08–09)422)*
Twelfth Report	The opening of Heathrow Terminal 5	HC 543

Session 2006–07

First Report	Work of the Committee in 2005–06	HC 226
Second Report	The Ports Industry in England and Wales	HC 6I–I and –II *(HC 954)*
Third Report	Transport for the London 2012 Olympic and Paralympic Games: The Draft Transport Plan	HC 199 *(HC 484)*
Fourth Report	Department for Transport Annual Report 2006	HC 95 *(HC 485)*
Fifth Report	The Government's Motorcycling Strategy	HC 264 *(HC 698)*
Sixth Report	The new National Boatmasters' Licence	HC 320–I and –II *(HC 1050)*
Seventh Report	Novice Drivers	HC 355–I and –II *(HC 1051)*
Eighth Report	Passengers' Experiences of Air Travel	HC 435–I and –II *(HC 1052)*
Ninth Report	The draft Local Transport Bill and the Transport Innovation Fund	HC 692–I and –II *(HC 1053)*

Session 2005–06

First Report	UK Transport Security – preliminary report	HC 637
Second Report	Financial Protection for Air Travellers: Second Report Abandoning Effective Protection	HC 636 *(HC 996)*
Third Report	Going for Gold: Transport for London's 2012 Olympic Games	HC 588–I and –II *(HC 1152)*
Fourth Report	Departmental Annual Report 2005	HC 684 *(HC 1517)*
Fifth Report	Future of the British Transport Police	HC 1070–I and –II *(HC 1639)*
Sixth Report	How fair are the fares? Train fares and ticketing	HC 700–I and –II *(HC 1640)*
Seventh Report	Parking Policy and Enforcement	HC 748–I and –II *(HC 1641)*
Eighth Report	Piracy	HC 1026 *(HC 1690)*
Ninth Report	The work of the Department for Transport's Agencies – Driver and Vehicle Operator Group and the Highways Agency	HC 907 *(HC 1615)*
Tenth Report	Roads Policing and Technology: Getting the right balance	HC 975 *(HC(06–07)290)*
Eleventh Report	Bus Services across the UK	HC 1317 *(HC(06–07)298)*
Twelfth Report	Local Transport Planning and Funding	HC 1120 *(HC(06-07)334)*
Thirteenth Report	The work of the Civil Aviation Authority	HC 809 *(HC(06–07)371)*
Fourteenth Report	Passenger Rail Franchising	HC 1354 *(HC(06–07)265)*
First Special Report	The Performance of the London Underground: Government Response to the Committee's Sixth Report of Session 2004–05	HC 431

Second Special Report	The Departmental Annual Report 2004: Government Response to the Committee's Fourth Report of Session 2004–05	HC 432
Third Special Report	Integrated Transport: the Future of Light Rail and Modern Trams in the UK: Government Response to the Committee's Tenth Report of session 2004–05	HC 526
Fourth Special Report	Search and Rescue: Government Response to the Committee's Eighth Report of Session 2004–05	HC 586
Fifth Special Report	Rural Railways: Government Response to the Committee's Fifth Report of Session 2004–05	HC 587
Sixth Special Report	Tonnage Tax: Government Response to the Committee's Second Report of Session 2004–05	HC 611
Seventh Special Report	Financial Protection for Air Travellers: Government and Civil Aviation Authority Responses to the Committee's Fifteenth Report of Session 2003–04	HC 639
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Oral Evidence

Taken before the Transport Committee

on Wednesday 20 May 2009

Members present

Mrs Louise Ellman, in the Chair

Mr David Clelland
Mr John Leech
Mr Eric Martlew
Mark Pritchard
Ms Angela C Smith
Sir Peter Soulsby
Graham Stringer

Witnesses: **Mr Alan Stilwell**, Institution of Civil Engineers and Institution of Highways & Transportation, **Dr David Metz**, University College, London, **Mr Graham Dalton,** Chief Executive and **Ms Ginny Clarke**, Network Services Director, Highways Agency, gave evidence.

Chairman: Good afternoon, welcome to our meeting today. Do members have any interests to declare?
Sir Peter Soulsby: I am a member of Unite.
Mr Clelland: A member of Unite.
Ms Smith: I am a member of GMB and Unison.
Chairman: Louise Ellman, member of Unite.
Mr Martlew: Member of Unite and GMB.

Q1 Chairman: Could I ask our witnesses to identify themselves for our record at the start of the evidence.
Mr Stilwell: I am Alan Stilwell. I am Director of Operations at Mersey Travel but I am representing the Institution of Civil Engineers and the Institution of Highways & Transportation.
Dr Metz: I am David Metz, I am visiting professor at the Centre for Transport Studies at University College, London.
Mr Dalton: Graham Dalton, Chief Executive of the Highways Agency.
Ms Clarke: I am Ginny Clarke, Director of Network Services for the Highways Agency.

Q2 Chairman: Thank you very much. In the evidence we have received from you, you say that the UK's major road network is full of potential and you suggest that it is not really achieving that potential. Could you say what you mean and what should be done about it?
Mr Stilwell: From our perspective the biggest issue is either existing congestion or potential congestion in the future. That was an issue picked up by Sir Rod Eddington in his report on transport and the economy a couple of years ago now. Certainly it is a great concern to us that congestion is estimated to be costing the economy about £15 billion a year. Rod Eddington himself identified that by 2025 the value of time wasted will be something like £22 billion. I know we are in an economic recession, but with traffic growth variously estimated as being about one third between the period 2020-2025 that situation is not going to get any better. For us the issue is how we address that issue moving forward and how we make sure that congestion is addressed now and does not become even more of a problem in the future.

Q3 Chairman: Would anybody else like to comment on that? We have had evidence saying that there is fragmented management in relation to our road network. Does anybody have any observations on that? What can you tell us about the Highways Agency?
Mr Dalton: I do not particularly recognise "fragmented management". Are there different responsibilities for different types of road and different types of highway? Yes. The Highways Agency are responsible for the strategic road network linking ports, airports, centres of population and centres of economic activity. Those need managing in a slightly different way to small, more lightly trafficked roads, serve quite a different purpose and need to be managed and maintained in a different sort of way.

Q4 Chairman: What about investment in our major roads? Is that done in the right way? Should we have different priorities? Does anybody have any views on that?
Mr Stilwell: For me the issue is not just about investment in major roads but about investment in our transport system generally. We cannot separate out the issue of what we do with our major roads. It is what we do with our transport infrastructure, it is about making better use of our existing roads, but it is also about looking at complementary measures and particularly improved alternatives. The Government are in a strong position to join up transport in its widest sense at the national level, major roads and our railways, but the situation in the metropolitan areas is perhaps a little more fragmented and a bit more challenging to deal with. For me the issue is about looking at it as a whole and getting an integrated transport system and not just focusing on the issues on the major roads.

Q5 Mr Clelland: Mr Dalton said that the Highways Agency are responsible for linking ports, airports and major population areas. I think that is right. Is he satisfied that the current network actually achieves that right across the United Kingdom?

Mr Dalton: Pretty much so. There was a major review about ten years ago which led to something like 2,000 miles of road being de-trunked and certainly some of those which were de-trunked, quite rightly, were no longer fulfilling the purpose they had perhaps done ten or 20 years before. It certainly means that on the whole in the Highways Agency we are operating, because with intensively trafficked networks it is as much about maintaining as actively operating relatively high-speed roads carrying heavy traffic, both people and freight. You could never say that the network is exactly the right shape or size; there are shades of grey. We have the main core of the nationally prescribed network and since about four years ago the regional parts of the network, where there was stronger regional influence and prioritisation over how that should be operated and developed, which has helped. I know the Department for Transport is doing a bit of work now and as part of the consultation towards a sustainable transport strategy is looking at some other small adjustments, some potential switches from regional to national routes, saying that we should not just be going into town, we should be going right into port or right to port gate, not necessarily with a change of ownership but at least integrating.

Q6 Mr Clelland: How important is it that the country's motorway network actually links all regions and nations of the UK?
Mr Dalton: It is important that there is a strategic road network. Less than half my network is motorway. It is not necessary per se to have motorway to every point.

Q7 Mr Clelland: Not every point but every region.
Mr Dalton: Yes, every region. There are bottlenecks on our network, some of them in places where it is difficult to invest, some where improvements are being made to make those connections. Certainly regionally the connections are essentially there, whether they are all of standard I am sure members will have a view and the Department. It is a matter of prioritisation.

Q8 Mr Clelland: As you might imagine, I have a view about the north east in particular.
Mr Dalton: I have a rough idea.

Q9 Mr Clelland: The north east is not as yet linked up to the motorway system. As you know, there is no motorway up from Dishforth to Scotch Corner. I understand the Department have now agreed that section of road will be completed. Is there any timescale for that?
Mr Dalton: We have started construction on site between Dishforth and Barton, so it is a job which is in construction.

Q10 Mr Clelland: How long is that going to take?
Mr Dalton: Dishforth to Leeming is the first part and, off the top of my head, it is about a three-year construction period there. Of course further down, Bramham to Wetherby is a job which is finishing in the next three or four months, so that is taking out another gap.

Q11 Mr Clelland: Will that be what we recognise as a standard motorway, three lanes with hard shoulder?
Mr Dalton: Not necessarily motorway standard but as far as a driver road user is concerned near enough the same with a lot of the side roads and side junctions taken off. It is not necessarily motorway but it is a high-speed route and safe route and fast motor route.

Q12 Mr Clelland: Will it be two lanes or three lanes?
Mr Dalton: I cannot remember off hand.

Q13 Mr Martlew: I understand very well the problems on the A1. As you get near to the Scottish border where the road is very bad is it the same problem that we had when the M6 came to Carlisle? I can remember talking once to the Head of the Highways Agency asking when we were going to get the link to Scotland. He said "Mr Martlew, once it gets to Carlisle there is nowhere else for it to go". That was about 15 years ago. What he was really saying was that Scotland was nothing to do with him and therefore they were not going to put the money into improving the road to the Scottish border. Is that the same problem you have with the A1?
Mr Dalton: Apart from observing that the M6 is now complete to the border.

Q14 Mr Martlew: I am talking about 15 years ago and they just opened it this year.
Mr Dalton: Understood. The real policy is with the Department for the longer-term transport plan. We have an investment programme, which is the one which was published by the Secretary of State in January. If you look at the traffic numbers in the north east—and I was up there in October with the local authorities—around Newcastle and Gateshead western bypass there is something in excess of 100,000 vehicles a day; it is a heavily congested piece of road around the bypass. South of Newcastle and Gateshead the A1 is carrying between 60,000 and 80,000 vehicles a day. If you go north, you are coming down to in the order of 20,000 vehicles a day so it is much lighter traffic. I know some road users have a perception that if it is not a motorway it is not a proper road, but in terms of the journey time, the actual transport and the function, it is a question of what the road does.

Q15 Mr Clelland: Mr Martlew rather pre-empted me. I was not talking about the A1 North of Newcastle, I was talking about the extension between Dishforth and Scotch Corner and I was trying to establish whether that was going to the same three-lane standard as the motorway South of that.
Mr Dalton: I should know but I do not know off the top of my head. I think it is three lanes but I am not certain and I can confirm to you.

Q16 Mr Clelland: The reason I am asking is that when you get to Scotch Corner of course you drop down to a two-lane motorway and that is responsible for much of the congestion you have just described. I am just wondering whether or not the Department has in mind that there ought to be a standard in terms of these heavily used trunk roads? Should there be a minimum standard?

Mr Dalton: The major part of the business case for Dishforth to Barton is not so much about congestion but it is taking out the side turnings and the central reservation gaps and the crossovers which is where the incidents occur, it is where the accidents occur, frankly that is where the fatalities occur. If you take those out, that in turn improves traffic flow because you do not have the disruption breaking down traffic flow. That is where the real benefits come; there is not as much congestion on those roads, it is just getting traffic flows.

Ms Clarke: We do not have a set standard. It is linked to traffic flows. On a road like that we would be looking at a minimum level of two lanes each way, a dual carriageway effectively, partly because of the speed of the road. So we would be assuming we would be planning to get the strategic traffic through; we would be looking for a dual carriageway. Anything above that is related to the volume of the traffic, whether it is two, three or four lanes will then be a relationship to the expected traffic over a period of time.

Q17 Mr Clelland: I know it is all a question of investment and finance, but would it not be sensible, from the motorists' point of view, for them to know what is motorway and what is not, when they move from a four-lane motorway down to a three-lane motorway down to a two-lane motorway and back up to a three-lane motorway? Should there not be a standard motorway?

Ms Clarke: The point is that you could say it should be three lanes but in some areas that is not necessary and you would be investing money where actually you did not need to do so. So the reason for having the choice between two, three and four lanes is that we are best able to match the cost of that provision against the benefits we provide.

Q18 Mr Clelland: The problem with that argument is that a three-lane motorway was not necessary when they built the A1 up to the north east but it is necessary now, so it is a question of planning for the future.

Ms Clarke: Yes and to some extent that is what we do. We do look to the future provision, not just the year of opening but the years after that. That is why we will just confirm to you the standard of the top half of the Dishforth to Barton section.

Q19 Ms Smith: The Institution of Civil Engineers have said that they " . . . would support the greater use of road space reallocation, e.g. dedicated bus lanes and high-occupancy vehicle lanes as demand management tools to make better use of existing road space and enhance public transport journeys". Very often we get complaints from our constituents about the dedication of bus lanes. The argument is that you are reducing capacity for ordinary car users and so on and making life more difficult for the traveller. I do not necessarily agree with that but perhaps you could explain the thinking behind the statement you made.

Mr Stilwell: Yes, I am happy to share and this links very much with the comment I made earlier about having a truly integrated package of measures. Clearly if we are re-allocating road space for buses or for high-occupancy vehicles, that only works if people have the choices, the alternative modes of transport that are available to them. Certainly from our perspective the so-called demand-side solution has to be a sensible package of measures so it is potentially in the future things like road pricing and congestion charging, it is about looking at workplace parking charges to perhaps discourage people from using private cars where an alternative mode of transport is available. It is about things like road space reallocation where it is appropriate to do so and I think that is a fair point. Perhaps I could stress that it is also even bigger picture stuff. It is about reducing the need to travel, trying to encourage the right sort of planning regime, things like home working, so that people do not have to travel in some situations. For me the summary is that we have to create the choices so that people can make smarter choices and that is about getting the right infrastructure in place, the right public transport in place; yes, if people need to use their private cars then making those facilities available and linking with what Mr Dalton said about making sure that the standards are right for the traffic that will use them. Perhaps the bottom line for us at the Institution of Civil Engineers and the Institution of Highways and Transportation is addressing the issue of car dependency. We have a car dependency culture and where alternative transport modes are either already available or could be made available for the future we really ought to address that car dependency culture.

Q20 Ms Smith: From that answer you seem to suggest that you believe it is actually realistic to expect a significant modal shift away from car use. Would you like to expand on that?

Mr Stilwell: Yes, certainly in the denser urban areas. That might be more challenging on some of the inter-urban routes. Certainly we have seen, for example, the investment in the West Coast Mainline with the improved rail services from the north west down to London have given people a better opportunity to travel by train for those inter-urban trips. Clearly we see a degree of modal shift because of that investment and it is quite right that we should do that. It is largely in the urban areas, particularly in the metropolitan areas where there are enormous opportunities to get the package of public transport solutions right so that we can encourage people to use public transport rather than private cars. We also have to accept that in many of the rural areas, people do not have those choices and clearly there we have

to make sure that people are provided for in using private cars because that may be the only choice they have.

Q21 Ms Smith: In terms of rural areas, yes, a car may be the only realistic option in many cases. However, increasingly people commute from rural areas to work in urban and suburban areas. Does that not add to the problem therefore and do we not therefore need to do something about the fact that people travel into towns and cities?
Mr Stilwell: In absolute terms, possibly, but then I think we need to be a bit smarter about how we help people to plan their journeys. They might start in a private car but they do not have to finish in a private car. Getting the right sort of park-and-ride facilities at railheads or perhaps even more extensive use of park-and-ride, intercepting traffic on motorways and trunk roads travelling into the denser urban areas and giving them that choice of public transport for the last part of their journey; being smarter about the complete journey and giving people those choices is what it is all about for us.

Q22 Ms Smith: In terms of the realistic possibility of delivering all of this do you agree that there is a strong case for strengthening the subsidy system for delivering public transport improvements?
Mr Stilwell: I would answer yes to that. If I turn that round, the cost of doing nothing is even more serious. We have the evidence, as I said right at the start, that congestion is already costing the economy dear and it will cost even more in the future. So investment now will avoid some of those problems in the future. That was the central tenet of Sir Rod Eddington's report on transport and the economy.

Q23 Chairman: There is a problem on rail capacity, is there not? Do you think that is a serious impediment to moving people onto the rail from the road?
Mr Stilwell: Yes, it is. It is worse in some areas than others. Clearly in the south east there are some serious capacity issues. In other parts of the country, emerging capacity issues on the rail network are relatively easily solved with investment in additional rolling stock and capacity improvements on the railway. I pay tribute to the work that the Government are doing and Network Rail are doing on the HLOS, the high level output statement on the additional 1,300 vehicles on the rail network nationally. That is the sort of investment that is needed to give people those choices and to encourage them to make that modal shift from road to rail.

Q24 Mr Clelland: On the modal shift to public transport, given the fact that most public transport companies are in private hands and run for private profit how are you going to influence a shift unless the subsidy can be unlimited, which it cannot, to move from cars to public transport?
Mr Stilwell: There are clearly some issues there. We do have a largely deregulated public transport system outside of London and that does create some serious challenges. Things are getting better. The Local Transport Act, introduced last year, makes it arguably easier to introduce a London-style franchising system for buses. It is yet to be tested just how easy that is but in theory at least we can have greater integration in our metropolitan areas to allow better planning of public transport systems.

Q25 Mr Clelland: So if for any reason the Local Transport Act was unable to be enacted fully that would be a bit of a setback for public transport then.
Mr Stilwell: Yes, I guess it would, but we should not underestimate the ability of the various partners to get together to work in partnership without the force of an Act of Parliament behind them.
Mr Clelland: The partnerships I have seen growing in the last few months have come directly out of the Local Transport Act with bus operators anticipating what might happen. If it had not been for the Local Transport Act perhaps we would not be getting so much cooperation.

Q26 Ms Smith: I should just like to say that Sheffield had the first quality partnership in the country and that is on the point of breaking down, partly because the local authority is cutting down on the use of bus lanes. I think some of the points you made earlier are actually very relevant to all of that. I want to talk about rail freight. I just wondered what the opinion of the Institution is about the need to secure a modal shift in terms of freight off the roads and onto the railways. Road freight must take care of a major percentage of the number of vehicles on the road network.
Mr Stilwell: Yes. The joint institution view is that there are indeed opportunities to get a modal shift for freight from road to rail. We should keep that in perspective. There are limited opportunities, partly because of the capacity on the rail network that we talked about just now, but also because rail lines do not always go exactly where you would like them to go. We have to accept that the highways network is a degree more flexible but nevertheless there are opportunities there and we should take those opportunities. In the future, bearing in mind the multi-party support for the high-speed rail agenda, that may well in the future offer opportunities for existing lines to be used more extensively for rail freight. We ought to be planning now part of that process for increased rail freight on the existing network.

Q27 Ms Smith: Would the Highways Agency like to comment?
Mr Dalton: Typically it is about 12% of traffic on a given road; it varies a little bit but typically 12% is freight movement and the rest is car and light vehicle movements. You get differential speeds to a degree and that is why in some places we have introduced overtaking bans on two-lane dual carriageways just to keep freight in one lane. It is of that sort of order. To make a substantial difference on the road network would require a virtual saturation of the rail network. To put the numbers in proportion, the vast proportion of freight moved in the country is by road

and you could double what is on rail and it would not make an awful lot of impact upon the road network.

Q28 Mr Leech: How accurate are methods for calculating trends in growth of the use of the roads?
Ms Clarke: Our parent department does the predictions for traffic growth, not just on our network but it takes growth forecasts for traffic across the UK. It has a well-established history of doing that and certainly in terms of looking at our network, where we have more of a role in recording what actually goes on the network, the forecasts have been relatively accurate actually. It has changed a bit in the last year, where there has been a change in the growth but generally yes, those forecasts have been relatively reliable.

Q29 Mr Leech: Has a forecast ever actually predicted more traffic than we have ended up with on a new road or an extension or a widening?
Ms Clarke: Generally no. Having said this I am sure somebody will find me one example. In past years we have had more growth than has actually been predicted. I am talking about our network and that is a relatively small part of all roads in the UK. On ours, generally forecasts have been very reliable; if anything traffic growth has been greater.

Q30 Mr Leech: When you say they have been reliable, do you mean that they have been reliably under-estimating how much extra traffic it would create?
Ms Clarke: If you take forecasts at the national level, those are what have been reliable. What then happens, as you break those down and look at more local areas, look at one particular part of the network, that is where the variability of forecasts is more likely to be greater because of the factors we are looking at in a particular local area; the assumptions about development or whatever else, are a bit more difficult to predict. Generally the differences you get in forecasts tend to be a bit greater as you get to more local areas.

Q31 Chairman: Dr Metz, you have given us evidence on this subject and you seem to be saying something rather different to some of the other analyses. You appear to be saying that the change has been an increase in the length of journeys rather than the number of journeys. Could you tell us something about your work and why you think it might differ from some of the other forecasts?
Dr Metz: Thank you very much, I would like to. I have been doing a fair amount of analysis of the Department's national travel survey which has been running for over 30 years and is a really valuable source of information. What you find from that is that on average the amount of time we all spend travelling is about an hour a day and has not changed in 35 years. On average we make about 1,000 journeys a year and, again, that has not changed over this period. What has changed is the distance that we travel. In the early 1970s on average we travelled 4,500 miles a year and now we travel 7,100 miles a year. What you find is a period of growth over the first 20 years and over the last ten years we have not travelled any further. We have travelled for about 7,000 miles a year on average. Looking at all the travelling per person, the growth of travel has stopped—that is from the Department's data—moreover, if you look at the cars on the roads—not lorries, not vans but cars on the roads—per capita the growth of that has stopped over the last five years. I think this means that the Department's forecasts are really very problematic because the Department assumes that the long-running historic trend in the relationship between economic growth and traffic growth will continue into the future. My reading of the various observations is that is not necessarily so. In London, car use per capita has been falling over the past ten years while public transport use has been rising. I do think we need to re-examine traditional assumptions about the basis of forecasts because clearly it is very relevant to what you might invest in the major roads system, which is the subject of your present inquiry.

Q32 Chairman: What conclusions do you come to about what investment there needs to be in the major road systems?
Dr Metz: I am sceptical about major investment in the major road system. What the effect of such investment is, in a particular locality like the north east, is actually to encourage the dispersal of people in that region. If the road is widened and people can travel faster in the amount of time they allow themselves to travel, they can spread themselves further into the countryside to live while working in the cities and so forth. In a context of anxieties about climate change and environmental impact from travel you have to ask whether that is a sensible direction of policy. My view generally is that we should not be increasing the capacity of the major roads network. That leaves us with the problem of congestion but you cannot build your way out of congestion, as you well know. You therefore need solutions which depend upon information technology to give people a better understanding of where congestion is and how they can avoid it by varying their travel behaviour.

Q33 Sir Peter Soulsby: In the light of what you have just told us, what do you make then of the claims made—and we have heard them again today—about the substantial savings which are potentially there to be made if only congestion could be removed? Does it not suggest, from what you have said to us, that they are more aspirations than realistic hopes?
Dr Metz: Yes, I agree with that. How might you deal with congestion? You might widen the roads but that actually generates more traffic, so you are back to where you started. You might have road pricing but, as you well know, that is quite a problem. Therefore my preferred solution is to use information technology to give people better information about travelling conditions so that a freight haulier can plan his routes, et cetera, in the light of the traffic conditions. An individual traveller, deciding when to start the journey home from work, can check the

state of the system, work out how long it is going to take them and if they do not need to get home at a particular time they might delay the start of their journey to avoid the peak. That is good for the traveller because they experience reduced journey time uncertainty as well as congestion. It is good for everyone else who has to travel at peak because that one person has been taken out. There is a lot of technology, a lot of enterprise happening in this area. The Highways Agency has its own initiatives. My view is that we should bring all that together and operate a national system which gives good advice about journey times and routes. This would go with the grain of a wide range of developments and give us probably the best way we can manage of operating our congested road network.

Mr Stilwell: For me it is about journey time reliability. It is the information flow but the freight industry in particular needs to know how long it is going to take for the journey to be completed and they need that information to be reliable. What they do not need, the last thing they need, is complete unpredictability because they will lose their slots at their distribution centres and that in itself creates problems. The congestion itself is a problem but it is also about journey time reliability.

Dr Metz: If you ask people what the problem is with congestion in surveys, the first answer is that the most important problem is the uncertainty. It is not congestion as such, it is the uncertainty. I believe it is much easier to tackle that uncertainty with technology rather than tackle congestion per se.

Q34 Chairman: What about dedicated bus lanes and high-occupancy vehicle lanes? Would they have much impact on reliability?

Dr Metz: There are trade-offs between who you want to benefit from what intervention you make. Clearly high-occupancy vehicle lanes benefit those who have many people in their vehicles. There is quite a lot of experience of that in the States. I do not have a very clear view on that myself. A related issue is the use of the hard shoulder running with speed limits because that is a way of increasing capacity and reducing congestion without getting a great increase in the amount of traffic because you are controlling the speed limits and that is quite promising.

Q35 Mr Martlew: I am very interested. What you seemed to say before is that if you are behind in getting a new road then you should continue to suffer. That seems to be the view: you should not continue to build any more new roads or you should build very few roads. It is very difficult to sell that if you are a politician, is it not? It is very difficult to tell people that they cannot develop the countryside because Whitehall thinks it is not a great idea that they should have the same freedom as others. How do you get over that dilemma? Do you invest very heavily in public transport in those areas? How do you solve that sense of unfairness there will be for people who have to suffer congestion every time and do not have the freedom of other parts which have good roads?

Dr Metz: That is a very fair point and there are issues arising from the history of where the roads happen to be. In this context we have to recognise the pressures of population growth; the population of Britain is due to increase by ten million people by 2030. Where are they going to go? What are the requirements going to be for housing, work and so forth? How are they going to travel? My conclusion would be that they probably have to go to existing towns and cities rather than disperse into the countryside and if they are in towns and cities you have good prospects of improving public transport to meet their needs. That is basically what has been happening in London. London is a vibrant city with a growing population, increasing density, you invest in public transport to good effect and therefore car use shrinks. The issue of the balance between rural and urban and the pleasures of rural life offset by the problems of transport has no generalised conclusion; it may be more a matter for regional policy than national policy.

Q36 Mr Martlew: What you have not answered—perhaps you have. What you are saying is that you have to continue to live in cities, there is no alternative. We will build bigger cities and we will put public transport there. Is that what you said?

Dr Metz: If you are contemplating, as you are, an increase of ten million in the population of Britain that is probably what has to happen. They have to go in cities and towns.

Q37 Mr Leech: DfT predicted a 38% increase in traffic from 2000 levels by 2025. Is that predicted growth still on course or has it been knocked back by the current recession or the big spike in petrol and diesel prices?

Mr Dalton: Those were predictions without anything else being done and all things being equal. As you were alluding to earlier, one thing about a forecast is that it can go either way. As a result almost certainly of the state of the economy over the last 12 months, we have seen volumes on the strategic road network, the Highways Agency's network, decline; not a lot, it is single figure percent but there has been a year-on-year decline. That will affect the trend line. The bigger question which Professor Metz was talking about is whether the trend line is still upwards, just gets moved to the right or whether there is a different trend.

Q38 Mr Leech: If these figures are at all accurate, what impact will this have on the existing network if lots of money is not spent on expanding it?

Mr Dalton: We do a number of things. We have a pretty intensive construction programme and we have a capital programme which is getting up to around £1 billion a year on the funding guideline which is targeted on some of the difficult spots and congestion spots. They are not about connecting new areas together but about capacity and reliable journey time, whether it is the A3 and the last bottleneck at Hindhead, whether it is the A14 linking Cambridge to the West Midlands and then on down to Felixstowe, schemes like that, our

investment just completes the routes right through; the A1/A1(M) is a similar case. We also do a lot of work with developers for business park developments. A very attractive place to build a new business park, to build a new shopping centre, almost anything else, is next to a motorway junction. For example, in the proposed business park development in Cambridge, we are working closely with local authorities and with the developers to get in travel planning there which is just the case to put in public transport links and links between the business park and city centre or town centre. If those links are not there, then it is all traffic which comes onto our network. The buses do not even necessarily come on our strategic road network; they are linking the city with the business park on the outskirts. If we do not do that, that is the sort of traffic that will then cause congestion again at hotspots which interferes with the performance of the whole.

Q39 Mr Leech: How much of the predicted growth though is as a direct result of us building all these roads or expanding the existing network?
Mr Dalton: As I say, I do not think we are expanding the network. You get small volumes of traffic growth because the journey gets a bit easier but relatively small, single figure percentages.
Dr Metz: I would say that over the long period the traffic has essentially expanded to fill the network. You build a new road and that allows people to get access to the new destination. It may be greenfield land for housing or for industrial development, business parks, what have you. What limits our travel is time; time is always a limiting factor. The limitation of time is overcome by speed, so by going faster you can go further. If you go back to the mid-nineteenth century, people walked to most places and you had to live close to where you worked, work close to where you lived and so forth. A core part of the whole process of modernisation and development over the last 150 years has been going faster to get more access and more choice of destination. I would argue that by building the trunk road network, the major roads network, what we have built for ourselves is access, not, as is conventionally supposed, time saving. That has been the basis for conventional economics but actually in the long run you do not save time. What you do is get access. It gives us more choice, which is a good thing, but I would argue, as set out in my submission, that actually now we have a lot of choice, we really do have quite a considerable amount, and that is why the underlying demand for travel, to which I referred earlier, has now come to a stop because we do have extensive choice. With a highly developed transport network in a compact country like Britain, I would not think there is a major need for further investment in order to improve access and choice. Probably we have very largely what we need.
Mr Stilwell: Expanding that point and in answer to Mr Leech's question, maybe not now, maybe not in the next few years, but at some point we are going to have to consider seriously the whole issue of road pricing and at the national level either influence when people travel so that they make more sensible choices about travelling at less congested times or persuade them not to travel by car at all. Of course, the caveat to that, as we discussed earlier, is that there have to be the appropriate alternative modes of transport available to them to make those journeys, unless of course we can reduce the need to travel. The predictions are based on no road pricing, no demand restraint measures in place and that is something we might have to consider in the future very seriously.

Q40 Mr Leech: How many years away do you think road pricing is on the national scale?
Mr Stilwell: Very difficult to predict. I would not want to predict, sitting here. We could all do the work, perhaps with the Highways Agency, local authorities, to see what the congestion levels would look like, certainly in my own local area, the Liverpool area, the models show that although we do not have a large element of congested network now, parts of that network will start to become congested in the next four to five years, certainly not sufficient to think seriously about congestion pricing or road pricing. We saw with Greater Manchester that there was a strong feeling there initially that congestion charging was the right way forward and that has failed because clearly there was not the will to introduce that. It does leave the question "Where now?" with the congested network. I would also say, if I may, that some of us felt that was almost bound to fail because you do not have the same range of fiscal incentives for road pricing unless it is done on a national level and you can start to influence things like fuel duty.

Q41 Chairman: It was not so much that there was no will to introduce congestion charging, it was actually rejected very firmly on a referendum.
Mr Stilwell: Yes, indeed.

Q42 Sir Peter Soulsby: Is it also the view of the other witnesses that road pricing is an inevitable part of the package of solutions?
Dr Metz: No, I would say it is not. The thing with road pricing is that you redistribute a given amount of road space in favour of those who are willing to pay, at a cost to those who do not wish to pay, cannot afford to pay. Politically I think that is just too difficult as the Manchester referendum showed. London is a very special case, given the huge amount of public transport. That is why I was arguing earlier that we should not be fixated on road pricing as a solution to congestion, we should go for technology solutions which give people better information about times for journeys. People are used to making decisions about journeys based on time but their information at the moment is limited, so if you give them better, more accurate information, they will make better decisions and we shall get the same kind of outcome that we would get with road pricing, without all the difficulties of getting road pricing implemented.

Q43 Chairman: Do the Highways Agency want to give a view?
Mr Dalton: You can probably predict. Last time we met we gave a view about road pricing and my response has not changed. What we are talking about is demand management. Road pricing may be a solution.

Q44 Sir Peter Soulsby: Dr Metz spoke about what is happening in London. I just wondered whether he could comment and put that in an international context as to what extent what has happened in London is a matter of deliberate policy, something that is not part of a general trend.
Dr Metz: I think London is one of the very few cities where you can see a modal shift away from cars. It is pretty unusual. I think it reflects a whole variety of factors including the particular arrangement put in place for buses, the role of the Mayor in promoting public transport, small effects of congestion charging in the centre. London is an international city and lots of people come here to work. The first thought you have, if you are working or studying in London, is not to buy a car. You will live in the centre, take advantage of all the facilities but car ownership is not necessarily the first thing which comes to mind. I must say that amongst my younger friends only a proportion speaks about owning cars. Others say it is not what they want to do; they can cope with the system because public transport is so good. So it is these combinations of factors, some of which are policy by intention, others of which are happenstance. We can learn big lessons from London.

Q45 Ms Smith: Dr Metz made the point about using technology to give people the information so they can make the right choices to reduce journey times and help reduce congestion. However, in many cases that can annoy quite seriously populations who live on relatively quiet roads who end up with traffic coursing through them because they are trying to avoid congested major road networks. For instance, you go over the A628 towards Manchester, to avoid the typical congestion at Mottram and Tintwistle and if you use satnav—I do not need to but if you do use satnav, it will take you to Hayfield, Hadfield a whole number of very small National Park hamlets in order to avoid the A628 congestion into Manchester. That in itself presents problems, does it not?
Dr Metz: Yes, I agree with that. My view is that the main purpose of this technology is not to give the best route but rather to tell you how long it is going to take. There is a lot to be said for diverting people away from these sensitive routes based on some kind of national initiative, for instance national licensing of the system. Satnav at present is sold on giving you the best route, but the really useful part is telling you how long the journey is going to take before you start out so you can decide when to start your journey and whether to make the journey at all.

Q46 Mr Clelland: This is probably more a question for Mr Stilwell really. Should the Highways Agency take responsibility for key parts of the secondary road network?
Mr Stilwell: No, I think not. As Graham Dalton said earlier, the Highways Agency undertook a phased de-trunking of the non core network some years back and by and large that was the right thing to do. What is important though is the relationship between the Highways Agency and local authorities which have responsibility for the remainder of the Highways network. That relationship has been very strong in my view over many years. There may be many areas where it could be even stronger, but having that right level of strategic planning across the agencies and authorities which are responsible for different parts of the network is the right way forward. The answer to your question is no, I do not think there is a case for that.

Q47 Mr Clelland: I was interested in your answer because it does rather demonstrate something of a dilemma for the local authorities. We come back to the north east and the Highways Agency's objective of linking ports, airports and population centres. Three very important roads for doing just that, the A66, the A69 and the A1 north of Newcastle are roads which are not the responsibility of the Highways Agency but come under the regional transport allocation. When the regional transport board sits down and makes its priorities for the following year or whatever period it is, they can only work within the budget they have. So there is absolutely no point whatever in them making a priority of something which they cannot afford or which would take up the whole budget and nothing else would be done. There is a dilemma there. As long as those important strategic links are the responsibility of local authorities or regional authorities rather than the Highways Agency, what prospect is there of them ever being improved?
Mr Stilwell: That is a really important point. The introduction of the regional funding allocation process included with it a proportion of the Highways Agency funding for regional, not national, parts of the network related to that process. So actually the regional prioritisation process includes local roads and Highways Agency roads of regional not national significance. I think that is the right term. So those decisions for regional prioritisation should be taken in the round, taking account of priorities irrespective of responsibilities.
Mr Dalton: The roads you are talking about are Highways Agency roads and we are responsible for maintaining them but the prioritisation of investment for improvement is down to the regions.

Q48 Mr Clelland: It is obviously the investment for improvement which I am concerned about.
Mr Dalton: Yes.

Q49 Chairman: What does the Highways Agency do to take into account local needs for development when considering road projects?

Mr Dalton: We have a programme of national schemes which are substantially determined by the Department for Transport and the Secretary of State. For the regional schemes, the other routes, we take the prioritisation from the regional assemblies or regional transport boards. The way my agency is organised is that we have a regional director in each region who is responsible for the maintenance operation within that region; they match the Government Office regions. They are also charged with building a strong relationship with local authorities and understanding the priorities. That is an arrangement we have had for just over a year and it is trying to bring that emphasis and local input from where regional priorities are. That is not the same as setting how much money is available.

Q50 Chairman: It is to do with the priorities.
Mr Dalton: We place quite a lot of importance on that and it is not just about the big investments it is often about the small schemes and it is about working with local authorities and local bodies on other developments and developments they want to see happen. Even for a housing estate, for example, with an access onto the trunk road network, the first approach is that something is either going to change traffic flows or introduce traffic onto our road, normally in a place which is already one of the more congested parts. We put a lot of time and effort into working with local authorities and planning authorities to get the right design and to shape or influence the planning policy, show them what we can do to accommodate as well. The balance is between what is not a problem and what are real non-starters and putting that volume of traffic in will create a really big problem and what we can do to mitigate it between us.

Q51 Chairman: When you are considering objecting to local planning applications how do you balance local needs with the needs of through traffic?
Mr Dalton: Again that is an activity which is carried out by my regional directors. We have route managers, people who are familiar with the route and our road in that area. I like to think we liaise with the developers, and whether it is a private sector developer who is doing something almost completely on spec or whether it is publicly promoted such as housing, we try to work with them. It is often a case of what is to be spent by way of mitigation measures. It is less often a complete binary do it or do not do it. It is often about it being accommodated but it often means spending some money on junction improvements or traffic lights phasing and things like that. It does mean working with the local authority as well; it is often not just our road but the other roads there as well.
Mr Stilwell: I can testify to what Graham Dalton is saying there from local experience in this Merseyside area. The whole issue of strategic investment areas and the relationship with the Highways Agency and between the Highways Agency and the local authority is backed up by a Memorandum of Understanding on how the issue of new developments would be addressed. When I was working in local authorities, that was working very well indeed.

Q52 Chairman: Does it still work well?
Mr Dalton: I think so. I have been doing this job for about a year and have been to the north east, which was partly about making sure the voice was heard and I was very pleased to go up there.

Q53 Chairman: You find it helpful.
Mr Dalton: Yes, I do. I had conversations with secretaries of state, with Ruth Kelly last summer when I was appointed, who had a view that the Highways Agency was always getting in the way and I do have a responsibility to look after the function of the strategic network for the Secretary of State. That does not mean I therefore blindly put that above all else and I gave the undertaking that I would advise. When we get these completely difficult and intractable ones, where I am told to keep the network performing, if that does not serve the community then we are getting something wrong. There are some tough decisions to be made and that is the sort of decision I should then be putting to the elected politicians, the Secretary of State. Those are the tough choices and how would they like to handle it?

Q54 Chairman: What about the impact of road maintenance on delays and traffic flow? Does this maintenance cause big delays for the traveller in the way that it is done? Very often drivers get very frustrated by the time that is taken dealing with road maintenance and parts of roads blocked off when nobody can see any work being done, work that is done and then started again a few weeks later; great frustration for many motorists. Is that a big problem?
Mr Dalton: It can be. We try to tell them what is going on by various means; the best is a sign at the side of the road. Sometimes we will close a lane to protect the workforce who are working just at the back of that because I do not want to see my contractors' people and my people killed by errant vehicles. We do an awful lot of our maintenance at night. The vast proportion of our maintenance is done at night and if you are out on the motorway network at ten o'clock at night you start seeing big yellow vehicles with flashing lights out there. To a tremendous degree, of the order of 70%, routine maintenance is done at night. With the bigger things such as big resurfacing works, which take two or three weeks to do, we put a lot of effort into keeping as many lanes open as possible. If there is a dual carriageway, dual two lanes, we might narrow lanes down a bit but we will keep two lanes going in each direction. That management of traffic is quite a major part of the cost of maintenance. There are things which go on where the public do not see something happening. As a rule that is for a very good reason. It may be on a bridge and actually what is going on is replacing bearings underneath and you

will not see what is happening but we cannot do the work with load on the bridge. Then we have to tell them.

Q55 Chairman: Is the management good enough? Do you think you are sufficiently sensitive to the frustrations of people trying to drive by?
Mr Dalton: I am a user of my network and I do not get any special treatment I assure you. We have a lot of work to do and even the motorway network is an ageing network because bridges and structures there are now coming up to 50 years' old and they need some pretty serious maintenance. We do do a tremendous amount at night. We do drive it hard. I had a case last weekend on the M6 with some resurfacing going on last Friday night. It was due to open before seven in the morning and it was actually around nine o'clock in the morning before it opened. I can assure you that this Monday morning, as a board of the Highways Agency and with our suppliers, we had a pretty close investigation on what had gone on and it was due to unforecast very heavy rain which delayed the resurfacing operation. If we have had a slip-up like that, the same as on the railways when possession overruns, so we are doing on the strategic road network. If it overruns, it is not good enough.

Q56 Chairman: Mr Stilwell, what are your observations on this? Do you think that the management of maintenance is efficient? Do you think it does take sufficient consideration of the motorists who want to get through?
Mr Stilwell: As far as I am competent to comment, certainly as far as the Highways Agency's responsibilities are concerned on the motorway and trunk road network, because there is a lot of emphasis on proactive maintenance rather than reactive maintenance it feels about right. I stress that is a lay person's perspective on that. What I was going to comment on though was the concerns that the two institutions have about local road maintenance and some of those are major roads in the sense of the traffic flows they are carrying. There we think that there is way too much emphasis on reactive maintenance and really storing up problems for the future. In part that is the way the funding mechanism works with the revenue funding for highways maintenance being incorporated into what is called formula spending share within the local authority grant system, but undoubtedly, over many years, investment levels have been too low. Although that has been partially addressed, there is still an estimate that the shortfall is something like £7.5 million per local authority in terms of investment. The Institution of Civil Engineers has recently made a submission on the Budget and we have argued that there should be a ring-fenced additional allocation to local authorities to address that backlog to deal proactively with the maintenance issues which remain on the local network and eliminate, as far as it is possible to do so, this unbalanced emphasis on reactive maintenance which is creating some quite serious problems.

Q57 Ms Smith: Sheffield has been provisionally granted a PFI grant to do exactly that, to invest properly in replacing the local network almost completely and then to pay for a long-term maintenance programme. Do you see the PFI as a possible financial tool for other major cities in terms of the kinds of programmes you are talking about?
Mr Stilwell: Yes, quite possibly. My own experience, my own background, is in some elements of PFI on things like street lighting schemes and there is no doubt that has allowed the investment in the infrastructure to invest now and reduce some of the reactive maintenance costs in the future. Of course in the current climate there must be some doubt about the ability of the private sector to invest in that way, even if PFI credits are made available. Yes, there is potential there for increased use of PFI.

Q58 Chairman: Could you give me that figure again, the shortfall?
Mr Stilwell: Yes, it is in our evidence but it is estimated that for the principal roads, the shortfall is about £7.5 million per local authority, that is per highway authority.
Chairman: Thank you very much for coming and answering our questions.

Witnesses: **Cllr David Sparks**, Local Government Association, **Mr Steve Nicholson**, Project Director Mersey Gateway and **Mr Brian Smith,** Executive Director, Environment Services, Cambridgeshire County Council, gave evidence.

Q59 Chairman: Good afternoon, gentlemen. Could you identify yourselves for our records please?
Mr Smith: Good afternoon. Brian Smith, I am the Executive Director, Environment Services, Cambridgeshire County Council, but for this afternoon I am actually wearing my hat as President of the CSS, which is the chief officers' society covering a range of technical functions such as highways, planning, environment and the like.
Cllr Sparks: David Sparks. I chair the Local Government Association Regeneration and Transport Board and I am leader of the Labour group in Dudley.
Mr Nicholson: Good evening. Steve Nicholson, Mersey Gateway Project Director, Halton Borough Council.

Q60 Chairman: Is the current major road network adequate for the needs of the UK economy and for individuals? Who would like to express a view? Is what we have good enough?
Cllr Sparks: May I kick off very briefly, following on from the last question to the last witnesses? The short answer is no. There is an incredible backlog of repairs which need to be made. The estimate is £8.6 billion backlog which is building up.

Mr Nicholson: Most of my answers will be in the context of Mersey Gateway because we have offered it as a potential case study to inform many of the issues which you are looking to investigate going forward. The existing Silver Jubilee Bridge that the Mersey Gateway will replace is now 60 years old and it requires significant maintenance. The normal funding arrangements for stepping into that situation are really inadequate because we are looking at upwards of £50 million for the existing Silver Jubilee Bridge. The only way we can do it is through the major scheme funding route and it is a bit unusual for a maintenance project to go through that route.

Q61 Chairman: How high a priority is the reduction of congestion?
Cllr Sparks: The reduction of congestion is a very, very high priority in relation to local authorities, not just from a transport point of view but because it is indicative of a lot of other problems which need to be addressed because of climate change, economic competitiveness, et cetera. It is a number one priority.

Q62 Chairman: What is the best way of dealing with congestion on the roads? Is there any one way or particular ways local authorities or others can use?
Cllr Sparks: This is the number one priority and it is obviously a hot political issue as well. There is no doubt, as far as we are concerned at the LGA, that there needs to be a massive investment and improvement in public transport, that it is not possible even to scratch at the surface of dealing with this problem without having a more integrated transport system than we have at this particular moment. Road charging has a role, but it is not in itself sufficient to deal with the problem.

Q63 Mr Clelland: How important is partnership working between local authorities and the Highways Agency?
Cllr Sparks: It is extremely important and on the whole is very good. With the de-trunking of roads, you have a situation where local authorities have increased their responsibility for the road network. What is particularly important from our point of view at the LGA in terms of regeneration and transport, which I know is a priority of yours, is the role of transport in relation to regeneration. Our research in relation to the economic development of our communities has emphasised how important the sub-region is and therefore, given the importance of the sub-region, you cannot just deal with local roads and local transport and regenerate your economy, because your economy is subject not just to global factors but to sub-regional factors.
Mr Smith: To give another angle on that and building on what Mr Sparks is saying, on a day-to-day basis the public does not recognise whether they are actually on a Highways Agency road or a local authority road. The point I would want to bring out is, and it comes back to our network management responsibilities, that the roads come together. So if there is an incident on a Highways Agency road they are looking to our roads for diversionary routes and the like. Equally, if we have a problem on our roads, it can have an impact on the Highways Agency. So we do have to work together. There is generally a good relationship, as you were hearing in the last session. We do have things like the Memorandum of Understanding. Around the country we have diversionary routes which are in place but we do have to work even more closely than that on an operational basis just to make sure we are joining up everything from when we do maintenance to how we do some of the working together on development, as you were hearing in the last session.

Q64 Chairman: On the Mersey Gateway Project you depend very much on close working between the local authority and the Highways Agency.
Mr Nicholson: We do.

Q65 Chairman: Has that been successful?
Mr Nicholson: It has matured and we now have a very successful relationship with the Agency. It commenced with a certain difficulty in that we were building new capacity in a place which could cause redistribution of traffic using the Highways Agency's network and that could put additional pressures on their network. It was mooted initially that we were going to have to fund some improvements on the motorway network which potentially could jeopardise the project from the outset. We have now moved to a position where we have a consensus with the Agency that overall we are adding capacity in an appropriate way that indeed will add value to the Agency's future performance in improving journey time reliability. We now have very much a solid partnership with the Agency, again backed up with a Memorandum of Understanding and it has been a useful course to take and has informed the partnership-building on both sides.

Q66 Mr Clelland: The Highways Agency told us that although they are responsible for the maintenance of some of the key secondary roads the actual improvement of those roads and the investment in those roads will be the responsibility of the regional funding allocation. Given what Councillor Sparks said about the importance of some of these roads to regional economic development, is there a problem there?
Mr Smith: The quick answer is yes, there are issues and the key to that is that there is not enough money in the system. Across all regions in the country we are trying to deal with these Highways Agency roads which are the ones not of national importance which are in the same funding pot as the local authority roads as well and there are some very difficult decisions to be taken about which ones we should be funding. There are issues there and I guess it is great to be having local decision-making and we would all applaud that and it is important to do so. However, we are struggling with not a lot of money and I suppose what is beginning to worry us now are the prospects for future years as we look forward.

Q67 Mr Clelland: Should the balance of funding responsibility between local authorities and highways authorities be shifted in favour of local authorities?

Mr Smith: It would be very easy from a local authority point of view to say yes, but at the end of the day Government have to take an overall view of the situation and make a judgment about how much money it can afford in total. One of the things—and we may well come back to this and it was being referred to in the earlier session—is this idea of de-trunking and the responsibilities which have come to local authorities. I think that is good because it helps us to manage a more rational network in that way, but as ever there are tensions between your responsibilities and the funding you have available. It touches all the services we do anyway in local authorities; we are used to difficult decisions about priorities.

Cllr Sparks: There is a point we need to add to that though, in that we are slightly ahead of the game really and probably ahead of the Government in terms of what we are now looking at in local government; increasingly we have to try to bring spending together into more and more of a single pot, again at a sub-regional level, so that we can address the strategic priorities of an area and bid for the appropriate funding. So it would not just be a question of deciding on "highway grounds", it would also be taking into account housing development, economic development, et cetera.

Q68 Chairman: Do you support hard shoulder running as a way of getting more capacity?

Cllr Sparks: I have to curb my enthusiasm here. As someone who uses the M42 quite a lot as a motorist, absolutely; it is absolutely fantastic, it has been an incredible success; it has shown in a very intelligent way that you can deal with a major blockage without building another motorway and it really does work very, very well. I would also like to add, travelling all the time up the M6 back into Warrington and Merseyside, that the way in which road works are now dealt with by using average speed using the same technology is equally impressive.

Q69 Chairman: How can local authorities use their powers on land-use planning to encourage sustainable travel?

Cllr Sparks: This is of crucial importance and it has preoccupied the discussion and the debate about sustainable communities over the last five or ten years. It is not just a question of identifying sites for inter-modal terminals, et cetera: it really is a question of locating residential development and industrial development in the right locations and also taking into account the development of park-and-ride facilities. There are major land-use issues.

Q70 Chairman: Is it realistic to anticipate a major modal shift from roads?

Cllr Sparks: Having visited the Mersey Gateway in the last two weeks I think absolutely, yes. There are incredible opportunities for shifting people, road freight to rail as well as passengers from cars to public transport.

Q71 Chairman: Mr Smith, can you put any percentages on what modal shift you think can be attained?

Mr Smith: I will get to the percentages but purely on what has been said there, I absolutely agree with that. If we get the right planning framework in place, then we have the basis for actually getting that modal shift and as we were hearing earlier on—and we would echo that—that will often mean you are talking about edge-of-town developments all together. What you do not want is a bit of development here, a bit of development there. If you are providing lots of development, you can best provide the quality public transport alternatives which are vital and then you can work with the public transport bodies and indeed provide the other attractive alternatives so it all comes together. What we are finding—and I am talking here of my area of significant growth—is that where we have those characteristics in place we are looking for percentage points of modal shifts 10%-20% different from when you have dispersed development. That is what we are anticipating now with our developers and that is the demand we are putting in, if you work in that way.

Q72 Ms Smith: Would you agree Councillor Sparks that local authorities have to bear some of the responsibilities for engineering modal shift in the sense that taking sometimes unpopular decisions about bus lanes and priorities and so on will have to be part of the package?

Cllr Sparks: Absolutely. I have quoted the example before to this Committee of a classic case out of Birmingham where there are bus lanes going into Birmingham along Broad Street that service the Black Country and there are no bus lanes coming out. It is ridiculous having a bus lane in Dudley or Wolverhampton, if it takes you an hour to get out of Birmingham before you start your actual journey.

Q73 Chairman: To what degree do road works cause delays, delays that are avoidable?

Cllr Sparks: Road works cause massive delays, especially in London. I am amazed actually that the closure of one lane in Oxford Street can have a knock-on effect all the way to Marylebone which seems to happen quite regularly. You need great sensitivity in terms of road works, prior planning so you can get round the road works. The professor earlier was extremely right; a lot of it is to do with information.

Q74 Chairman: Are road works planned properly and are they planned sensitively enough looking at the needs of road users? Mr Smith, could you comment on that from a national point of view?

Mr Smith: Absolutely; yes. I want to start by comparing with some of the answers you got from the Highways Agency, because we actually need to recognise that the Highways Agency do not have the problems that a lot of the local authorities do and that is that the utilities are running under our roads. That is a fundamental issue. We may have certain issues in terms of when we may be repairing a road or resurfacing a road and clearly we have to plan that carefully and we seek to do that and provide good information to the public. Indeed, if it is a sensitive road, we would be making the same sort of decisions as the Highways Agency about potentially working at night, although you get difficulties there and if you are in a residential area that might be difficult. One of the biggest problems for us and I say this as a user of the road network as well, is the unplanned problem that a utility might have, a sewer collapse or a gas leak, and you just have to act there and then; you cannot just leave a hole in the road. We clearly work together there. Sometimes they are very inconvenient where they are and we have to work round them as best as we can. I can think of talking with colleagues around the country and that our biggest problem is how we manage that. We have to recognise as a country that a lot of our sewers and our other utilities were put in a long time ago and they do need replacing and we would be complaining they do not work.

Q75 Chairman: How much of that is unplanned because it is an emergency and unplanned when it could have been planned maintenance rather than reactive?
Mr Smith: It is the emergencies which are the problem without a doubt. There is planned work and then we can work more closely with utilities and we can agree certain times when they can work and the like. It is the emergency which causes a problem for us. It depends what road it is as well. If it is on a main road it is probably very different from how it might be on a residential one.

Q76 Ms Smith: Related to that were the problems we had in Sheffield two years ago when we had the major floods and the closure in the long term of some pretty major routes out of the city. One road was out of action for about 18 months and one is still shut. One of the key issues in terms of rebuilding the collapsed roads was not so much getting funding in from Government but what seemed to be the protracted process of contracting out the work to deliver the repair programme. Is this a major issue sometimes in road maintenance work?
Mr Smith: We are talking here about the utilities and their contractors in doing that. Clearly there can be different issues, so it is difficult to comment without talking to the utilities themselves, but it is part of the whole process. As far as our own contractors are concerned, when we can plan the work I would not want to say it has always worked absolutely smoothly because of course there are hiccoughs and the like, but for the most part we seek to get that right. If you can get it right for the contractors, then we can give good information to the public and the users, which we believe is vital.

Q77 Ms Smith: When you get emergency and major repair programmes, perhaps not always directly connected to the utilities, is it sometimes very difficult to let contracts out and deliver in a reasonable timescale?
Mr Smith: It can be difficult and these things seem to come in twos and threes. I can think recently in Cambridge of three collapsed sewers in a very short period of time and obviously the same sort of companies do that and the knock-on effect is that you can perhaps deal with one, but when you get to a second one, then you have the problems of where you would otherwise go. That really does put pressure on the network if you are unfortunate enough for that to happen.

Q78 Ms Smith: The representative from the Institution of Civil Engineers pointed to potential problems with delivering renewal of roads under PFI because of the capacity of the private sector to deliver. Do you see that as a potential problem?
Mr Smith: Potentially, but the fundamental issue there is simply the amount of money which is in the system. There have been one or two examples of a successful PFI but to me that is simply a means of delivering against what is basically a funding problem that we all have.

Q79 Ms Smith: That is not what he suggested. He suggested that you could get the credit but you may not necessarily get the private sector capacity to make use of the credit.
Mr Smith: I would agree. If we suddenly found that 25% of the country were going for PFI deals at the same time, we would really be stretching people then in terms of the upfront investment. Clearly one of the things we are doing, and it is a more general comment, is that we will in local authorities talk to the industry and they would be saying things about capacity and spreading workload over the year. However, if they saw a large number of PFIs coming up, then they would be able to gear up for that and undoubtedly they would do a certain amount of that. I suppose, as ever, that is how all industries tend to adjust to see what workload is coming through.

Q80 Sir Peter Soulsby: I just want to follow up on the questioning about the cooperation with utilities. Leaving aside the burst water main or the collapsed sewer or something, just on the day-to-day level is there sufficient obligation on the utilities to cooperate with local authorities in the planning of work and to minimise delays?
Mr Smith: I need to preface what I am saying by saying that it is a matter of continuing discussion from both parties there as well. We do have the theoretical powers now which have been given to us by Government but some of us feel frustrated that the full extent of those has not been opened up in terms of how we can go forward. At the end of the day you still need to have both parties cooperating

and working together and that seems to me a critical issue that we are going to have to make further progress on, because at the end of the day it is about all of us cooperating.

Q81 Sir Peter Soulsby: Is it fair to say that the cooperation between the utilities and local authorities works better in some places than others?
Mr Smith: Absolutely.

Q82 Sir Peter Soulsby: And that in fact we could usefully say something about the need for good practice being spread nationwide.
Mr Smith: Absolutely; that is the case and that is probably an important learning point for us all. Why is it you can do it here and in other areas it still seems to be very sticky.
Cllr Sparks: The other important political point to add to that is that there is less excuse than there has ever been for lack of cooperation, both in terms of the powers which have been given by Government, but also the technical ability of the utilities to tell you in real time practically every job they are doing on their pipelines on a laptop in this room.

Q83 Chairman: So you do not think there is room for any excuse.
Cllr Sparks: No.

Q84 Mr Martlew: Can we return to the PFI schemes and perhaps Councillor Sparks we could have your experience? At the moment you have a lot of schemes which are paralysed because the banks have withdrawn. I have one in my own area and the Government have had to put more money in it. Is it not a very bureaucratic, very expensive way of putting a package together to build a road?
Cllr Sparks: My direct experience has not been so much in terms of building roads with PFIs, but Dudley was one of the first authorities to be involved with PFIs and the then chief finance officer, who has recently retired, was always very reluctant to go into further PFIs because they are extremely complex negotiations to manage. It is not an easy solution. If you have expertise within a local authority of having dealt with a PFI or if you can access the experience of dealing with a PFI, then it is far more attractive as an option than if you do not have that experience. It certainly is not a solution in itself.

Q85 Mr Martlew: The reality of a fairly small- or medium-sized authority is that experience is only going to be needed once or twice so they are unlikely to have that experience. We have a situation with the widening of the M25, which is not your remit, which is severely stalled and there are schemes up and down the country that are stalled because of the PFI scheme. Mr Smith, I was not quite convinced about your enthusiasm for the schemes.
Mr Smith: Let me just try to help by giving an example because you are absolutely right about the possible expertise. For instance, at the moment my own authority is working alongside Northamptonshire, so it is Cambridgeshire and Northamptonshire together, on a street lighting PFI. One of the things therefore we are able to do is to share expertise, have a joint team. We are going to finish up with two separate contracts which is better but that is a good example of working together and indeed I know that is happening in other parts of the country on street lighting PFIs in particular. That is the sort of thing that local authorities will need to consider, particularly if you get to the medium- and smaller-sized authorities who will not necessarily have that in-house specialism. Having said that, we do have other national resources which we are able to call on, where we tend to be using things like gateway reviews and the like, which are very helpful to check that we have gone through the procedure and we are not just simply left exposed to making potentially expensive mistakes. I stress "potentially" because that is the one thing we must not do, given the longevity of these contracts.
Cllr Sparks: They can access through the LGA group expertise in relation to PFIs but that is only part of the problem. The problem is not the knowledge in terms of getting one going; it is actually managing it and making sure that it is actually worth doing.
Mr Nicholson: I would add to the points made by Brian Smith in that there are certain sectors like street lighting which are pretty mature now in the delivery of a PFI service; they are sometimes referred to as more commodity-type PFI arrangements. The highways maintenance service has yet to settle down to that level. There are still options under consideration, variations on the theme. What we should be looking for is what we really want out of a highways service that the private sector is capable of contracting to undertake under private finance arrangements.

Q86 Mr Leech: Have there been any benefits of de-trunking part of the network?
Cllr Sparks: Yes, there have. The main benefit has been incorporating it into regional and sub-regional plans and helping local authorities in particular to try to be far more sustainable. Also, we would argue that in the main the transition has been reasonable in terms of funding and that has enabled the roads to be maintained and developed to a standard that might not otherwise have been the case.

Q87 Mr Leech: Is it fair to say that there has been some criticism in some areas that the roads have not been maintained to the same standard by local authorities?
Cllr Sparks: There will be local variations and there will be some criticisms.

Q88 Mr Leech: There has been a suggestion from some people that the de-trunking should be reversed. From what you have said I assume that you would be opposed to that.

Cllr Sparks: We would be totally opposed to it and we would argue that there should be more de-trunking where appropriate and there should be best practice throughout the country where there are good partnerships.

Q89 Mr Leech: What discussions do you have with the Highways Agency about that programme and expanding that programme?

Cllr Sparks: The discussions with the Highways Agency are mainly at a regional level.

Chairman: We will finish there. Thank you very much for coming and answering our questions.

Wednesday 24 June 2009

Members present

Mrs Louise Ellman, in the Chair

Mr David Clelland
Mr Philip Hollobone
Mr John Leech
Mr Eric Martlew
Mark Pritchard
Ms Angela C Smith
Sir Peter Soulsby
Graham Stringer
Sammy Wilson

Witnesses: **Mr Stephen Glaister**, Director, RAC Foundation, **Mr Edmund King**, AA President, the Automobile Association, and **Mr Tim Green**, Director, Road Users Alliance, gave evidence.

Chairman: Good afternoon and welcome to our meeting. Do Members have any interests to declare?
Graham Stringer: Member of Unite.
Ms Smith: Member of GMB.
Sir Peter Soulsby: Member of Unite.
Mr Martlew: Member of Unite and GMB
Mr Clelland: Member of Unite.

Q90 Chairman: Member of Unite. Could I ask our witnesses to identify themselves, please, for our record?
Mr Glaister: I am Stephen Glaister. I am Director of the RAC Foundation.
Mr King: My name is Edmund King. I am President of the Automobile Association.
Mr Green: My name is Tim Green. I am Director of the Road Users Alliance. I am also on the Executive Committee of the European Union Road Federation and the Board of the International Road Federation.

Q91 Chairman: Thank you very much. Would you say that our current major road network is fit for purpose?
Mr Glaister: I find the use of that phrase in this context unhelpful. I do not know how I would judge whether something like this was fit for purpose or not. What I can say with, I believe, some confidence is that there is good, to my eyes, scientific evidence that one could make it a lot better at a reasonable cost. So in that sense there are things we could be doing and should be doing, but we are not doing, to improve the quality of experience, the benefits for the economy and for the general public.

Q92 Chairman: What is the key problem?
Mr Glaister: I think the key problem, as you will see in our evidence, is the history of pretty relentless traffic growth going back to soon after the War, more or less on a straight line, some deviation above and some deviation below but fundamentally on a straight line, quite extraordinary growth in traffic up against the lack of provision of capacity to match that traffic growth. The consequence is that, like any network which gets congested, journeys become slow and in particular they become unreliable. I think the profession is becoming more aware of the unreliability of journey times, the unpredictability of trips, as being the big problem both for business and for individuals. So it is the coming together of traffic growth and the failure to provide commensurate capacity and the way to solve that is partly to change the way it is charged for and partly to provide more capacity, or do nothing and let it get worse.

Q93 Chairman: Would anybody else like to offer any comments? Could you perhaps give a view on whether the situation we have here compares unfavourably with what you see in other European countries?
Mr Green: Absolutely! In comparison with the European Union it is really diabolical. As regards fit for purpose, my members represent most of British business and I would say the vast majority, nearly all of them, rate the roads wholly inadequate for their business and they quote a heavy reliance on the road network for the success of their business and therefore the success of our economy. In that regard the major problem they identify—and we are talking very high numbers in terms of percentage disapproval—is congestion and the delay that causes. Congestion is, of course, a relative matter and relatively ours is one of the worst in Europe. All the surveys of other countries show that you are less likely to be delayed if you are a businessman operating in France or Germany than you are in the UK, and that makes us uncompetitive and that also reduces efficiencies and productivity and the consequences, of course, feed through to economic performance and that is obviously serious.
Mr King: At the AA we actually have an AA populace panel of 75,000 members and we asked them about the road network and whether they felt that improvements were needed. We had a response from 17,500 members: 66% thought main roads in rural areas needed improvement; 78% thought more bypasses would help the road network; 82% thought more should be done to make roads safer, the actual design of roads; 71% thought we needed better roads to link cities, ports and motorways. Having said all of that, roads do account for 93% of passenger travel and therefore to some extent are fit for purpose in terms of the majority of people are transported by road. It is only when things go wrong, particularly when you have two unrelated incidents on the road network—it could be a broken down truck in one of the lanes and then an accident further ahead—that leads to gridlock, but our main roads, our motorways and trunk roads, are certainly much better maintained than they were. The Highways

Agency ringfences funds for them. It has got better at managing that asset with traffic officers, with variable speeds and using technology. So the road system works but obviously it is under strain, and being under strain when things go wrong the delays can be quite prolonged.

Q94 Mr Clelland: Stephen Glaister did not particularly like the term "fit for purpose" but if we were to say, for instance, that one of the purposes of the major road network is to ensure that all of the major conurbations are properly linked, is it then fit for purpose?
Mr Glaister: Yes, I believe that you can document that. I appeal to the *Eddington Review*—and I am sure I shall mention that several times—which is an independent piece done for the Chancellor and Prime Minister, looked at this kind of thing very thoroughly and broadly speaking concluded that the connectivity of the road network was what it needed to be. Plainly, things are connected to each other. The difficulty he identified is that in some places there is not enough capacity. There is a road, but you cannot use it reliably. Of course it is true, as Edmund has indicated, that at many times of the day and in many parts of the country there is absolutely no problem. On the other hand, where businesses are active or where the population is very large, the road network is just not providing that capacity for a guaranteed level of service.
Mr King: I do think, though, there is still a couple of missing gaps in the network. If you look at East Anglia, there still is not a fully dual road through to Norwich or the port of Great Yarmouth so you have still got gaps there. If you look at the A1 north of Newcastle up to Scotland you have still got a single carriageway road which is incredibly dangerous and there are all sorts of signs about speed cameras, dangers and numbers of accidents. The best thing we can do is to dual it and all the evidence shows it would be safer. There are parts in the south west of the country again where you have got missing links around Stonehenge, where we could have had a tunnel, for example. So we have broadly got a network but there are some missing links and if those were filled in it would make the whole network much more efficient.

Q95 Mark Pritchard: Do you think the Highways Agency is currently fit for purpose?
Mr Glaister: I have got no criticism of the Agency as such. It does what it is briefed to do, which is to look after a really very, very small part of what I would call the strategic road network. The first line of the press notice which announced this inquiry I think correctly talks about "The network of motorways, trunk roads and principal roads that serve the country's strategic transport needs." That is about 22,000 miles. The Highways Agency looks after less than 5,000 miles, I think, in other words less than a fifth of what that sentence describes as a "strategic" network, and it is only directly responsible for the funding of the Motorways and the A14. It looks after some other roads, but the funding for development of many of the other A roads and principal roads is with the Regional Development Authorities and other bodies, so fundamentally I question whether, if we all believe there is such a thing as a strategic road with a national interest, the portfolio which the Highways Agency has is anywhere near big enough to look after that responsibility.

Q96 Mark Pritchard: I am glad you mention that and I am sure it was not advocating that the Highways Agency has more responsibility. One of the criticisms I have of the Highways Agency is that you do not know whether to trust it. If you are travelling along the motorway and there are signs saying "Congestion" or "An accident, turn off" you do not know whether that sign was put on 30 seconds ago or three hours ago and somebody has knocked off for a cup of tea. My own experience is that so often those signs are out of date and if you have drivers going along and they are unsure whether they can trust the information on those signs, then in the worst case scenarios you are just adding to the congestion when there is a traffic pile-up or whatever it might be. If they cannot get even those simple things right, then why should you give them any more business?
Mr Glaister: I am quite sure there is a lot more to be done in improving the day to day management of the road network. It seems to me extraordinary that we expect the road network, such a busy thing, to operate without any due attention, so to speak, day in and day out. It has been proven with the M42, the active traffic management, that if you give attention and make sure that the speed control lights are doing the right thing at the right time then you can increase the traffic flow and reduce the accident rate very substantially, but what it says is that you have to manage these things actively and carefully and be sure you put some resource into them because the active traffic management is going to require considerable money year after year to make sure it is properly managed.

Q97 Mark Pritchard: As a Midlands MP and as somebody who uses that road virtually every week when I am not travelling by train, can I say that whilst there have been upsides to that strategy, the downside is that there is a lot of confusion amongst motorists that the speed and signs are changing all the time—you can use the hard shoulder, you cannot use the hard shoulder, get into this lane, get into that lane—and I am someone who has travelled a lot of miles and I am sure that a lot of drivers do get sign fatigue. Therefore, if you get sign fatigue, or you do not have sign fatigue but the sign is one you perhaps cannot trust, then the cumulative impact of that is not good for the user, which means more congestion and people not using the roads perhaps as wisely as they could. Who is the architect and the author of that? The Highways Agency.
Mr King: If I could add, I do think, though, that some of its techniques have got better. For example, now the sign can be used on the M4 which says "Debris in the road ahead" whereas before it would have just said "30 mph" and people would think,

"Well, why 30 mph?" and would not slow down. As long as there is debris in the road ahead, which I have found in my experience, and as long as people then believe it because it is a direct message to the motorists, I think we need that. I do think also that the Highways Agency's traffic officers have helped in clearing up minor incidents more quickly to get the road open again, or the road flowing more quickly, but I think the major concern with the Highways Agency is that its network has shrunk through the de-trunking programme and I think that is a problem. In 2007/08, 110km of road were de-trunked, so they were taken away from the Highways Agency, taken out of the strategic road network. In July 2007 I think the Government realised perhaps it had made a mistake over the amount of de-trunking because then 115km which were going to be de-trunked were not. I think that is a concern because the strategic road network should serve all towns, villages, ports, airports in the country and in terms of things like road maintenance, road maintenance for the Highways Agency roads is ringfenced, so it tends to be spend on those roads, so you do get a better quality road, whereas in local authorities it is not ringfenced and quite often the budget is raided to pay for other things. So I do think there have been some improvements on the national road network, but there is certainly a lot more we could do.

Q98 Mark Pritchard: Finally, could I just put on the record that I think you are absolutely right, the traffic officers are doing a great job on the whole and have made a real difference and released police patrols to go off and do other things. Do you think that in the circumstances where there is congestion, for whatever reason, in the future as part of any renewal of contracts or brand new contracts for toll roads there should be an agreement between the Highways Agency and/or Government and other road network operators that the toll road is opened up and that there is some agreement in order to ease the congestion charge for the taxpayer, perhaps a reduced rate or free of charge, question mark, so that at least we are diverting people and that people who perhaps cannot afford it at least are able to get on their way and ease that congestion?
Mr Green: The only suggestion I have in that direction is a suggestion that road haulage companies should have their fee paid for them so that they can use the M6 toll road for trucks, which it is otherwise uneconomical for them to do, so that they will in turn create more space on the M6. My defence of the Highways Agency is that although it may do quite well what it does, what it is asked to do is wholly inadequate. It accounts for the major part of the major road network, which of course has not been growing anything like fast enough to meet demand for it. In the last ten years we know that it has increased the major road network by 1%, about 30 miles of motorway, when the number of registered vehicles has gone up by over a quarter. Inevitably, that is going to cause disaster and that is what we are beginning to see happening as we get more and more demands on a more and more inadequate motorway and major network as run by the Highways Agency. I would just comment that the motorway network in the UK puts us at the bottom in Europe on all measures, or I think we occasionally beat Greece, but in general terms we are at the bottom in terms of miles of motorway per head of population, per pound of GDP, per number of cars. We have at least double the number of cars on the section of British motorways than you would have on an autobahn, nearly three times that of a French autobahn. Even the old chestnut of "Oh, we're a small country," even measuring motorway per square mile of territory, in other words density, we are at the bottom or near the bottom. So the Highways Agency's brief is wholly inadequate to the task we expect them to do.

Q99 Mark Pritchard: Coming back to my question, do you think it is a good use of the road network if there is major congestion, for example on the M6, to have the M6 toll road still pretty empty or running with very few cars and you have this massive ten mile logjam on the M6 holding us the nation's business?
Mr Green: The short answer is that, of course, it is not, but I am not going to defend or comment on the contract with the company which constructed it. In terms of overall capacity, of course if you add the number of lanes which are now incorporated in that route, if you spread the load equally between them, then clearly the chances of one of them becoming congested would be much less.
Mr King: I think the benefit of the nation is the M6 toll as it originally was intended, as the Birmingham northern relief road, within the public road strategy. It would have been more beneficial for more people because of the usage rates being lower than was projected or expected. There is no doubt that when there are major events going on on the M6 like the strengthening of some of the elevated section on the M6 where there were prolonged road works, I think there could have been a good case for opening up the M6 toll to offer an alternative, but obviously the contract with the operators of the M6 toll was a fairly one-way contract and there were no provisions for that kind of scenario.

Q100 Mr Hollobone: What is your estimate for traffic flows over the next 10 to 15 years?
Mr Glaister: I would refer you to the Department for Transport's own estimate of traffic growth, which was published in the autumn most recently, the official traffic forecast. I know a little of the work which goes on behind those. I believe they are soundly based, sensible and they take proper account of what is known about demographic features, the location of housing. They, of course, have to make assumptions, as we all would, about the future development of the economy and I do not see that I would be able to double-guess those. I have separately done some work on much longer distance into the future forecasts, up to 2041, which are entirely consistent with the Department's own shorter-term forecast up to 2025, following the same kind of logic, and the RAC Foundation reckons that given the demographic changes and assuming fuel at

the pump rises to £1.50, traffic will be something like 40% higher than it is today unless there is some major policy change in between.

Q101 Mr Hollobone: So 40% higher by?
Mr Glaister: 2041.
Mr Green: I think it is worth noting that in terms of car ownership we have a very low car ownership in the UK. We come tenth in Europe in terms of cars per head of population and we are substantially behind our equivalent countries. We have 470-odd cars per thousand of us. In France, Germany and the like they have over 500, and in Italy they have nearly 600. What has, of course, happened in the past is that the high motor fuel prices in the UK—again the highest in Europe—have actually made it too expensive for the lower paid sector of our society to afford to own and run a car. The last decade has seen a change in that where we have seen the real cost of motoring decline, so the share of car ownership has been shared far more evenly across the nation down to the less well-off, but we have a low level of car ownership and therefore the chances of growth post-recession is quite high.

Q102 Mr Hollobone: So do you agree with Mr Glaister's estimate of a 40% increase by 2041, or do you believe the Department for Transport estimate of a 32% increase by 2025?
Mr Green: I think both could be correct. I do not think they are mutually exclusive
Mr King: They are not inconsistent.

Q103 Mr Hollobone: Do both of you see petrol going to £1.50 per litre?
Mr King: If I may come in on that, because our panel has been tracking the cost of fuel and how it is affecting individuals in terms of their journeys and other expenditure. We were tracking it all last year and it really is beginning to have an effect at current prices in reducing miles driven, particularly for the less well-off. In our last survey it showed 55% due to the cost of fuel have cut back on their journeys, cut back on other expenditure, or cut back on both, so I do feel, when we are looking at traffic forecasts, that the performance of the economy and the cost of fuel are beginning to have much more impact than in the past and I think that may affect some of these traffic forecasts.
Mr Glaister: That is absolutely right, but the sensitivity of traffic to fuel prices is pretty well-established in history. It is definitely there, I would not demur from anything Edmund has said, but the traffic growth is a much stronger long-term effect. It is more or less one to one with income growth. Where incomes grow about 2% a year, as they have historically, and people expect them to again in the future, traffic will be growing at 2% and the population is going up and the demographic structure of the population is changing. For instance, older women typically do not have licences now, but their daughters do and so when they become older they will be driving. There are all sorts of important demographic changes going on which to me say that traffic will grow, maybe not 40%, maybe only 30% if fuel prices go up a lot, but it is very unlikely that the increase in the fuel price will be sufficient to stop that growth in its tracks over a long period, in my opinion.

Q104 Mr Hollobone: Your traffic forecasts are very interesting and I am sure a lot of people would find them very alarming—
Mr Glaister: Yes, they are.

Q105 Mr Hollobone: —because what they are saying is that basically in 15 years' time for every three vehicles on the road now there is going to be one extra. Can I ask you, what immigration assumptions have you made behind your forecasts?
Mr Glaister: Our assumptions are very straightforward. The official OPCS forecasts, which are embodied in something called TEMPRO—it is the forecasting network which the Government generally uses for housing hospitals and all its planning work—we have simply not commented on that.

Q106 Mr Hollobone: Have you made an estimate of the size of the population in 2041?
Mr Glaister: Yes. We are using the official forecast and it will be 11% higher, but also, more importantly, it moves. It moves from the North, and North West particularly, down to the South and the South West. So you have got differential population growth in the areas where the infrastructure is already under stress. This is a problem for housing policy and health policy as well as transport policy.

Q107 Chairman: But the Government planning policy is also to encourage development to be closer to people so that they do not have the same transport needs. Is that realistic in changing needs?
Mr Glaister: If it is successful—if—it would clearly make a difference, but over a very long period of time. Most of the built environment will be what it is today for the next century or so, I imagine.
Mr King: Government policy does have an effect—the policy on schools, the policy on hospitals. If you look at a city like Norwich, when the Norfolk and Norwich Hospital was taken from the centre of Norwich to the outskirts more people drove to the hospital because of where it is located, so I do think that land use planning is something we ought to consider more in terms of transport and I do also think that the use of technology ought to be considered more. Does everyone need to commute 8.6 miles a day to get to their job? Could they work at home one day a week? Does every middle manager have to drive up the M1 to a meeting? Could they use telephone conferencing for the meeting? Certainly at companies like the AA that is what we are doing a lot of in terms of trying to reduce travel and I think due to the congestion out there we all need to get smarter about when we travel, where we travel, and indeed if we travel at all. That will make a small dent in the growth forecast—

Mr Glaister: Yes.
Mr King:—but only a small dent.

Q108 Chairman: Do you think there have been any assumptions of the nature of those changes? Have they been quantified in relation to transport needs so far as you are aware?
Mr King: Certainly on the environmental side in terms that most of the studies look at projected CO_2 emissions they are quantified and Defra have put numbers on them in studies that I have been involved with. There was one with the Commission for Integrated Transport which did look at the CO_2 rates but overall when talking about CO_2 it was the vehicle technology which actually would have a much greater effect than those softer measures, important though they were.
Mr Glaister: We have offered you, on page 8 of our evidence, a table which gives an assessment of the ability of the various measures we are talking about to mitigate traffic growth, things like telecommunications, workplace travel plans, and all of those things. As we say here, if all of these effects were to be fully achieved over ten years it would amount to about 10% of expected trunk road traffic growth. So it does something, but it is not enough to offset this relentless demographic change you have got to deal with.

Q109 Mr Clelland: Should three lanes plus a hard shoulder be a minimum standard for motorways in the UK in the twenty-first century?
Mr Glaister: I do not believe so, no. I think you need to do the assessment and take a sensible view about how much traffic there is. In some places three lanes and a hard shoulder will not be enough; in other places it will be more than you need. I know that is not a precise science and you have to recognise that in design. So if you decide that two lanes and a hard shoulder would be adequate, I think the intelligent way to design the road is to make the bridges wider than you would need so that if you get it wrong in the future you can easily widen the road to give you the extra highway. They do this in some parts of the world. I know they do in Portugal.

Q110 Mr Clelland: Do you think, despite the growth forecasts you have just been telling us about, that is still adequate?
Mr Glaister: It depends because it is also geographically specific. People are moving from particular places to particular other places and it would not make sense to impose perhaps a uniform standard which was over-designed in situations where you actually would not need the capacity.

Q111 Mr Clelland: When the final section of the A1(M) from Ditchford to Scotch Corner is completed—and construction is going on as we speak—that will give a three lane motorway from London up the M1 all the way up to Scotch Corner, where it will then drop to a two lane motorway. Would that be a disadvantage to the northern region in any way?
Mr Glaister: I can see it might be. I am afraid I do not know that geography. I do know something about the A12, which I was involved with an inquiry into the way that road works and that is a road which goes from three to two, from three to two, for historical reasons. It is a very heavily used road and it is a dangerous road for that reason because you have got the interweaving, and so on. That is a very uncomfortable situation and unsatisfactory because the traffic is so heavy.
Mr King: I think the strategy over motorways at the moment and widening is in danger of backfiring somewhat in that there is now quite a reliance on hard shoulder rallying as was used on the M42, but there are plans for bits of the M25, bits of the M1 and bits of the M4. The problem with that is in the short-term it can give some extra flow, some extra capacity, but in the long-term once you have used that hard shoulder the benefits have gone, whereas obviously if you are adding an extra lane and then if the traffic flows increase as forecast you have got more capacity. It is harder then to widen.

Q112 Mr Clelland: I was going to ask whether hard shoulder running should be extended to other sections of the motorway network?
Mr King: Yes. I think there are some areas which are close to urban areas where the traffic speeds tend to be lower anyway where you can regulate, using the hard shoulder, relatively, so in some circumstances. I think the problem at the moment is that it is kind of seen as widening on the cheap and I think that is a problem which will leave us with more problems in the future.
Mr Glaister: Yes. It also does not deal with the junctions and a lot of the problem is not the road itself but getting onto the road and the access roads onto the motorway, so it is all very well to give you some more capacity on the through run on the motorway but if you do not worry about how people get onto it and provide neighbouring access then you have still got a problem.
Mr Green: You mentioned the hard shoulder. I think the data for dual carriageway road safety versus motorway road safety indicates that there are things about the motorway which make them about twice as safe as a dual carriageway and I would say one of those is the hard shoulder. Having myself had a blow-out on a dual carriageway trunk road which had no hard shoulder, I could not deal with that safely at all. It was an extremely hazardous situation and there was no adjacent lay-by either which I could have gone to in an emergency. So in that sense certainly the hard shoulder is a vital constituent of any serious road. I would certainly support the idea that during peak hours if you have got that hard shoulder and you are going to have slow moving traffic anyway, you might as well use that as a general carriageway to add to the capacity of the road during those peak hours.

Q113 Mr Clelland: What criteria should be used then to assess whether a stretch of road is suitable for hard shoulder running?

Mr Green: I think the sheer volume of traffic is the essential assessment because the sheer volume of traffic will also feed through to average speeds and things like that. So, yes, I would say that was what you do in terms of all capacity. How many vehicles is it designed to carry and how many will use it?

Q114 Mr Leech: All three of the organisations have said that they see road building as a major part of dealing with congestion and the RAC has gone as far as saying, "There is a strong economic case for more strategic road capacity in Great Britain at an annual rate of at least 600 lane kilometres a year". Obviously that would cost a lot of money. If we need this extra capacity, how should that be paid for given that there is unlikely to be a massive injection of money into transport? What areas should be cut, or do you think it should be paid for by road charging?
Mr Glaister: In terms of the proposition we have that there is a strong economic case for this level of investment—it is not just us, it was supported by the *Eddington Review*, the numbers are rather similar but perhaps not quite the same—the same order of magnitude in the absence of a change in the pricing system. Eddington made the same comment. What we are saying there is that the benefits of that rate of investment are more than twice all of the costs involved in providing for it, the construction costs and other environmental costs. That is what we mean when we say there is a strong economic case. That does leave you, you are right, with (amongst the many problems) the question of how you pay for it. I think our estimate for that programme of work—which, by the way, was similar to what we used to do in the late eighties and early nineties, it is not out of the way in terms of history—was that it might cost about £4 billion a year. There is a figure and we could make sure you get it, but it is in our document. I would judge—I do not know if others would agree—that finding that kind of money in the current situation would be very difficult indeed. That is essentially why our proposition is not just to find more capacity that way but to have a package which involves a new pricing regime as well as a new capacity regime. The scheme we have worked out involves distance-based charging which generates a lot more money, a very great deal more money than you need to fund the investment in the highway, so you would have money to spend on other things like public transport, and so forth.

Q115 Mr Leech: So that would not just be on the new sections of road, that would be on the existing network?
Mr Glaister: That would be on the existing network because with the best will in the world the new road is going to be a small proportion of the total in the future and the economic costs we face are the congestion on the existing network. So yes, we want to price congestion on the whole of the system, to reduce fuel duty substantially, very substantially, and replace it with distance-based charging and then use some of that revenue to fund the new capacity.

Mr Green: It is very difficult to win the trust of the motorist when road users have contributed £46 billion a year in taxes to the Government. The Government elected only to spend £4 billion on it and their immediate reaction is, "If you want another £4 billion we've already given it to you." That is the immediate reaction and of course the reality is much tougher. We have the challenge of completing what is really a wholly inadequate network in getting all our regions connected. We have a much bigger programme than is being envisaged at the moment and somewhere there must be a solution. It is worth remembering that individual motorists pay for their own car and pay for its maintenance and collectively they pay £130 billion a year for using roads, against which the Government pays £4 billion, It immediately highlights the discontinuity that is there, but it also highlights the relatively small increase in percentage terms that a £4 billion a year increase would constitute, but there is no trust, no confidence in the road-using general public that they can trust Government not to tax them heavier and to not spend the money on a better service.

Q116 Mr Leech: That sounded a bit like a politician's answer, with respect.
Mr Green: Is that a compliment?

Q117 Mr Leech: Let us assume that we are not going to get any extra money to spend on transport. Is it cuts in other areas or road charging that would be your priority?
Mr Green: I think the reality is that the overall road budget is so small that there is not really a serious cutting potential, so we are basically talking about charging more for roads and we would say that you must begin by making it quite clear that the money which is spent on roads is absolutely dedicated and totally secure. In that regard we rather go along with the suggestion that you should actually section off that percentage of taxes which are collected and devoted to investment on roads as a quite separate pot, if you like, and it must be in the charge of somebody who accounts to the general public for what has happened to that pot. In other words, "We are going to slice off a percentage of the amount you pay on your petrol, which goes into this fund, which is then used exclusively for road construction. It is already £4 billion. If we do a good job with that and show you what we are doing and account to you for what we are doing, you may agree that that section of the tax revenue, the road charge, should be increased to pay for better roads." But there are all sorts of other ways of doing it.
Mr King: I think it should be done in terms of cost-benefit analysis. In terms of transport look at the individual schemes and what gives the highest cost-benefit analysis for the country. Certainly if you look at some of the missing links in the road network they give returns of 10 to 1, and indeed higher, and many of them are much higher than rail schemes or tram schemes. So I think it is transport as a whole. If you look at the current budgets for transport very generally we spend just about as much on rail, which

takes about 6.5% of journeys, as we do on roads, which take 86% of passenger journeys, so there is an imbalance there and I think we should be targeting those schemes which give us the best returns in terms of reliability, journey time, and indeed the environment. There is nothing good about having a congested stretch of road which is continually congested. It is not good for the environment.

Q118 Mr Leech: But given the commitment to reducing carbon emissions by 80%, is it realistic to do this with a massive road building scheme?
Mr King: Yes.
Mr Glaister: Yes, because if you do not, what is going to happen? Carbon emissions will be higher, not lower. Having traffic stuck in traffic jams is very bad for the emissions.
Mr Green: If you replace the traffic jam on the motorway, that traffic will reduce its emissions by half or by 100%.

Q119 Mr Leech: Is there not some evidence to suggest, though, where roads have been widened or extended, or by-passes have been introduced, that all you do is fill up the new road?
Mr Glaister: I believe what is happening there is that the demand is there before and after this new bit of road is built. When you put the new bit of road in you reduce the cost of getting from A to B for the people who use the road, so more people do it. That is the point of building the road, to allow more traffic to flow. That does not necessarily mean that you generate more carbon, because if you do not build the road you have got everything jammed up with traffic, because it is the congestion which rations out the available space. I think the more sophisticated answer is, you have to do the sums to see how the opposing forces work out. One force is, yes, you have got more passenger demands for your travel because people travel more, because you have got more capacity, but on the other side of it you have got less congestion which is going to offset the carbon. We have done those calculations and set them out.

Q120 Mr Leech: Just one more question. How many years would it take, if we were to add 600 km of lane each year, to create a road network which the RAC would be happy with?
Mr Glaister: That is not quite how we would put it. What we do, as I mentioned earlier, is that we look at what is likely to happen between now and 2041—that is a date we have chosen because it is the end of the horizon in the demographic forecasting, the official study—and say, "What capacity could you justify in 2041 to deal with that traffic growth, and getting from here to there what level of investment would you need to make?" That is a very crude way of doing it and in practice you would not do it that way. It is a kind of rough-and-ready calculation, but what we are saying is that that level of investment will give you what you could justify to deal with in the traffic allowance in 2041.

Q121 Ms Smith: Just picking up on some of the comments which have been made, there was a comment about road traffic growth reaching 40% in terms of increase by 2041. Comments have been made about how congestion can actually increase emissions and about the negative impact which increasing congestion is having on the economy, all points which I accept. Is it not the case, though, that any sensible way forward in terms of managing traffic, managing travel, if you like, across the country and maximising potential for economic growth would involve a modal shift from road traffic onto rail? Has it not got to be part of the solution?
Mr Glaister: I believe the railways have exactly the same problem as the roads have. There is a shortage of capacity on the railways. There is a case for expanding them in the right places, just as there is a case for expanding the roads, but I do not think that when you do the arithmetic there is any support for the proposition that massive investment in other modes will solve the roads problem. It may be good to do on its own merits, but there simply will not be enough diversion.

Q122 Ms Smith: What about modal shift in terms of freight then? I accept that it will not be a total solution for the problem on the roads, I think any sensible policymaker would accept that, but in terms of reducing the volume of freight on the road and putting some of it onto rail surely that is also a sensible way forward?
Mr Glaister: It depends on where the freight is going. There are few freight flows for which railways are ideally suited, and typically the railways have got them anyway, long distance aggregates, motor vehicles, that kind of thing, going long distances, but most freight is going very short distances and railways just are not there to deal with it. There is a low average length of haul for freight.

Q123 Ms Smith: But if we invested in the railways in order to create the necessary freight corridors for rail—and there is some talk about that now—then surely the road users lobby could see the advantage in terms of freeing up road capacity itself, in terms of investing in rail freight?
Mr Green: One is the cost, and I speak as someone who has run a company which used a lot of rail freight and we pulled out of it completely because it was so expensive. It is highly cost-sensitive, particularly when it comes to short journeys, and part of the cost, of course, is the infrastructure which you need to access the railway network. Railway freight represents a very small percentage, a very small percentage indeed of freight by weight and by value, of course, it is absolutely tiny. So even if you increased it by very significant amounts it does not really impact much. If you increased the size of the carrying capacity of all our heavy goods vehicles by 10% that would be the equivalent of doubling rail freight and it is what happened last time we did it.

Q124 Ms Smith: In terms of developing rail infrastructure which would allow us to put containers, for instance, from our major ports onto the railway, surely that could have a significant impact?
Mr Glaister: Absolutely, and there is a wonderful opportunity to do that for the railway serving the east coast ports going due west. It is crazy that that has not been done before now. Regional freight now comes on the railway down across north London and all the way back up again. Otherwise it goes by road. That is, I think, an obvious example where we should invest much more in a freight railway to get the loading gauge which will get containers straight through. We are not opposed to any of that, but what we are a bit cautious about is the proposition that there are a lot of opportunities that would serve the freight market sufficiently well that the freight would actually use the railway rather than continue to go by road.

Q125 Chairman: So what is the most important thing which could be done to achieve a greater switch of freight from rail to road?
Mr Glaister: I think it is identifying where the market is actually there, where there is a sufficiently strong freight flow over a long enough distance that you would be confident that it would be used—I am sure there are some—and then it is finding the money.

Q126 Ms Smith: The east coast ports being one of them, presumably?
Mr Glaister: I believe so, yes.

Q127 Sammy Wilson: The American study showed that if you compared highways with the money spent on railways there was nearly 100% difference in the benefits, but did it go down to looking at money spent on the railways for specific purposes, such as carrying heavy freight, which we are being told continually probably does more damage to roads than, say, cars would do, and would the differential in the benefit/cost ratio be any smaller if you had taken the figures for expenditure on encouraging freight onto the railways?
Mr Glaister: I think those numbers are averages calculated from looking at specific actual schemes. We published a document last week which gave all the figures we could find on specific schemes. Some of them are rail freight schemes, others are rail passenger schemes, there is Crossrail and there are some high speed railways in there. They are listed there. I would not guarantee all the calculations are perfect by any means, and we did not do them, they are all Strategic Rail Authority or Department for Transport calculations, but I think insofar as it can be done your proposition has been taken care of.

Q128 Ms Smith: I just want to ask a question about land use planning and transport planning because quite clearly I think there is a real issue, particularly in urban areas, around all of this. If you go to a city like Los Angeles you will clearly see a city which has been built around the car. This is a country where the car has had to fit in around existing urban structures, existing settlements, and that is the history of our two countries. That is how it differs. Is it not the case, though, that we must take account of that and recognise the limitations and that when we are planning for land use we should always look for integrated solutions in relation to public transport rather than trying to make sure that we plan land use around the needs of the car?
Mr King: As a former resident of Los Angeles, I know a bit about the system there. Ironically, LA did have a perfectly good tram system and all the rumours are that the car companies got together and had the trams ripped up to encourage more cargo, but I do not know if that is true or not. In terms of planning our cities and looking at transport corridors, I think you are right, I think more can be done because if you look at road congestion, if you look at the times of day when congestion is worse, much of it is down to commuting. It is people going to and from work. One of the problems with that recently, why there has been a growth in commuting and in longer commute distances, has been the problem of lack of job security. Ten years ago someone might have been in a job typically for ten years, now they are in a job for two years, and many people are not willing to move house, to move closer to the job, to pay stamp duty and all the other costs and move their children from school if they are only going to be there two years, so they will commute further. So even with the best intentions—and I think you are right to raise it and I think we could do something—the job market, the job situation, is leading to a lot of this traffic in peak periods and I think that is a much harder problem to overcome. Yes, we can look at car sharing, we can look at park and ride, we can look at where public transport could be better and improved, but I do not think planning alone would solve that.
Mr Glaister: I agree, and I agree with your proposition. We have had for decades very restrictive land use planning policies. It is not a criticism, we have had them and we should control the way our cities are developed, and the traffic is still growing. I am just really endorsing what Edmund has said. You cannot do a King Canute on it! Traffic is growing because people are getting richer, they are taking more opportunities to change their lifestyles and getting benefits from it, and land use planning will help but it will not solve it.

Q129 Ms Smith: No, I accept that, but taking your own remarks there as a starting point, traffic growth is on the cards and increasingly people are finding it harder and harder to undertake the daily commute with any predictability. So in the end will not commuters themselves demand solutions in terms of being able to get to work? Take, for instance, the park and ride schemes. It is far better, far more reliable to get on the tram on the edge of Sheffield than it is to drive into the centre of Sheffield, leaving any remarks about the difficult nature of driving around Sheffield to one side.

Mr King: Could I just add to that, because I think that is a very good point and we do not always help ourselves in terms of integrating transport. If you look at many of our stations, the car parks have been reduced or the cost of car parking has been increased, so there is not that real incentive for people to leave their car in the car park and get onto the train. It kind of works against them. Privatisation has perhaps influenced that to some extent, but I think we ought to be doing more, if you like, to help drivers to get out of their vehicles where there is a viable alternative.

Q130 Graham Stringer: I would just like to follow up Mr Leech's questions really in terms of the benefit of investment in roads compared with rail. Very roughly, I think Mr King said there is a £4 billion a year subsidy into the rail system at the moment. It is that ballpark figure. Are you really saying that money invested in rail should really be invested in roads?
Mr Glaister: That depends on what you want to achieve, but if you want to follow—

Q131 Graham Stringer: Let me answer that. I will put it into the question. If you want the maximum benefit for the economy, where would you put the money?
Mr Glaister: I would take the money away from the railway and put it into roads, and Eddington said the same thing—he has implied the same thing, he never said it in such stark terms. Eddington looked through all the methods of appraisal and he criticised them but broadly speaking he acknowledged that the calculation of time savings was reflecting the economy, value to the business. What else would you measure if you tried to measure what you are talking about? The value of the time savings you get from the right road scheme are typically very much higher per pound of spending than the equivalent rail spending. There are some good rail schemes. Crossrail perhaps is one of the better ones. I would not say they are all bad, but on the average the rate of return—which is what you were saying, I think—is higher on road schemes than rail schemes, so in that sense we have under-invested on roads.

Q132 Graham Stringer: I do not want to put words in your mouth, but the Government and Network Rail are looking at increasing the size of the rail network at the present time, at some considerable cost. Are you saying that that is a perverse priority and that for the benefit of the economy that money should go to roads?
Mr Glaister: Yes.

Q133 Graham Stringer: Can I also take you back to the point you were making about distance-based charging on roads. It is my opinion—you may disagree with it—that congestion charging and distance-based charging is dead in the water for ten years at least. What would be your second or next alternative for raising money to invest into the road system?
Mr Glaister: I would agree with you that distance-based charging in the form of local schemes like the Manchester scheme, for reasons we all understand, is now no longer sensible. It just is not going to happen, whether it is sensible or not. I am not so sure that a national reform is impossible. I do think the recent financial crisis has given it a new impetus. We have already discussed this with Mr Leech. Whether we are talking about transport infrastructure or anything else, there is going to be no money from the existing sources for more investment. As I have already said, road charging in some form provides the opportunity to fund a great deal of new investment which we cannot get in any other way. If you insist it cannot be done, then I suppose the only alternative is to increase the existing rates of charge to road users, namely vehicle excise duty and fuel duty, which are the main ones. I cannot see any other place the money is going to come from. That will be politically very difficult to do as well. It might be possible to frame it in terms of a carbon charge. I would be entirely in favour of deciding what the appropriate charge for carbon would be and making sure that road users and everybody else pays it. By the way, the railways should pay it, too, and they do not, but I would also argue that road users already pay far more than the appropriate carbon charge, so it does not actually help you very much.

Q134 Sammy Wilson: You have given some very good reasons why congestion actually is important to businesses, to motorists and to the environment and everything else. Is the assumption that congestion charging is dead in the water for the next ten years a correct assumption?
Mr Glaister: I do not believe so, no. I think it has so much to offer and I think Government is going to be driven to it. We disagree.

Q135 Graham Stringer: I realise other people might disagree with it, but I think if we could take the top of what Mr Brown said or what Mr Cameron said you would see 1.8 million signatures on a Downing Street petition! That is one of the reasons why I suspect it will not happen.
Mr Glaister: I do believe it goes to the discussion we had earlier about the remit of the Highways Agency. The Agency just manages the road. It has no remit to do strategy. If we had a different body which had the remit to do strategy and the remit to make charges and use those charges to invest in the network, just as Network Rail does, just as the electricity industry does—

Q136 Chairman: Are you saying you think it is more appropriate for a government agency to decide the strategy for using road charging rather than the Government itself?
Mr Glaister: No, I am saying that nobody is doing it, that is my problem. I think there is an interesting model based on what happens in the other utilities, including the railways, where there is a delivery organisation, not the Highways Agency but something different, a corporation of some kind which has the duty to meet the needs and has the

ability to make charges and use the charges to invest in the system, and thereby gets the trust of the motorist that the money they spend, or some of it, will indeed be spent in the appropriate way, going back to what Mr Green was saying.

Q137 Chairman: Are you saying, in relation to road charging specifically, that if a government agency such as the Highways Agency, or any other, took a decision on road charging that would be more acceptable to the motorist than if the Government itself did?
Mr Glaister: I am not sure about that. One would have to think very carefully about what would be acceptable to the motorist and it might well not be the Highways Agency.
Chairman: I just wanted to clarify that.

Q138 Graham Stringer: Just a couple of questions. If you had such a body, whether it was the Government itself or a quango, or whatever, which was looking at how best to strategically manage the highway network, would it be looking at the speed of vehicles as one of the key factors to control to make the system work better? Would it have different speed limits in different parts of the network than we now have? The speed limits are primarily determined by safety at the moment. Would speed have a role in making the system work efficiently?
Mr King: May I come in on that? I think for the public it is not so much about speed, it is about reliability. So if you can use speed to increase reliability, that is acceptable. If you look at the western section of the M25, it is the busiest section of motorway in Europe, over 220,000 vehicles a day, and when variable speeds were introduced it did help the flow, the reason being that what you used to get before was the red light effect in that cars would be driving too close together, too fast, one car would brake suddenly and then there is the red light effect and all the cars behind it slow down and you get this phantom traffic jam. You do not know why there is a traffic jam. It is because of that one car which is travelling too fast and too close. So what the variable speeds have done is to slow the cars down so you do not get so much of that effect. I think in immensely congested motorways like the western section of the M25 it does help there to regulate speed. I think, though, when you are looking at hard shoulder running on the M42, or other areas, where again speed is regulated because you are using the hard shoulder, there you are actually losing capacity in effect by using the hard shoulder because if you had an additional lane you could argue that cars could be going at 70 mph not 50 mph. So you are losing that capacity, but I think speed is important.
Mr Glaister: I think such a body would be—to make the same point in a broader way—looking after the quality of the service delivered to the users. Nobody does that at the moment. Part of the quality of service is to how fast you can go, but part of it is how reliable is your trip So it would come to a decision—perhaps under regulation, it may need to be regulated to look after that—to provide the best possible quality of service to users within the resources available. We do not do that at the moment. We do not worry about what the user gets.

Q139 Graham Stringer: That is a very interesting point. My final question: the impact of land use planning, I think, on the transport system is relatively old and still, although not often, heeded when decisions are taken, but what about the distribution of just straightforward revenue expenditure in the country? There is a lot more money spent in the south-east of England because a lot of people live here and it is congested. The phrase I read in one academic study is that what that means is you are effectively subsidising congestion and increasing congestion by re-investing and following the congestion. Do you think there are any lessons to be learnt, in terms of the transport system, in how we spend our money spatially?
Mr Glaister: That is probably right and the reason you get that conclusion, in my book, is because we under-price the congestion. If you under-price it, you get too much of it and the only way you can then respond is to build more capacity, which is not properly paid for. The whole point about getting the proper pricing—and we have had this discussion in the context of your other inquiry—is that it provides the right incentive to mitigate the traffic and it gives you money to expand the capacity, not at the expense of anybody else but by charges through the users. So in an ideal world if you did have a better charging system the phenomenon you describe would go away because the money to invest in the South would be generated by the South. It would relieve the national taxpayer of the need to expand the capacity to deal with the congestion.

Q140 Sir Peter Soulsby: However it is funded, what has been argued for is predict and provide. If you can predict a 40% increase, then you do your best to provide the road space to accommodate that. Can I just take you to some very persuasive arguments we had from Dr Metz of the University of London? I will just quote what he said. He argued in general that travel frequency and travel times have not changed. The factor which had changed was the distance travelled. This is looking back over a period of 35 years, so it is a very persuasive argument indeed. He was not saying that nothing could be done, but what he did say was that looking at all the travelling per person, the growth of travel has stopped. He stresses that is not lorries, not vans, but it is cars on the road. Per capita the growth of that has stopped over the last five years. How do you respond to that evidence?
Mr King: I think some of the growth has slowed down. I am not sure it has stopped, but I think it has slowed down due to technological reasons. The use of the Internet, teleconferencing, teleworking, home shopping, has slowed down some of the growth. I do not see evidence that it has actually stopped because if you look at the DfT traffic figures it has plateaued out because of the recession, but –

Q141 Sir Peter Soulsby: He did provide some very compelling figures for the assertion he was making about the way in which frequency and travel times had not changed but distance travel had and about what had happened more recently to overall car use.
Mr Glaister: With regard to your opening comment, personally I am absolutely not talking about predict and provide. What I was saying was we should not predict and not provide. We should face up to the evidence—and we can dispute with Dr Metz what the evidence is on this, but if we are agreed there will be growth, as in housing and everything else, we have to decide whether we are going to provide for it or not, and if we are not going to provide for it to price it away or do something different. I think that evidence is consistent with lots of other evidence. The thing that is generating most travel is lengthening journeys, not an increasing number of journeys but lengthening journeys. What we then have to discuss is, is that a bad thing? Are people getting benefits from this? Are we somehow going to stop it? How are we going to stop it happening, if it is happening? We cannot just wish it away. If we do not do anything the congestion will just get worse. Is that a good thing? I do not know. Our argument would be that actually what is happening is that people are taking advantage of improved technology, vehicle availability, and so on, to take more opportunities to travel further from their home to their work, get the benefits, and that there is a case for providing for that to a degree, providing the costs are not too high in relation to the benefits.

Q142 Sir Peter Soulsby: Just taking the other side of it, I take your point that you not arguing for predict and provide, but you were arguing for something which is clearly not going to be something which any government is likely to face up to in the near future and that is actual road pricing in order to fund the programme. That is a statement of fact. I do not believe any government is going to be prepared to bite that one. If that is not the case, I do not see any realistic prospect of the sort of road building programme you are suggesting would be actually being provided. Therefore, we do have to look for alternatives, do we not?
Mr Glaister: I do agree with that and if, in our wisdom, we decide not to change the pricing and we decide not to build a not of new capacity, as night follows day congestion will get worse and we have to decide whether we want to live with that.

Q143 Sir Peter Soulsby: I think that is what I was arguing for, that we have to look for alternatives to living with that. If we are not going to be able to provide the road space to meet the demand you are anticipating, we have to look at alternative ways?
Mr Glaister: Yes, of course I agree, but I do not know what they would be. Given our view of what could be offered by travel plans, by telecoms—and telecoms is a bit of an uncertain thing, of course, and maybe people will start staying at home, but absent something really quite dramatic and new let us stick to the proposition that congestion will get worse.
Chairman: Nobody knows what this alternative is.

Q144 Sir Peter Soulsby: I think it could be argued that even if we were able to provide the extra 600 km lane space per year you suggest, it would very quickly fill up and it would actually make very little difference to the overall picture of congestion?
Mr Glaister: No, I would not accept that.
Mr Green: The "filling up" argument really does not hold much water when you actually examine individual cases like, perhaps, the Newbury bypass. Besides, it is interesting that the reverse is not the case. We did not build any roads in the last ten years, I think we increased it by 1%. We increased the number of vehicles by 26%. In other words, it does not work backwards. If you decide that because they fill up you do not build them, then you fill up all the other roads instead.
Mr Glaister: This is based on serious research, which you may or may not like, but it is set out in a lot of detail what we think we should do and building that level of capacity, if you choose to do it, would improve speeds, would reduce the density of traffic on the roads and it would not just fill up. You would get a better outcome.
Chairman: We will be looking at that. Any further questions?

Q145 Sammy Wilson: I think quite clearly there is a lobby which says, "Roads are bad so we won't build any more," and the public are saying, "Roads are good because we want to travel more and we have chosen to travel by car or transport goods by lorries." You did mention that you did not think it was inevitable that congestion charging or road pricing of some sort should be ruled out totally and you mentioned one particular condition you thought should be attached, and that was that people could actually see that the money being given was going on road improvements. Are there any other conditions you would attach to road pricing or congestion charging, whatever you want to call it, which you believe would make that form of financing of roads more acceptable?
Mr Glaister: The way I think about this is analogous with what has happened in the other regulated industries. They are controversial but I think generally speaking they work quite well. They work well because you have got independent regulation. The public can appeal to an independent body to debate whether what they are being charged is reasonable in relation to the quality of service they are getting. So I think two of the requirements would be watertightness of the funding, so that you trusted where the money was going, there was transparency, and separately there is a degree of independent regulation, looking after the consumers' interest, the public interest, as against the interests of the providers, which might not be the same thing. I am sure there are other things as well you would have to put in place to make this thing acceptable to the public. It certainly is not acceptable as it stands, I agree with that, but that does not mean to say you could not think about something which would be accepted if the alternative is doing nothing and letting things get worse and worse.

Q146 Sammy Wilson: That kind of spending may deal with some of the problems increasingly with the network of highways, et cetera, or congestion, particularly in cities, but there is one point, which I think you did mention at the very start of your submission, is the state of the other roads, the road network which is outside the main congested area but nevertheless there may be, what, 60% of fatalities on those roads. There is a considerable amount of money which needs to be spent on upgrading those. Would you therefore say that as well as some form of road pricing, congestion charging, there would need to be a continuation of the current method of taking money from motorists to fund the main points and road improvements? Would that have to stay in place?

Mr Glaister: Absolutely. The charging would be for the provision of the whole road network and you would be paying more if it was congested and much less than now if it was not congested, but you would still have to make sure there was adequate maintenance and provision of all the road network and for more money on safety spending because we do not spend anywhere near enough on our road safety.

Mr King: On the question of road pricing, the public are divided on it, 45% are opposed to pay-as-you-go motoring, 42% are in support. For local schemes it is much higher for those opposed, 77%, and the real problem is that 86% do not believe the Government would deliver any quid pro quo. So if the Government introduced road pricing, the public do not believe that there would be a reduction in fuel duty or vehicle excise duty and therefore they do not buy it, but for future governments there is going to be a major problem because currently £46 billion-odd comes from motoring taxation. Cars are getting much more fuel efficient. We will see more electric cars, hybrid cars, fuel cell cars, and therefore in terms of the tax take from oil, diesel, petrol, will no longer be a source. It is interesting that even little areas like Oregon in the United States are looking at pay-as-you-go, not because there is congestion but because they realise that their tax dollar which comes in to maintain the roads is going to disappear as cars become more fuel efficient. So future treasuries are going to have a problem. Congestion is not particularly liked by the public, but in terms of the Treasury and where it gets its money there is a real dilemma.

Chairman: Thank you very much for coming and answering our questions.

Witnesses: **Mr Jack Semple**, Director of Policy, Road Haulage Association, **Mr Gareth Elliott**, BCC Senior Policy Adviser, British Chamber of Commerce, and **Mr Mick Laverty**, Chief Executive, Advantage West Midlands representing ERDA, gave evidence.

Q147 Chairman: Would you identify yourselves, please, for our records?

Mr Laverty: Mick Laverty. I am Chief Executive of Advantage West Midlands, the Regional Development Agency for the West Midlands, representing the nine English Regional Development Agencies.

Mr Semple: Jack Semple, Director of Policy for the Road Haulage Association.

Mr Elliott: Jack Elliott, Senior Policy Adviser for the British Chamber of Commerce.

Q148 Chairman: Thank you very much. Do you think that the major road network is adequate for the needs of the UK economy, and if not where are the problems?

Mr Laverty: I think probably not. I think there is quite a lot of evidence that there is congestion on the network which is quite a big drag on the economy. I have attempted to estimate how much that is, something approaching 1.2% of GVA in 2005 as a result of road congestion, and I think the projections are that that congestion is going to get worse and that will have an increasing impact on the competitiveness of this country.

Mr Semple: I think congestion at the moment is slightly less than it was a year ago, but if you were to ask the haulage industry a year ago what has been at the front of congestion over this decade, typically you would be told the ability of the trucks to carry freight has been reduced by about 20% and our fear is that that can only get worse in the medium term. The impact as an order of magnitude simply on the UK articulated truck fleet we reckon to be about 1.5 million tonnes of CO_2 from the impact of congestion on the major road network through increased fuel consumption.

Mr Elliott: From our point of view, I think we would say the network is pretty well connected. However, it is just getting a lot more congested and from our own figures we calculated the cost of congestion to British business is £23.2 billion, largely as a result of what Jack has said there. It is building in that slack capacity into the system. We have to send out extra lorries. You do not know when you are going to get to your meetings. You may have a whole day wasted in terms of traffic jams. So from a business point of view it is a lot of wasted money. I think Eddington himself said it was £22 billion of wasted money every year.

Q149 Chairman: How did you come to that figure of £23 billion?

Mr Elliott: That figure came through our annual transport survey which we carry out. We ask businesses how much, in their eyes, it is costing them in terms of what I have just mentioned and then we equate that with the amount of businesses by sector and size across the country.

Mr Semple: It is useful to recognise that certainly in terms of the haulage industry firms have been trying to respond to congestion, so you cannot simply look

at what they are doing now and compare it with what they were doing ten years ago. The network is at capacity, but it is only at capacity for part of the day and the haulage industry in particular has been seeking to run at night and as much as possible at less congested times, and to change its way of operation in order to avoid congestion.

Q150 Chairman: How much more do you think business could do to reduce congestion?
Mr Semple: I think in terms of trucks it is working at the issue all the time. The Highways Agency has figures for, I think, around Cheshire and the M6 and through the night the volume of articulated truck traffic is almost as high as it is in the middle of the day.
Mr Laverty: I think there is more that business can do and one of things we have done at the RDAs is look at smarter ways of working around work patterns, mobile working, teleworking, remote working, et cetera. I think there is far more business can do to make use of technology so that people are not all travelling at the same time in rush hour, and more flexible working arrangements, perhaps more home-based so that the need to travel is less. I think there is a lot more that can be done.

Q151 Chairman: Should we be building more roads or trying to reduce the volumes of traffic?
Mr Elliott: We certainly believe there needs to be more roads and there are certain studies which have looked into it and the cost-benefit ratio of that. I think the RAC Foundation, whom you head from, put a cost-benefit of an extra 600 lane kilometres per year at four to one, so we certainly think there is a case. However, we do understand the argument that you cannot just build yourself out of the problem and we do believe we need to be looking at demand management measures.
Mr Semple: If I may pick up on the point of the broader issue of how you make use of the roads and whether journeys are necessary, one of the points we make in the discussion of road pricing in relation to congestion is that at the moment all the focus is on road pricing and, to pick up the point from my colleague on the right, there is insufficient focus on alternative ways of working, on macro planning in terms of the economy as a whole and also in terms of the way companies work. I think there could be more emphasis there.
Mr Laverty: I think we would say it is one of a number of things you might want to look into. It is not exclusively the answer. There are things around smarter ways of working, better use of technology in the vehicle and the roadside, targeting hotspots, funding, and focusing on public transport. I think it is one of the measures you might want to consider, but it is not the only one you might want to consider.

Q152 Sammy Wilson: Road pricing is not actually an incentive for firms to start thinking of some of the kinds of things you describe, which clearly are alternatives which are available to them at present, but either it is not worthwhile contemplating using them or it is simply that their minds are not focused sufficiently to make them think of doing some of those things. Actually road pricing may well make them look at when they take their journeys, how they can have alternatives to peak hour travel, but without the incentive of road pricing that is not going to happen?
Mr Laverty: It is a big issue and it is an issue which has many different views. I think one of the things we were saying and one of the reasons why the RDAs have not got a collective view on road pricing is that it very much depends on what assets you start off with and in what part of the country. London has a very good public transport system, but that cannot be said of other parts of England and the United Kingdom, so actually that has a major impact on the road pricing debate, talking about where you start from, what sort of city or region you are in, what assets you have and what sort of hinterland you have.

Q153 Mr Hollobone: Does the Highways Agency give enough consideration to regional development needs?
Mr Laverty: I think they are good partners, and I genuinely mean that. I think they try to fulfil two roles. They run a national network and they have responsibilities and objectives associated with that national network and they try on a regional basis to ensure that what they do joins into regional plans, regional employment opportunities and tries to address regional issues. So I think they try, as best they can, with the funding they have to balance those two things very well, but they are two very different objectives potentially and I think when push comes to shove their oversight of the national network is the most important thing they do.

Q154 Mr Hollobone: They do the best they can, you say, but is what they are doing good enough?
Mr Laverty: I think they do a very good job. With extra resources you can always do better, but none of us, particularly in the public sector going forward perhaps, will have the amount of resources we might like to for what we have been asked to do. I genuinely think they do a good job given the issues they face and the resources they get.
Mr Semple: It is always difficult to know how much they are championing the needs of the region at the Department for Transport, which is formally, I guess, the policy need.

Q155 Chairman: Mr Semple, how much are your members involved with the RDAs in looking at transport needs?
Mr Semple: I suspect not particularly strongly would be the honest answer. The haulage industry in particular responds to developments in an area. They are concerned to ensure the road link is adequate to serve their customers, but whether their customers choose to follow it I guess is a different issue.

Q156 Chairman: Mr Elliott, in a policy sense how much are the chambers involved with the RDAs in looking at transport issues?

Mr Elliott: In a policy sense the chambers are deeply involved with their local Highways Agencies in regional areas.

Q157 Chairman: No, not the Highways Agency, the RDA.
Mr Elliott: The RDA. They work quite closely with their RDAs, but I did want to come back to that other point about the Highways Agency because in terms of how good they are we have seen a change in how they have been working with the local chambers. There was quite a bit of an issue, especially in the North East and the use of Article 14 restricting development. Since we have raised that—and the North East chamber has been working with the Highways Agency—we have seen a lot less use of Article 41.

Q158 Mr Hollobone: Who should take the lead on promoting and allocating funding for major road improvements, local authorities or the Highways Agency?
Mr Elliott: I would say on the national roads, which is what the Highways Agency controls, it should be the Highways Agency. I think there is an issue which has come up with regional roads which are of national significance which seem to get stuck in a sort of anomaly because the regional funding is not enough to fund that road nationally and therefore it gets lost.
Mr Semple: I think we have a big concern about the roads in England and Wales which are not funded by the Highways Agency. There is, I think, a growing problem of the funding of the development of local authority roads and also the maintenance of the local authority roads. On the one hand we have central government saying, "Here's lots of money with which to maintain the roads," but having taxed the taxpayer and handed over the money, there appears to be no mechanism and no clarity in central government as to how you are going to ensure that the money is spent on the purpose for which it has been given. Our members are increasingly concerned that the money is not being spent adequately, never mind that budgets may be cut in the future. There are several issues. The first of these is a road safety issue because as the roads deteriorate they do become more dangerous, there is no question about that. Secondly, it is pushing up the cost for our members. Thirdly, in terms of the public purse, the more you neglect these roads—because you have to do something because of the increase in death and injury and cost to vehicles operating on the road—the more it is going to cost you because the cost will rise exponentially. There is a lack of clarity as to who is going to grasp this nettle.

Q159 Mr Hollobone: There is a real problem, is there not, with the regional funding allocation mechanism? For example, in the East Midlands, where the Kettering constituency is located, recently a lot of money has been allocated to the Widmerpool to Newark bypass, and it has been a long time waiting for that, but the sum of money involved has been described by a former transport minister as almost a whale in the pond and all the other important schemes in the region have had to wait for that scheme to be allocated RFA money and lots of schemes simply will not be taking place. Is the RFA mechanism inadequate to meet the needs of roads below the Highways Agency level?
Mr Semple: I would say the current system is not working and it is going to become, I think, a much bigger issue in the future.
Mr Laverty: I would have a slightly more positive take on the RFA process. I would say it is attempting to ensure that the Highways Agency and the local transport authorities are joined in to where the development is going to happen, so you have got a situation where people are trying to map out where the roads and the infrastructure need to be built, not the situation we had previously where it was all done separately, and we hope it is all connected up. I think the RFA to a certain extent ensures that actually everyone is familiar with where employment land is going to be, the housing growth is going to be, and tries as best it can to draw that up given the resources it has.

Q160 Mr Leech: Just to pick up on what Mr Elliott said earlier, what is the solution to a situation where an area has regional or local significance but it is not a Highways Agency road and there is a direct link between local strategic work which needs to be done with the Highways Agency network? How do we prioritise that sort of work? Should there be more emphasis on more money going to local authorities rather than the Highways Agency so that they can prioritise local and strategic regional priorities rather than the national priorities?
Mr Elliott: I think our view is that that is a road of national significance and we would rather it be part of the Highways Agency and that the Highways Agency put funding into that. This is why this anomaly has been created. So our view generally is that if it is, as I say, nationally significant the Highways Agency should take control rather than the local authority.
Mr Laverty: I think the regional funding advice seems to address just the issue raised. It is the roads below national level that are somewhere between the Highways Agency and the local authority and the two pots of resources are around the regional funding advisers deciding which within the region are the priority roads. They are either local authority or Highways Agency owned below the national road level. I think that is exactly what the regional funding advice seeks to do.

Q161 Mr Leech: Are there not then more examples of what Mr Hollobone was suggesting where a regional priority has then stung other areas in a particular region which are not getting any money because there has been a focus on that regional priority?
Mr Laverty: I think there is never enough money to do everything everybody wants. That is life, is it not? I think the regional funding advice is starting—all the partners now are in a situation where public resources are potentially going to be less going

forward than we have had—to be clear about what the priorities are and about making sure that the investment with the various agencies is coordinated, otherwise things will not join up and things will not happen at all.

Q162 Ms Smith: Will the introduction of high-speed rail routes help to reduce congestion?
Mr Elliott: I think from a business point of view actually it will have some effect. However, the actual effects it will have on road use we feel will be fairly limited. I think it is the amount of freight, for instance, that travels by road, the flexibility that roads provide. Rail simply cannot do that. We are also looking at a timeframe here of 30, 40 years hence and yet the road network at the moment is heavily congested, so in the future, yes, it will have an effect but I do not believe it will have as big an effect as we might hope.

Q163 Ms Smith: But the evidence upon which you base that is slim. You have not done any research to suggest whether or not it will have a limited or a major impact?
Mr Elliott: We have recently in actual fact done a report internally with Professor Glaister and Professor David Bayliss and we looked into that and the major road network and the findings of that were that rail would not really have too much of an impact on major road use.
Mr Laverty: I have seen research from around the world which showed that if you just increased the capacity overall then you do have an impact on congestion, but one of the major implications of a high-speed network is the impact on short-haul regional air flights. That is probably where there is the most impact. People flying from Manchester to London are more likely to go by high-speed rail than by plane. That is probably the biggest impact. That is what the research has shown.

Q164 Ms Smith: Just turning to comments which the British Chamber of Commerce made not long ago, you suggested that the proposals for inter-urban corridors should be brought forward. Where do you think these corridors should be?
Mr Elliott: Is that on high-speed rail or on the roads?

Q165 Ms Smith: Inter-urban corridors, roads.
Mr Elliott: Our view on that is that the major arterial routes, especially the M6 and the M1 going up North, and we have also looked at corridors from the North-East to Scotland, in particular the A1, they are the sort of key priorities. However, we are actually carrying out an internal study of this at the moment and we have not reached conclusions on that yet, but when we say corridors it is the busiest routes on the network.

Q166 Ms Smith: Is it not inevitable, though, at the end of the day that given the anticipated growth overall in the numbers of people wanting to travel that we are going to have to strike a balance between investment in roads and investment in other forms of transport if we are going to deal with the demand for the future and reduce carbon emissions, or rather contain them at least? Would a sensible transport policy not acknowledge that we need a multifaceted approach rather than focusing on one form of investment alone?
Mr Laverty: Absolutely. One of the things we have suggested is that you need a whole variety of tools to tackle the congestion issue and building new roads may be part of that toolkit but smarter ways of working, the other things I mentioned, would certainly be another part of it as well.
Mr Semple: I think there is an argument over rail and there was an interesting exchange towards the end of the last session about whether the allocation of money to rail going forward and the balance with road was right. There seems to be a greater certainty about the funding for rail in going forward than there appears to be for road and the argument seems to be should we be investing significantly more in roads, even as much as Eddington said would probably be required? So the big concern is to ensure that the budget anticipated by Eddington actually is forthcoming because there is the demand there for road. So to a degree to expand the road network appears to be where the discussion is. Nobody is objecting to the investment in rail, except to say that we are not getting a good return for our pound. In terms of rail travel that seems to be where the debate is.

Q167 Ms Smith: The suggestion that we are not getting a good return for investment in rail—the numbers using rail have increased significantly in the last ten years and demand is outstripping supply.
Mr Semple: Indeed, and the more rail in terms of passengers—I was going to say in high-speed rail—my feeling is that if high-speed rail is the best way of getting people out of their cars and onto rail, then it probably is. If a different focus in terms of passenger rail is going to do that better, then that is where we should be looking, without being a great expert in that area. The return in terms of getting people out of cars and onto rail where we can do that is quite strong.

Q168 Ms Smith: Is it not about connecting? It is not about separating road and rail and treating car drivers/passengers and rail passengers as completely separate entities, it is about an integration of those and an integration of conventional rail networks with potential high-speed networks surely?
Mr Semple: Yes, I would degree with that, a degree of integration in terms of cars. If you have a high-speed train service, then by implication almost inevitably that means you are not going to be stopping so often, so you are going to need a greater road service probably at either end of the rail journey, so your relatively minor road journey may actually increase.
Mr Laverty: I wholeheartedly agree that a national transport plan, strategy, call it what you will, that integrated all the various modes looking perhaps 30 years ahead would be fantastically advantageous and I think would enable lots of steps forward. I think if, instead of the historic travel patterns, it tried

to reflect a bit more the current and expected growth patterns of people and goods that would be even better.

Mr Semple: I agree.

Mr Elliott: Looking at a multifaceted holistic approach, certainly we would support that wholeheartedly. We see integration as key. If you look at London, for instance, where you do have an integrated transport system, people are getting out of their cars and using alternative methods. However, it is a matter of those alternatives and whether they do exist or not. Currently, as it stands, road is the only and most practical way of getting goods around the country.

Q169 Ms Smith: When you talk about inter-urban corridors there are examples, or instances if you like, of routes which frankly will never be inter-urban routes, road routes which will never be anything more than difficult, and I am talking principally about the connections between the North West and Yorkshire and the Humber, and the fact that Manchester and Sheffield are connected by two mountain passes effectively. Rail solutions are probably always going to be more effective and sensible, surely, than any idea about expanding or widening road networks through a National Park?

Mr Elliott: As I said, we do support certain routes and Trans-Pennine in chambers is one of the big issues. However, if we are talking about freight, currently I think 60% goes on our roads. It is simply the most practical and easiest route to use. Will rail take that over? I do not think it can do that. We can look at it and we can expand. You have mentioned high-speed raid and that is potentially one of the only ways we can really free up capacity on the conventional road network, but my issue really is that we are looking at congestion rising day in, day out, at the moment, yet we are talking about systems which will not be put in place for the next 30 to 40 years.

Q170 Ms Smith: I acknowledge that point entirely, but thinking strategically ahead, which we have to do, as well as thinking about the immediate future, would not the establishment of a dedicated freight corridor across from, say, the Humber over to the Mersey resolve issues Trans-Pennine?

Mr Elliott: Our preference is that we look at high-speed rail rather than a dedicated freight corridor and freeing up capacity on the conventional network and taking out the fast trains from the high-speed network.

Mr Laverty: We have done a range of studies including one in about 2002, which looked at surface infrastructure of national economic importance and one of the things we concluded was that the existing transport network is very North-South orientated and actually if you enabled East-West movements you could relieve congestion which just heads towards the South all the time. In an environment where congestion drives most of the spend, it is sort of a self-fulfilling prophesy, you keep having to tackle congestion, whereas if you looked at these other corridors—and one of the corridors we identified was Liverpool to Hull—for the movement of freight, you would stop people coming from Liverpool down to Southampton.

Q171 Chairman: What powers do you have to develop those corridors?

Mr Laverty: Absolutely none at all, but the Department for Transport has picked up that idea. I am not suggesting we are the only people who have ever had that idea. They are doing a major piece of work at the moment delivering a sustainable transport system and they have identified I think 14 corridors and there is a couple of East-West corridors in their work which acknowledges just that point, that everything at the moment is very North-South focused but if you start looking at East-West you might relieve some of the congestion issues in the South by thinking about how you could move things across from Liverpool to Hull.

Q172 Chairman: So you think some of those ideas are now being taken up?

Mr Laverty: Those are being looked at. I am not suggesting they have even agreed that that is the way it is going to be and all the investment is in place to deliver that, but certainly there is an acknowledgement that if we carry on facilitating a North-South movement we are going to continue to get congestion down in the South and we will continually have to tackle it. Perhaps we need to break out of that cycle somehow.

Sir Peter Soulsby: I would like to return to really the very fundamental issue because we have heard from other witnesses and although they acknowledge that there could be some regional and locally very worthwhile road building schemes, the scale of investment in those that you are arguing for is either unnecessary or impractical. I return again to the evidence we had from Dr Metz, who, as I said earlier on, was very persuasive and he concluded by saying to us, speaking of road, "You cannot build your way out of congestion." That was the general line. Why is he wrong?

Chairman: Does anybody want to comment on that, or maybe you think he is not wrong?

Sir Peter Soulsby: We are assuming he is, yes.

Q173 Chairman: Why is he wrong?

Mr Semple: The roads exist to facilitate economic growth, certainly in terms of truck operations. With the exception of an increase in weight, there is something else to make road haulage more efficient. Economic growth and road transport grow pretty much in line and that link has been re-established according to the Department's latest figures, after a dip of several years. You have a debate. If you do not build yourself out of congestion, if you simply increase congestion, the question then becomes, what impact does that have on the economy? I think most of the RHA's members would say it has a very negative impact on the economy. It is a barrier to economic growth, it makes it more difficult for companies based in the UK and competing in international markets to compete. So congestion is a by-product of not have a system which engages with

the economy in a way which is efficient and effective for the companies operating in the economy and the people it serves. So I would look at it from a slightly different angle.

Mr Laverty: I would say that building your way out of congestion is perhaps the wrong way to look at it. I think if there is congestion you have to tackle the congestion. I think to allow the extra capacity just to get filled up again, to get further congestion does not necessarily mean you have not had some benefit from that investment because actually there is economic benefit to all from investment in road and rail, but I think it is one of the tools in your bag. You have to tackle the congestion hotspots but you have to work hard and there are smarter ways of working and all the other things we have said to ensure that you just do not fill up that additional capacity. I do think that the current focus on looking at the current networks and tackling the issues there is potentially a little short-sighted. It should be more about what should be the corridors for the future rather than tackling the ones we have inherited from the past. I think there is something around that that needs looking at. I think you cannot just say that spending any money on relieving congestion is a waste of resource. I am not suggesting you are saying that, but I think there is a role for addressing congestion, but it is only one thing you need to do.

Q174 Sir Peter Soulsby: Another part of Dr Metz's argument to us was—and I think it has been echoed in some of the evidence we have had today—that the most significant problem which arises from congestion is the uncertainty it leads to. I think you have mentioned it in your evidence and in the earlier session we heard again about the unreliability that follows from it. He argued quite strongly that rather than building more roads we need to be doing more to make sure that people are able to understand what lies ahead on those roads. He was arguing that rather than investing heavily in all the capital investment which would be necessary for road charging, it would be much more realistic to look for investment in the technology which would enable people to predict the congestion ahead and to plan accordingly. Is he right on that point?

Mr Semple: If I could take first of all the point about reliability, I think that is very, very important. I just have one slight concern that people appear to have lost sight of speed altogether in terms of planning and while there is a focus on making sure your journey is reliable, consistent, and so on, we could have the most reliable journey in the world but if it is only going at an extremely slow speed that is not going to be a lot of use to our members. Setting that point aside, speaking for the haulage industry, for example, we are seeing a tremendous development in the use of what is called telematics to guide trucks and to plan trucks more carefully and I think that is something we will see more of. Whether or not it is prompted by the Government, I think it is something the industry is embracing and will embrace more and we will get benefit from it. The comment was made about the Highways Agency signs. I would absolutely add that I think they need to get a lot smarter. It might be interesting to look at why it is they are limited in terms of what they can tell drivers and the response time to changes in the network. For example, if there is no congestion why is it that there are signs saying there is a ten mile tailback, which I have personally experienced? The final point is, if I may, in terms of using the roads we have at the moment, if I could highlight the M4 toll road, which is a cause of immense frustration for very many of our members, because here is a road—I think there was a question before about have we ever under-predicted the use of a road and here is an absolutely classic case of how not to do things. I think in our evidence we have put forward one or two ideas, but we have to find some way of getting more vehicles onto this road and if there are one or two contractual difficulties then they have to be overcome, but there is no point in spending a huge amount of money on strengthening the road and putting in a hard shoulder running system (which we are not sure is entirely tested but we are putting a tremendous investment into that) where we have a perfectly good road running parallel which, for purely historic and contractual reasons, is grossly under-used. We have very many members who are sending their lorries through the Midlands every day who are astonished and frustrated that we cannot make any progress in this area.

Mr Laverty: I just wanted to comment on the reliability point. I think that is the number one issue, journey time reliability, but I believe it is a bit like Maslow's Hierarchy of Needs. If you can get the reliability sorted, the next issue should be the absolute length of the journey and whether that was acceptable. So I think reliability is the number one issue, but if that was sorted people would quickly move on to, "is the amount of time on this journey acceptable?"

Q175 Sir Peter Soulsby: Yes, but I think the argument is that at least if you knew what was ahead of you, you could make some sensible planning. Perhaps you are not necessarily the ones to give me a full answer to this, but is it not the case that there is a gap between what is known locally about what is happening on the roads and what the Highways Agency knows about what is happening on the roads, and that information getting to those who are planning their journey, whether it is back at base or the driver in the cab?

Mr Semple: I think that is the response you would get from many haulage contractors, that the telematics system, for example, can never fully replace local knowledge and there is a balance to be struck there.

Mr Elliott: I think there is a point to be made that it is not just that you can get information, it is also based on the customer demand. If you have to give a certain time in a certain peak period then you are going to have to go. You cannot just decide, "I'm not going to deliver at two o'clock because there's going to be less traffic at three." If you have to deliver it at two o'clock, you have to, and I think sometimes we miss that point.

Q176 Ms Smith: On that point, the problem with planning and having advance information and then perhaps changing routes is that it can lead to the use occasionally of unsuitable routes and that is increasingly a problem for residents in small towns, and so on. I have got a bypass in my constituency which is abandoned occasionally and we have got road haulage reverting to the route through town, thereby defeating the object of having the bypass in the first place. Is there not a potential risk of alienating pedestrian shoppers, people in residential areas because of road haulage? It is road haulage that bothers people more than anything using unsuitable routes.
Mr Semple: The short answer is, yes. I think road haulage is a problem particularly because big lorries stand out a mile. I have a case very close to me which has become a rat run because of SatNav between junctions 8 and 9 and there is a very large number of cars which use it, but it is the lorry that gets picked up. I think there is a lot of work to be done in this area. I think there are advantages, we have done surveys of members and there are clearly advantages to be had from SatNav. We are at the early stages of what is an interesting technology and there are going to be one or two problems along the way, hopefully short-lived and not too severe. Foreign drivers, in my own personal experience, tend to be the worst and the pitfalls of SatNav technology in the UK is something we are keen for the Highways Agency to communicate to foreign drivers at the point of entry into the UK.

Q177 Ms Smith: Has the Highways Agency responded to any requests made by your organisation on this?
Mr Semple: They are developing a leaflet to give to foreign drivers at the point of entry.

Q178 Ms Smith: Do you think that will do the trick or do you think it will take more than that?
Mr Semple: Hopefully it will be a start.

Q179 Chairman: Does hard shoulder running reduce congestion?
Mr Semple: I think our fear is that the commitment to hard shoulder running appears to have raced slightly ahead of the promised trial. Our understanding was that hard shoulder running through a junction (as opposed to off at a junction, which is what we have on the M42 at the moment and it appears to be working well) maybe a different matter and we have some concerns at the extent of commitment to that without it apparently being tested.
Mr Elliott: I think from our point of view, in relation to hard shoulder running, the trial there has been pretty successful. We are quite happy with it. However, it is how far we can take that to the rest of the network, especially considering a lot of roads do not have hard shoulders.

Q180 Chairman: Are there any benefits from the M6 toll road?
Mr Laverty: Yes, I think there certainly have been for the West Midlands. There have been sort of regeneration benefits along the corridor, along the M6 toll road. I think they have been confined because there are planning policies which do not allow the full benefit you could capture from the toll road, but there have certainly been regeneration development benefits there and I think it has improved capacity through the Midlands. It is an extra bit of capacity. At either end you might go back onto the M6 and it is as congested as it always has been, but certainly through the Midlands there is extra capacity, yes.
Mr Semple: I think it is the benefit that congestion and hold-ups are not as great as they otherwise would be. It has also give us the benefit of experience in how not to do things and some of the pitfalls and if we are going to develop roads with an element of charging—which could take a number of forms, I have to say—then we have to have a charging mechanism which does not interfere with the use of the road to the extent that it ceases properly to perform the function and the reason why it was built in the first place. That, sadly, is what has happened on the M6 toll road, through no fault of the toll operator.
Mr Elliott: I think I actually concur with what Mr Semple has just said. We are in favour of the M6 toll and it is one of the options you could use around the rest of the network. However, we have seen from our members great frustration in the pricing mechanism there. People are not using it because it is too expensive. If that was brought down just a little bit it would be much more utilised.

Q181 Chairman: Does the Highways Agency give enough attention to regional development needs?
Mr Laverty: It gives attention to them, but I think, as per my earlier answer, its main focus is the national network so I think its regional focus is always secondary to its national focus. I think it willingly plays into the regional partnership and the mechanisms. They have a regional structure and they have a regional director in every region. In my region, the West Midlands, that individual plays very willingly into the regional partnerships around transport. I hear the same story from the other RDAs around the country, but their primary focus is the national network.

Q182 Chairman: Who should take the lead on promoting and allocating funding for improvements on major roads? Does anyone have any ideas on that?
Mr Semple: The Department for Transport or, alternatively possibly BIS, the new Business—and the reason I say the Department for Transport is because that is the obvious answer at national level and the reason I mention business is that we have to remember the strong economic element of why roads are there in the first place, and that is certainly foremost in the view of road hauliers.
Mr Laverty: I would say below the national network there is a role there for regional partnerships and regional partners, the local authorities, the

Highways Agency, the regional government agencies and other partners actually coming up with their priorities. I think it is more likely to be the right priorities for the region in terms of the growth and the aspirations if it is done at a regional level.

Q183 Chairman: Is there tension between the different users of major roads, problems between business and other users of the roads?

Mr Semple: One point I would make on road safety is particularly related to the major road network but not exclusively, which is that there is a lot of discussion about the conflict between trucks and cars. I would just like to relate the very strong view our members expressed that they would like motorists to have a greater understanding of what heavy vehicles are doing, so on a purely pragmatic and parochial level I think that is something we are keen to promote.

Chairman: Thank you very much for coming and answering our questions.

Wednesday 8 July 2009

Members present

Mrs Louise Ellman, in the Chair

Mr David Clelland
Mr John Leech
Ms Angela C Smith
Sir Peter Soulsby
Sammy Wilson

Witnesses: **Ms Sharon Kindleysides**, Managing Director, Kapsch TrafficCom AG, **Professor Margaret Bell**, Science City Professor of Transport and the Environment, The Institution of Engineering and Technology, representing IET, and **Mr John Elliott**, Technical Advisors Group, gave evidence.

Q184 Chairman: Good afternoon. We are sorry to have kept you waiting. Can I ask you to identify yourselves, please, for our record?
Ms Kindleysides: My name is Sharon Kindleysides and I am the Managing Director of Kapsch TrafficCom.
Professor Bell: I am Professor Margaret Bell, and I am the Science City Professor of Transport and the Environment at Newcastle University.
Mr Elliott: I am John Elliott. I am the Secretary to the Transport Committee of the Local Authorities' Technical Advisors Group, which is the equivalent of the County Surveyors' Society for approximately 400 Local Authorities (Districts, Metropolitan Boroughs, London Boroughs, Tfl and Unitary Authorities).

Q185 Chairman: Thank you very much. Do you consider the major road network is sufficient to deal with the travel choices of residents in the UK and with the economy and, if not, what changes would you want to see?
Mr Elliott: Yes, I believe it is, but it might need different management and different management of the traffic on it to be good.

Q186 Chairman: You think it is essentially sufficient?
Mr Elliott: In general terms there is enough capacity there.

Q187 Chairman: Are there any different views from that?
Professor Bell: No, I agree that it is adequate and the important thing for the future is to take a lead on the Stern Report and manage the use of the major networks in order to minimise the impact on the environment.
Ms Kindleysides: I would also agree that in general it is fit for purpose but it is about having the occasional hotspots or even hot time, at which point it is absolutely overwhelmed. On average and split out over the area I think it is definitely fit for purpose.

Q188 Mr Clelland: When we are talking about it being adequate for the needs of the UK economy overall, does that apply to every region? Is it adequate in every region or are you talking about a global situation?
Professor Bell: I think you can argue that there are areas and sections where you need additional capacity but I think in the future we need to invest in the economic potential that motorways offer by using innovative ways in producing people movements, by having buses that are able to provide office facilities so that businesses can use the time that normally is spent driving, whether it is in free flow or congestion, for improving the economic situation and investing in it.

Q189 Mr Clelland: That is to do with the use of the roads rather than the roads themselves. In terms of the actual road infrastructure in each of the English regions, do you feel that each region has an adequate road infrastructure?
Professor Bell: There are areas, certainly an east/west cross route north of the M62 and in the north towards Scotland, where there needs to be considerable investment to improve the economic growth in those parts of the country.
Mr Elliott: Whether that should be done by roads or otherwise is another moot point. I think in some areas we might have an excess of infrastructure and this has encouraged too much road movement and particularly car commuting movement on the strategic road network, which cannot be matched in the urban areas. That is one of the big problems at the moment, that the trunk road network is assessed completely differently from the local road network and local transport systems and TAG authorities, mainly urban authorities where we have highway responsibilities. Generally we have managed as well as we can be expected to manage to reduce traffic under the existing rules but we have had the strategic road infrastructure put in which has generally added to our problems rather than taken away from them. I am not saying a small bypass might not be needed somewhere. I am not saying that we do not need more access roads, but, for instance, adding to the M25 I think is quite big public money that would make matters no better at all within a very short space of time.

Q190 Chairman: Are too many people using the major road network for local journeys?
Mr Elliott: I would go as far as to say that the major road network is the most environmentally friendly as far as residents are concerned, so if you can put traffic on the major road network and take it off the local road network that is an advantage. Short distance trips—are they less valuable or more valuable than long distance? I would go so far as to say that if you can meet the economic needs by a

short distance trip it is more valuable than a long distance trip, so therefore I do not see anything intrinsically wrong with short distance trips on the strategic road network.

Q191 Chairman: Is that a cause of congestion?
Professor Bell: I believe it is and I think we need to invest in encouraging local businesses to give incentives, perhaps with other policies like Every School a Good School, in terms of giving their employees company mortgages to live close to where they work rather than giving them company cars to address the issue of distance travel. That would free up the motorways for necessary travel. I would also make sure that we look at food miles and instead of having lots of capacity taken up by roads by, for example, taking potatoes from the south to the north or from the east to the west, we promote local use of food so that we keep the motorway network for essential travel and try and readdress short distance usage.

Q192 Chairman: Have you done any work on quantifying how much traffic could be taken off the major road network by means such as the ones you have identified?
Professor Bell: Not specifically motorway in that context I have worked—

Q193 Chairman: No, motorways and major roads.
Professor Bell:— mainly in major roads and urban areas, and it is certainly true that the pollution and carbon emissions resulting from congestion are three or four times greater than with free-flowing traffic. If we are going to deliver 80% reduction in emissions for CO_2 by 2050 we really have to control the amount of traffic needing to travel and that is maybe through intelligent transport systems, metering traffic and reducing the amount of traffic onto the motorways by one person in a vehicle travel and maybe having facilities on the buses where people can work instead.

Q194 Chairman: These are good aspirations but how much work has been done on quantifying how much traffic and congestion can be reduced by these means? Has any work been done?
Mr Elliott: There is a major piece of work on Smarter Choices—I do not know whether you are aware of this work—commissioned by the Department for Transport and led by Phil Goodwin whose name is very well known. This showed a 20% reduction in urban areas at peak times from the full range of Smarter Choices initiatives—car sharing, improving public transport, changing parking management, et cetera. That is for urban areas. That also has a knock-on effect on the strategic road network and quite a big one. I think Phil Goodwin has recently done some work on this showing that work in urban areas has a big impact on inter-city travel as well. I think we could solve all our congestion problems if we really went for some of these car reduction measures rather than tinkering with them.

Q195 Chairman: Are you saying it could solve all our congestion problems? That is a big ambition, is it not? Are you sure that these measures are going to solve all of the problems?
Mr Elliott: 89% of congestion is in urban areas anyway according to the figures in the Government's paper, so if we can tackle the urban areas we will be tackling it. A small reduction in traffic is usually a very big reduction in congestion in the peak direction in an urban area. Take the half term week—there is typically only a 5% reduction in traffic on the road network during half term but I think anybody who drives experiences that there are not any significant traffic problems; they vanish just with that small reduction in traffic.

Q196 Chairman: How robust do you think the current methods of forecasting road traffic growth are?
Ms Kindleysides: There are a number of environmental factors that I think even the transport modellers did not build in, so the unexpected, such as the recession we are currently going through, they did not imagine. In essence they have their uses in specific locations but the unexpected still happens and it is always the exception that proves the rule and I think that tends to be the case when the modelling does not work.

Q197 Chairman: What are the factors that you think have been left out or calculated wrongly? You have mentioned the recession. Are there any others?
Ms Kindleysides: Yes. The other thing I am very aware of is the different ways in which people travel, particularly the gender split. I think a lot of modellers perhaps see the bigger picture with journeys and say, "Short local journeys bad, long regional journeys good", without fully understanding the factors that are behind those journeys and the fact that you cannot always take out these short journeys because they are interlinked. It is the typical scenario of the mother who takes the child to school, goes to work, goes to the supermarket and then comes back to school. You cannot take one of those journeys out you need to take all of them out.
Professor Bell: I think a lot of the models that we are working with today, particularly for the environment, are generally based on average flows, average speed, and they ignore the congestion related problems and underestimate the impact they have on the environment. Some work that we are doing in the Leicester area is studying the peaks during the school terms and holidays as a measure of the benefits and beginning to understand the basic relationships which govern congestion, and I agree entirely that a small percentage in traffic flows can make a big difference in terms of congestion, but again we still need to reduce the demand if in the long term we are going to deliver the 80% reduction in emissions by 2050.
Mr Elliott: I had a fair amount of involvement in modelling earlier in my career. It has its uses, particularly where you are planning new towns or looking at an overall picture, but it is used for the

social cost/benefit economic assessment which I have very grave reservations. In part of our evidence we included what we put forward to the Department for Transport on NATA, that is New Approach to Transport Appraisal. It is a very complicated black box that I think has been taken too far away from the political system. It is not understandable by the average person. It is hardly understandable by people that have used it and you get very silly answers. The whole methodology of the assessment I think is suspect. Whether it has to be designed to get money out of the Treasury for certain schemes or not, I am obviously not a civil servant and I have not been that close to it. There needs to be some system but so much of the appraisal system is geared to an economic assessment that very often works against policy, and to have a credit in economic assessment when it is working against policy is something that I could not see a politician wanting. To go back to the modelling rather than the assessment—for a road scheme the modellers tend to model around a core area around a scheme so they forget about the bits outside. For an urban area you model all movements but at some point you are only modelling the movements from that city and not other movements.

Q198 Chairman: It is the nature of the modelling that you are querying?
Mr Elliott: Yes.

Q199 Mr Clelland: The RAC suggested to us that the spending on roads provides a far higher rate of return that other types of transport spending. Would you agree with that?
Mr Elliott: No. I think this is really the modelling and economic assessment that are structured the way they presently are. You can change those assessments very quickly. Certain members of our group, senior officers, say they are told by their modellers that "We will get the assessment to stack up". In the early seventies I worked on the Archway Road, an infamous road scheme and on the next section for consultants. We changed an assumption on the traffic speed on the minor road network—that the speed should be 24 miles an hour instead of 22 miles an hour, or the other way round; anyway it was two miles an hour difference and that changed the assessment from no benefits to good benefits, and this was only on the minor roads so it had no real bearing. Just that minor change changed everything. There are so many assumptions in the assessment method. Even the speed/flow relationship—as you get more traffic, obviously, it gets slower and slower, and there is a limit to how much you can put down a road. I suggested in our evidence that it is around 2,000 vehicles per hour. The road safety limit is something less than 1,800, but the assessment method assumes that you can carry on filling a road up to say 5,000 vehicles an hour per lane, which means that each vehicle would be about three feet long and would be travelling at totally unrealistic speeds. There are so many assumptions in the modelling that have created these economic values and I think they are pretty suspect. I am not saying we do not need something to assess between different schemes but at the moment I think the system is very suspect.

Q200 Sammy Wilson: Equally, are the assumptions in the other direction not just as tenuous? For example, you have mentioned getting people out of cars, walking, into public transport, car sharing, et cetera, and just by releasing that small amount of space on the roads you do away with congestion, but there are massive assumptions there that incentives will work to take people out of cars, take them into different modes of transport, and all of the evidence is that people are just not doing that and are not persuaded that that is the thing that they should be doing.
Mr Elliott: On Smarter Choices I have got first-hand experience for a major company, in the UK, Pfizer. I joined Pfizer for a short period in the early 2000s and did their Travel Plan. We got 20% of the people out of their cars (and these were high income people) on their journey to work. We got them either car sharing or walking or using an expanded bus service or cycling. The 50 percentile income at that stage at Pfizer (this was 2000) was £35,000 a year, and at that time the 50 percentile income in the rest of the country was about £17,000. We did manage to get 20% of those people out of their cars, so it does work and the Smarter Choices demonstrated this. That is how they got to this 20%, by taking a sample of all the companies that had successful Travel Plans.

Q201 Sir Peter Soulsby: I want to follow very much the same line. On the question of economic values and costs, we have had a considerable amount of evidence about the costs of congestion. You are probably aware of what we have heard about those costs.
Mr Elliott: A bit of it, yes.

Q202 Sir Peter Soulsby: What do you make of them? Do they bear any resemblance to reality?
Mr Elliott: A very large part of those savings, and this is from the assessment, is peak hour car traffic time savings. If you evaluate the car travel time savings in peak hours in urban areas at whatever the figure is, £5 an hour or £10 an hour, if you as politicians think that it should not really be that it would change all the assessments. The black box of the assessment method has been lost from political control because these figures are buried in the system and you do not know what you are buying. I would say that our 20% reduction in traffic, which I think is achievable, has very good value for money using those assessment methods but those assessment methods you have lost too much control of.
Ms Kindleysides: The figure that gets bandied around is £20 billion a year. I do not necessarily believe that. I think the benefits of reducing congestion are about the fact that people can say explicitly how long a journey is going to take, so if you are running a fleet of delivery lorries you know exactly how many you need and you do not have to get an extra 10% or you do not have to reduce the number of journeys a day because you know your

driver is going to get there in the end and it is very difficult to quantify because nobody knows how much risk factor everyone adds on, and everyone does it in their own head. I imagine you and I leave home early if we know we are going round the M25, for example. It is about the reliability and the ability of people to know they are going to do their journey on time which is in some way unquantifiable.

Professor Bell: It is also wasteful because if you have got to leave that slack it is lost time for economic generation and improving the economy because you have to build in the slack and employ more people and you waste time whereas you could get more benefit out of the time spent travelling in the day and you would not be having people hanging around doing nothing. I think it is important to reduce congestion in the near future but we need to address the need to travel and in the longer term again to look at the Stern recommendations.

Q203 Sir Peter Soulsby: If we are looking just in broad terms at the options that are available for the use of technology to deal with these issues, how do you rate the potential for technologies that introduce road pricing as against technologies that improve the flow on roads as against technologies that produce the information that enable people to have more certainty about what lies ahead of them when planning their journey?

Professor Bell: Technology can do all those things. The ATMs we have today are smoothing flows by displacing traffic onto the hard shoulder, but what they do is maintain the volume of flows and as time passes we will get more vehicles travelling and filling up the times during the off-peak, we are just spreading the peak, so again, if we want to reduce the volumes of traffic on the road in the long term by using the same technology, and, particularly with ramp metering, you can begin to ramp meter and regulate the demand for travel on the motorways and maybe switch from today travelling by one person in one car to in the future having express buses with multiple occupancy and electric powered, heavy goods vehicles. Using the technology you can enforce who uses the motorway and the way in which it is being used and you can use the data to give information to the public to improve the management of your networks, not just for maximising the number of vehicles on the road, as we are trying to do in the near future, but for moving towards a much more distant future where we are reducing the need to travel and having less traffic on the roads, and hence delivering a better environment and a healthier environment for people to live in.

Q204 Chairman: Ms Kindleysides?

Ms Kindleysides: I would say that in the same way the road network is different throughout the country the solutions are different. For example, in an urban area you may want to make the environment better for pedestrians and cyclists, so you may want to increase the time the green man is on and reduce the time for traffic to go through. Public transport has to be reliable so you need buses to have priority. There is no point leaving your car home to sit on a bus in the same traffic queue. You want the bus to be able to get through and you also want to be able to get the information that tells you your bus is going in five minutes and not that it went five minutes ago. On the road network the decision has to be about why do you want to reduce congestion and how far. It sounds simple but do you just want fewer vehicles on the roads so you know how long it is going to take to get form A to B? Do you want to reduce emissions? Do you want to make the road network last longer because fewer vehicles are on it. It depends on what you are looking to do, on whether you want to reduce the overall number of vehicles or whether you want to make them flow more smoothly at a slower speed. If you want to make them flow more smoothly at a slower speed you use managed motorway technology and increase hard shoulder running. If you want to reduce the number of vehicles on the road network altogether then you are looking at I would not say more punitive measures but you really are looking at ways of getting people out of their private cars and onto public transport. You need to encourage them onto public transport, have information and have a public transport system that meets their needs. At the same time you really do have to be discouraging them from driving their own car. It has to start being a real decision, "I am going to pay that money to drive my car. I know what it is going to cost". In some ways congestion does stop people driving. I do believe traffic planners use it as an approach to restrict the number of vehicles that go into a town.

Q205 Chairman: Do you think that is a good thing?

Ms Kindleysides: I live near Cambridge and I do not go into Cambridge because the congestion is so appalling.

Q206 Chairman: So you think that is a good thing in deterring people?

Ms Kindleysides: Yes, it works as a deterrent.

Mr Elliott: It is easier than road pricing.

Ms Kindleysides: It is cheaper.

Q207 Sir Peter Soulsby: I am really very interested in what you are saying about the potential of this technology. I just really wonder whether you feel that the Government, and the Department for Transport in particular, are doing enough to experiment with the technology and promote its development.

Ms Kindleysides: The technology is there. It works already in Europe. It is extremely well tested. There is absolutely no reason why the UK could not move ahead virtually tomorrow with an element of road pricing. Even Transport for London have done technology trials. As an industry perspective, we have been through three sets of technology trials in the UK already. The knowledge is there. We do not need another set. As a resident and as a company I would like the Government to take a lead and make some painful decisions and go for it.

Chairman: Sir Peter?

Sir Peter Soulsby: I was waiting for Professor Bell because I saw her nodding.

Q208 Chairman: Do you see any obstacles in the way, like public reaction?
Professor Bell: I honestly believe it is the way you sell it to the public, and it is signing up the public in creating innovative ways of giving them an incentive to see what good it is going to do in the long term. I really believe it is just the way it is sold to the public and we do have the skills, we do have the technology, and I think the ATM trials that we have done on the motorways have been successful and showed that it can be delivered. With the technology it does not have to be a dramatic change. You can subtly change the capacity of the networks for cars. For example, we relocated queues from closed space to open space in Leicester some years ago and we did that so that the pollution would not be trapped in an area of the city and moved it to a place where the natural ventilation of the environment blows it away. There were a lot of problems and criticisms from the public because they were queuing in the wrong place, the journey time was no different, and what we should have done was, instead of making a step change, we should have slowly moved two vehicles and displaced two more vehicles over a period of a month. We could have got the same change but it would not have been noticed by the public. It is how you do it and how you deliver it to the public and there are ways of doing it.

Q209 Mr Leech: Is not the reality at the moment though the evidence from the Manchester congestion charge that people are not going to buy it under any circumstances?
Professor Bell: I think I would like to disagree there, mainly because I have family in Manchester and I talk to them at length about it. They voted against it because they did not understand what was the good for them. They felt as though everybody else was benefiting. I think if it was sold in a different way and we engaged the public and got them to understand the detrimental effect of congestion, not just on carbon emissions and climate change but health and also for the economic good, and created the right environment and incentives they would sign up to it.
Mr Elliott: I think there are also mixed messages. There is again the hope that for an average member of the public a road enhancement will solve the problem. The Government is now widening the M25. They have gone back to Manchester, and I understand, but I am not up to date, that a number of road schemes are being brought forward and giving hope, "Oh, I can carry on driving", when I think we have to explain to the public that if we do widen the road the maximum you will get is two or three years' relieved congestion and then worse congestion afterwards than you had before. I think this message has not got across, that building roads is not a solution. Certainly in urban areas it is a counter solution. That message has not been sold. I have been around too long but Peter Bottomley said, "I am not going to build more roads for people to commute in their one and a half tonne metal vests"'. I think those were his exact words. Steven Norris and John Gummer said, "If we had known about the traffic generation from road building we would not have gone into this".

Q210 Chairman: These are historical things, but how can things change, or can they?
Mr Elliott: I think this Committee is in a very powerful position to—

Q211 Chairman: Yes, but I am asking you the question how you think things can change.
Mr Elliott: I think that message has got to be got back to the public, that we cannot solve problems by road building. Then they are more likely to accept these other measures to improve traffic flows.
Sammy Wilson: I have listened to the arguments that are being made and the impression being given is that the public are not aware that when they drive their cars there is congestion, when they drive their cars there is pollution, when they drive their cars there is demand on resources. They are probably well aware of this but still make the choice. Is the policy you are suggesting not really running contrary to the choices which people make? It is rather patronising, I have to say, that people make these choices because they do not know, they are ignorant. They are not ignorant. They know full well but they also weigh up the personal benefits of having the freedom of using their car and being able to engage in that mode of transport and they make grown-up decisions, and surely we should just accept that.

Q212 Chairman: Instead of repeating all the problems we know, have any of you got any new ideas, things that have not been tried up to now which you think would make a connection with the public that clearly has not happened up to now?
Professor Bell: I would like to say that rather than tackling the use of roads and building on roads, more emphasis should be put on giving the public choice and investing in public transport. A lot of people that we have had focus groups with say, "We do not use the bus because . . .", "We do not use the railways because . . .". Because there was privatisation, for example, I feel that, certainly for the buses years ago, that was the wrong step forward. You have to look at—

Q213 Chairman: You see the answer as improving public transport?
Professor Bell: It is public transport integrated with traffic to give people a service to make their journey rather than operating public transport and networks for cars separately.
Mr Leech: Is not the reality though, and I have a bit of sympathy for what Mr Wilson was saying and I do not normally agree with him on these issues, that people want public transport improving for everyone else to use and for them to stay in their car, and the question is how do we stop people from having that attitude? How do we persuade people that we have to make public transport better so that you want to use it, not so that other people use it and you get less congestion on the road when you are driving your car?

Q214 Chairman: Can you give quick answers with a magic solution to this?
Professor Bell: I think it is a balance to give incentives to use public transport before you give them the stick to make it more difficult for people to use their cars through car parking pricing, et cetera.

Q215 Chairman: Thank you. Are there any different points?
Ms Kindleysides: I would incentivise people not to use their cars in the same way that water meters were introduced, however many years ago that was, and people opted in to start with. Let people opt into paying less for their motoring.

Q216 Mr Leech: Road user pricing?
Ms Kindleysides: Road user pricing and at the same time investing and giving people enough information to use public transport. I live in deepest darkest Fenland. We have about two buses a day. I still do not know when they run. It is very difficult, and I am reasonably intelligent, I hope. I should know where to find this information. It is very difficult for people in the outlying areas to find out what the alternative is. Approach the big employers, encourage them, as the gentleman was saying about Pfizer, to have car sharing schemes, park and ride schemes. Go out proactively and say to the big hospitals, the big universities, the big employers, "Okay, you are causing this congestion at nine o'clock in the morning and at five o'clock at night. We are going to work with you but we are going to get rid of it".
Mr Elliott: I would agree with that entirely and it is a matter of individual freedom but we must send the right messages so that people make their choices but with a sensible basis on making their choices.
Chairman: Thank you very much.

Witnesses: **Mr Ali Clabburn**, Managing Director, liftshare, **Mr Stephen Joseph**, Director, Campaign for Better Transport, and **Mr Mike Lambden**, Head of Corporate Affairs, and **Mr Paul Bunting**, UK Sales and Marketing Director, National Express UK, gave evidence.

Q217 Chairman: Good afternoon. Can I ask our witnesses to identify themselves for our record, please?
Mr Bunting: I am Paul Bunting. I am the Sales and Marketing Director for National Express UK.
Mr Lambden: Mike Lambden, Head of Corporate Affairs for National Express UK.
Mr Joseph: Stephen Joseph, Technical Director for the Campaign for Better Transport.
Mr Clabburn: Ali Clabburn, Founder and Managing Director of Liftshare.

Q218 Chairman: Thank you. We have heard from the British Chambers of Commerce that major road expansion is essential to meet the needs of business and of the economy. Do you agree with that?
Mr Bunting: I think the priority is, rather than more of it, better use and more efficiency of what we have in place at the moment. The biggest drawback we have as coach operators in the UK is our punitive journey times, the penalties of congestion, and for me the first priority in inducing people onto the long distance coach network is to improve the effectiveness and durability of the network we currently have rather than the much more controversial option of taking more land to produce greater volume and capacity on the roads.

Q219 Chairman: What is the best way to secure that improvement?
Mr Bunting: For us it is very much about how can we give priority to high occupancy vehicles to encourage people onto public transport as opposed to the familiar car vehicle which carries one person as opposed to a coach that carries 50 or 60, and that is about a range of things. It is about incentivisation for people to change their mode and it is also about there will have to be some punitive measures to change behaviour. That is I think where the dialogue with government and the operators and the Highways Agency needs to be clear, be it a pricing option, be it preferential priorities for particular road lanes or better management of engineering projects that allows us to get the most from the existing network.

Q220 Chairman: Mr Joseph?
Mr Joseph: I would like to make an additional comment in relation to your question on the British Chambers of Commerce. Our argument is that the benefits to motorists of major road building have been massively oversold. It is not really in the British Chambers of Commerce's interest to have a massive expansion of the road network. This week we have published some new work which we commissioned from Professor Phil Goodwin, who has at times been an adviser to this Committee, which looks at the corridor planning process and hard shoulder running and finds that major road building in isolation will do nothing but will actually make things worse for motorists by jamming up the surrounding road network such that end-to-end journey times for motorists will get worse.

Q221 Chairman: What do you think will make the biggest impact on vehicle emissions, better technology or changing travel behaviour?
Mr Joseph: We definitely need a push to have better technology to have lower carbon vehicles and, where possible, fuels for all the vehicles we have. That is true of vans, buses, planes, cars and lorries. We have had significant research done on this and that is not on its own going to be enough. We will need aspects of behaviour change. Without taking the words out of the mouth of my neighbour from Liftshare, the Department for Transport's figures on the use of the road network suggest that for commuting and business travel around 90% of the car commuting

and car business journeys are single occupancy, and, as the Liftshare evidence says, the vehicle occupancy rates have been going down in recent years so measures to reverse that, to encourage, as the previous witnesses were saying, car sharing with employers, would make a huge impact on emissions as well as on being better utilisation of the road network.

Q222 Chairman: How much difference will cleaner technology make and how much faith do you have in that?

Mr Joseph: It will make some difference. It partly depends on what view you take about the uptake of new technology and its price. At the moment we have a number of technologies being promoted by the Government. A lot of them at the moment are more expensive than current technologies and in a context in which people are not buying new vehicles anyway, so in terms of meeting the first three carbon budgets set by the Committee on Climate Change of a target overall of 34% reduction in greenhouse gas emissions by 2022, if the economy does not revive in a way that promotes a lot of purchases of new greener cars then we will need to do much more in other areas. In other words, new technology is necessary but not sufficient. We will also need to look at a range of other measures, including land use planning and better public transport, and also ways of making better use of road for freight.

Mr Clabburn: Just on that last question, the Term Report 2008, which is a European report, has concluded that passenger transport continues to grow, particularly in aviation and cars, and increased car usage and a reduced number of passengers per car negate the improvements in vehicle efficiency. Maybe in the last year vehicle use might have slowed a bit but it has historically been going up and so whatever technological improvements have been happening they have not been overriding the decline in how we are using our current vehicles, so I think it is much more important to focus, in the short term at least, on changing behaviour whilst relying on the technological changes coming in the longer term if we are to achieve anything. Technological changes have been occuring for the last 20 years and yet we still see emissions and congestion going up. Improvements in cars may in the end reduce CO_2 levels but they will not improve on congestion and, if people feel they are not polluting, may actually increase congestion levels.

Q223 Chairman: I just wonder whether Mr Joseph's scepticism about the Chambers of Commerce view about the need for expansion of the major road network stretches to improvements in the existing network, for instance, adding lanes to motorways, improving roads which are single carriageway into dual carriageway. Are these not improvements which would help the economy of certain parts of the country?

Mr Joseph: Not on their own. Our argument is not that we should not have any road development at all but that the case made for a lot of the road schemes that are currently out there is oversold. The Committee heard in a previous session from a motorising organisation, particularly the RAC Foundation, and their argument was that you had to have a much wider motorway network. The problem with that and with the work that underpinned it is that it only looks at the motorway network. To take an example familiar to you, that would involve, les us say, a 14-lane A1(M) and that would look great. It would definitely decongest the A1(M) if you did that. The problem is that the amount of traffic that that would generate would completely congest the entire local road network and that lay behind my point earlier that overall end-to-end journey times would get worse if you did something like that. The RAC Foundation report looks narrowly at the trunk road network and does not look at dumping a lot of extra traffic on the local road network. I do not think anybody is yet talking about massive new urban road building in Tyne and Wear or any other major city now because it is widely recognised that that was self-defeating. That is why we argue that while it might speed up British Chambers of Commerce members' cars and vans and trucks on the network, once they got off that they would face a worse problem and that is certainly underpinned by the work we published this week from Professor Goodwin. Instead of doing corridor studies, which is what the Department for Transport is now proposing to do on 14 main national corridors, and it will get the wrong answers if it does not in effect make them bar-bell or dumb-bell shaped, in other words, looking at the conurbations that they connect, his argument is that solutions to the major road network lie in the conurbations around them and therefore improving the land use planning, the public transport and other things in those conurbations will have a major impact on conditions on the A1(M), the M6 and the national road network.

Q224 Chairman: In the urban areas we can resolve, hopefully, some of these congestion problems by improving other transport and encouraging people to use public transport rather than cars, but the interlinks between city regions, and you mentioned Tyneside and Teesside, and Tyneside and the M6 to the west and Tyneside and Scotland to the north, are equally important. You are never going to resolve the problems on those roads by improving public transport because people will not use public transport between those points because it is an urban issue, is it not?

Mr Joseph: The point I am making is that you cannot distinguish between those two because what is congesting the A1, or indeed the M6 in the West Midlands or whatever, is a lot of local journeys that are using those. I will give you an example nearer London. If you travel between, let us say, St Albans and Watford, you are made by the signing to use the M1 for one junction. If public transport were improved between those two places you might get some of the local traffic on the M1 off that road and that would help the long-distance journeys that have to be on that road. The point I am making is that you

cannot consider those two in isolation and the solution to the A1(M) or the M6 or the other places lies within that, and Professor Goodwin has done a report which I believe we have sent you as additional evidence so you can see the argument he is making. It makes the point that the underlying proposition for things like hard shoulder running, if you look at the figures, is not going to make things better; it is going to make things get worse a little more slowly than they otherwise would, and that is a less attractive proposition than making things better. His argument therefore is that you have to consider other things and look at a range of choices and options rather than just look at major road widening because ultimately that will be self-defeating.

Q225 Mr Clelland: So how do you deal with a problem like the A1 western bypass around Gateshead, which I am sure you are familiar with, which gets very congested and it does not have a hard shoulder, so you cannot have any hard shoulder running? Do you think that problem can be resolved by public transport?
Mr Joseph: No; I think it can be resolved by a range of measures that deal with the local transport in that area, freeing up that road for genuine long-distance traffic that needs to be on it. That is fundamentally where we are coming from. You will find that a lot of the vehicles on the A1(M) have one person in them and even a small change in which you have car sharing widespread, say, organised through a Tyne and Wear-wide car sharing scheme, would make a difference to the vehicle occupancy. In other words, you would get more people in fewer vehicles on that stretch of road and that has hardly been tried. It has been promoted by Mr Clabburn and his colleagues. It has not been subject to any serious government work.
Mr Clelland: Is there any evidence where that has had a real impact on communities anywhere else?

Q226 Chairman: Could you give us one or two specific examples?
Mr Joseph: I can quote from Seattle in the States where they have a team of people who focus specifically on improving car occupancy. They monitor car occupancy which is something we do not do in this country. We collate it but we do not monitor it, and they have put in place measures to improve it, so they work with local businesses to encourage them to have car share schemes. They have HOV vehicle lanes in the centres. They have 200 miles of HOV lanes in Seattle itself. In this country I think we have about five miles in total.

Q227 Chairman: Are there any examples from here?
Mr Joseph: There are lots of examples but they are all done on tiny budgets. Devon has the highest per head of car sharing in the country and they spend typically about £20,000 on promoting it and they have about 9,000 members. Nationally in the UK we have 350,000 members and we save about 40,000 trips per day, but that is done on our social enterprise budgets which are tiny.

Q228 Mr Clelland: But, apart from Seattle, do you know of anywhere in the world this has had a major impact on traffic congestion?
Mr Joseph: Depending on whether you look at HOV lanes or just promoting car sharing generally, if you are looking at promoting car sharing to businesses, as my predecessor sitting in this chair was talking about, there are lots of examples where companies have taken this seriously. One company had a 70% reduction in car use to their site by promoting car sharing.

Q229 Mr Clelland: Yes, but what was the impact on traffic congestion in that area?
Mr Joseph: Locally, massive; collectively, across a whole area, minimal, but at the moment it is all being done by individuals rather than being supported centrally by government.

Q230 Chairman: Mr Joseph, have you any examples of where this has made a significant impact?
Mr Joseph: Yes. The Highways Agency have some examples because they have been doing a programme of work with employers surrounding the trunk road network. For example, they have done a travel plan with the Cambridge Science Park which now has 45% of people cycling to work and larger public transport use. A lot of the people on there were previously on the A14 which was congesting there. There is some good experience from Northern Ireland where the Department of Regional Development have told me that they have been promoting park and share schemes on the outskirts of the city. I do not know how that has progressed; that was a few years ago, but that was a scheme that was being promoted by the Northern Ireland Government at one point. The point we would make is that all of these things have so far been tried on a small scale. It needs to be done on an area-wide basis. The evidence is that where we have done some area-wide work of this sort, notably in the sustainable travel work that the Department for Transport has been funding in Darlington and Worcester and Peterborough, the numbers suggest that you have a significant increase in public transport use and an appreciable decline in car use across the city in those areas by every school having a school travel plan, large-scale household information for those that want it about the alternatives available to them, working with a lot of employers and so on. The final numbers on that will be out later in the year but I understand from talking to the researchers that the numbers show that if you compare, say, Darlington, with equivalent sized towns in the region, they had declines in traffic and car use compared with other towns by doing this and the Department for Transport is now rolling that out to a sustainable travel city. The problem is that all of these are being done on tiny budgets compared with the cost of major road building.

Q231 Chairman: What you are saying is that they do have impacts.

Mr Joseph: They have impacts.
Mr Clelland: Can you let the Committee have evidence on that?

Q232 Chairman: We will be interested if you can send us some evidence.
Mr Joseph: We can certainly send you the evidence from both the Highways Agency and the Department for Transport.

Q233 Sir Peter Soulsby: Can we turn to the evidence that we have had from the British Chambers of Commerce particularly, and I think they were quoting Eddington, that the cost of congestion is £23 billion a year. Can I ask National Express whether it is something that you have put a cost to or whether it is the uncertainty, the effects on your scheduling, that are much more important than the congestion itself?
Mr Bunting: The problem we have is that we are a national coach operator. The size and scale of our operation is equivalent to a medium sized train operating company, so the Midland Mainline did the same amount of journeys and the same amount of turnover as National Express national coaches does. The reason is that demand is so constrained by at least two of the things you referred to there. Coach travel generally is less time sensitive and more price sensitive, so time is not a great thing, but the thing that would really attract new people onto coach would be to increase the competitiveness in terms of journey time, and the big barrier we keep coming up against is congestion. Building on the debate, we have some good examples. We run people from Stansted and the business at Golders Green is growing, so we can drop them off there. If we could have some really good interchange points at key points on the radial areas of cities that would be very helpful. During the RMT strike when the England game was on we were talking to the FA about some key hubs on the M25 and then some real high quality stuff into the site, in this case into Wembley. We need to improve our competitiveness in terms of our journey times particularly and in turn that will take away the uncertainty that you are not actually in control of the vehicle that you are in, and in that way you then can start to reap the benefits of coach effectively taking minor traffic out of the equation, so removing uncertainty and increasing the speed are the two things that would start to drive and grow what is the most environmentally friendly mode we have in the UK.

Q234 Chairman: Mr Lambden, do you want to add to that?
Mr Lambden: If I could add to Paul's comments, the coach network we operate runs very well to time. However, that is because we have built in over a number of years allowance for the traffic conditions as they exist at various parts of the day. We certainly could save several million pounds of cost if we could operate our services with reduced journey times because it takes more drivers and more vehicles to operate than it would if we had the right priorities to enable us to provide the sort of service Paul was talking about.

Q235 Sir Peter Soulsby: I can see the real problems for National Express and others operating that sort of business, but I wonder, Mr Joseph, whether the figures that the British Chambers of Commerce put to the cost of congestion are ones that bear close examination.
Mr Joseph: These large numbers for congestion have been around for a long time. I do know when the CBI first produced a figure like this 20 years ago and I asked the person who had done it how he did it, he said he had found a report which said that congestion was 1-1.5% of GDP and that was where the number came from. These figures are, I think, slightly artificial and if you ask in surveys how important people think congestion is, they say congestion is a problem for the country, not necessarily in sums. Where it does impact is on reliability and predictability and I think this does bear examination because the Department for Transport's appraisal process gives priority to time savings, sometimes very small time savings aggregated up and then discounted over 60 years, whereas what matters to businesses, to National Express and to the members of the British Chambers of Commerce is reliability and predictability. One of the benefits of the hard shoulder running and the active traffic management experience is that you can control that and manage it in such a way as to ensure a bit more predictability, which might involve various speeds slowing down traffic congestion, but it does increase predictability. However, that has no value itself in the appraisal process and in the cost/benefit analyses that are used. One of the things we have been saying to the Department for Transport when it has been considering refreshing its appraisal process is that they need to give much more priority to measuring and allowing for reliability in the road network which would give much more priority to managing it better, as National Express have said, rather than trying to look at major expansion which might not, for reasons we have discussed, lead to much better reliability and predictability.

Q236 Sir Peter Soulsby: You have mentioned some of the technology that might be used for this. I do not know whether you heard the previous evidence but there was more discussion there of other technologies. Do you think there is much potential there?
Mr Joseph: I think there is plenty of potential for that. In a way, one of the problems with this is that a lot of the discussion about future road building tends to be dominated by schemes that have been around for a long time rather than looking afresh at the problem and thinking what the range of options is that might deal with the problem, and certainly some kinds of technology could be of huge assistance in managing the network. The M42 traffic management scheme seems to work very well. One of the problems we have, we think, is that there does not seem to be very much of a learning process going

on here. The M42 scheme at least had good before and after evidence. The Highways Agency experiment I mentioned at Cambridge Science Park, we do have some good numbers for that. When you come to look at major road building, and again I have given you some material on this, the Highways Agency published recently some post opening project evaluation which showed that if you compare actual outturn closed to traffic forecasts with predictive closed to traffic forecasts, they are more or less random and on bypasses in particular they are completely random and we particularly like the bypass where the relief road had 1,250% more traffic on it than was predicted. By contrast, others had much lower traffic and there does not seem to be a process whereby they learn from that and say, "How can we get forecasts better? How can we deal with our planning better and where is the evidence in what works?". It seems to be more very complex models which do not seem to be terribly effective.

Chairman: A vote has been called, so we will end there. Thank you very much indeed for coming.

Monday 20 July 2009

Members present

Mrs Louise Ellman, in the Chair

Mr David Clelland	Sir Peter Soulsby
Mr Philip Hollobone	Graham Stringer
Mr Eric Martlew	Mr David Wilshire

Witnesses: **Mrs Cynthia Games**, Northeast Combined Transport Activists' Roundtable, and **Mr Ralph Smyth**, Campaign to Protect Rural England, gave evidence.

Chairman: Good afternoon. Welcome to the Select Committee. Do Members have any interests to declare?
Sir Peter Soulsby: I am a member of Unite.
Mr Clelland: A member of Unite
Mr Martlew: A member of Unite and GMB unions.
Chairman: Louise Ellman, member of Unite.
Graham Stringer: Member of Unite.

Q237 Chairman: Could I ask our witnesses to introduce themselves for the record.
Mr Smyth: My name is Ralph Smyth. I am the Senior Transport Campaigner at the Campaign to Protect Rural England.
Mrs Games: I am Cynthia Games. I am the Northeast Coordinator of Living Streets, but I am here today representing the Northeast Combined Transport Activists' Roundtable—NECTAR.

Q238 Chairman: Thank you very much. We have heard strong evidence from the British Chambers of Commerce that we need to have an expansion of the major road network. Do you agree with that?
Mr Smyth: No, I do not.

Q239 Chairman: Could you tell us why.
Mr Smyth: Because there are limited resources to spend on transport and the benefits of expanding other forms of transport, particularly rail and also improving land use planning, would be far more than spending money on roads which would simply lead to more traffic and more congestion, particularly on local roads which feed into the strategic road network.

Q240 Chairman: Does that mean that you do not think it is important to give economic needs priority when we are looking at the case for road building?
Mr Smyth: I think that economic needs are one of the many things that need to be considered. For example, the DfT's *Delivering a Sustainable Transport Strategy* has five goals, one of which is economic. However, I would not agree that spending money on roads is the best economic way of dealing with congestion because the evidence shows that more road capacity leads to more traffic. The DfT's figure in their Command Paper of July 2008 was an 8-10% increase in traffic per year where there is new capacity.

Q241 Chairman: Mrs Games, what is your view on this?
Mrs Games: We similarly would disagree with the Chambers of Commerce, not because we are against the economic growth of the country, nor indeed of the northeast region, but because we believe there is an argument for working smarter and developing a more efficient network through using things such as the rail network by diverting some freight in certain areas to other ports, for example Teesport and the port of Tyne, by making sure that sustainable transport and personalised travel planning and the development of urban areas is actually more effective so that we can reduce unnecessary journeys on roads.

Q242 Mr Clelland: I was wondering on what scientific basis this statement from the CPRE that the road network is "adequate" and from NECTAR that the major road network is "too large" is formed? When did the road network become "adequate"?
Mr Smyth: I think you are looking at our evidence. We said that it is better to see how the network is used rather than simply whether the network itself is adequate. I do not think there can be a scientific judgment either way because there are various different subjective values involved, various trade-offs between growth in different areas, between different public goods, be they environmental, economic or social. I do not think you can simply have a scientific objective answer to that, there are politics and different views involved.

Q243 Mr Clelland: As far as NECTAR is concerned, if the current major road network is "too large", which roads would you close down? Which parts of the country are going to lose roads under your proposals?
Mrs Games: I think the feeling of NECTAR as a whole, and I have got to say that I am not the person who put this particular argument forward, although I would concur with it, is that—

Q244 Chairman: Do you agree with it?
Mrs Games: In some places we have a lot of major roads which are not used effectively at the moment. I would not dare to state one particular road because I am not a road expert myself.

Q245 Mr Clelland: As far as the northeast is concerned, which you are principally concerned about, you know about the debate that has been going on for some time in the northeast about the

adequacy or otherwise of the road network. We are not talking about building new roads necessarily, but certainly the adequacy of the network we have to cater for the amount of traffic it has, but here you are saying in the face of all the evidence from everyone else I know in the region that the road network is "too large", so which roads would you close?
Mrs Games: I am not going to risk saying the wrong thing there. What I would say is that I would agree with Ralph that it is very difficult to say what enough is, what is adequate. If you expand for demand there will always be more demand, where as there is an argument which Robert Cervero came up with which said that "congestion is a sign of economic growth without over-investment in heavy roads". I think we need to be very careful about how we invest in the near future with climate change and changes in requirements for fossil fuels in the next 20 years when we may see a significant change, and it is that on which NECTAR's argument is based.

Q246 Graham Stringer: If you do not use a scientific basis, what basis do you use?
Mr Smyth: For example, again the Department for Transport has DaSTS with five different goals. There was widespread consultation on that. I think there is broad agreement from the Chambers of Commerce through to environmental groups such as ourselves that those five goals are good. The difficult question comes when you have a particular scheme or area and which goal takes priority. You might have some people saying, "We should put in a rail scheme here because these three goals are the most important" and you might have someone else saying, "No, there should be a road expansion". That said, as I mentioned earlier, it is our view that economically we are at the point where expansion of the rail network would have more benefits than further expansion of the road network because, again, building more roads will induce more traffic, and that is what the SACTRA report in 1994 said and many other bits of evidence since.

Q247 Graham Stringer: Can I just follow up on a couple of points because you said a lot of things there. In our previous evidence session we had a distinguished Professor of Transport, one of the most distinguished professors I guess, saying if you had a pound to spend you would get most benefit from the road system. What cost benefit are you using that is different from the cost benefit analysis that professor was using?
Mr Smyth: I am aware of the RAC's report looking at the expansion of the rail and road networks. There are two main things there. One is they have used a previous version of the New Approach to Transport Appraisal. The newer one, which came out in April of this year, takes into account things like physical fitness. You hear Lord Adonis, for example, highlighting how if you get more people cycling to stations that is a good example of how bike-rail trips have good benefits, and they are reliable because cycling and train tends to mean you get there on time, but also they give other benefits like physical health benefits. Another professor you had was David Metz and his argument was that people tend to spend the same amount of time travelling every day on average. Obviously different people travel different times, but on average the levels are the same. The benefits that Professor Glaister was referring to were time savings, people would save certain amounts of time per trip, but in reality they will simply travel a bit more rather than save time. I would question the figures put forward by Professor Glaister.
Graham Stringer: So what are the costs and benefits? On anything based on time, I do not mean the same time, you will be doing the same division sums. You have avoided what costs you are using compared to Professor Glaister and what benefits you are using. I understand all the benefits of integrated transport but we got very substantial figures from Professor Glaister, and we have had them from other people in the past, which show that the biggest cost benefit ratio is from investment in roads. I want some hard figures that show that is not the case.

Q248 Chairman: Mrs Games, have you got figures on this?
Mrs Games: Yes. Sustrans in 2002 published a report which suggested that investment in walking and cycling networks produced a 20:1 cost benefit ratio. That is a report which I can circulate to you later.

Q249 Chairman: Is that comparable to the report that Mr Stringer referred to?
Mrs Games: This is comparable to the cost benefit ratio of roads which regarded that as 1:3.
Mr Smyth: Going back to Mr Stringer's point, the Secretary of State for Transport, Lord Adonis, in his transport manifesto speech mentioned the transport time budget as well. If you are saying building an extra two lanes on the M6 would save 10,000 people a day an extra minute, the fact is that over five or ten years these people will spend the same amount of time travelling. What they might benefit from is increased accessibility, but the trends are that where you increase the road capacity you will have people travelling further, they will not use their local shops, they will start shopping in a supermarket, the local schools will tend to shut down because people are travelling further and further, and the result is there is a drop in accessibility and those benefits they might have got the first couple of years from there being quicker journeys will gradually be eroded over a ten or 15 year period.

Q250 Chairman: So are you challenging the methodology of the study? Are you saying it is looking at different sorts of benefits?
Mr Smyth: Yes.

Q251 Graham Stringer: I cannot let you get away, like lots of people do, with misquoting the SACTRA report. It did not say that traffic was always induced, it does not say that if you look at it. What it says is that it travels where it previously could not travel, for instance over estuarial crossings and where there have been restrictions. It does not say that roads always induce traffic, does it?

Mr Smyth: Forgive me, I do not think I used the word "always".

Q252 Graham Stringer: You implied it. You said it induces traffic. What he really says is that where traffic cannot go because there is no road where people want to go, if you build a road it will fit the purpose it is there for, which is for traffic to go along it.
Mr Smyth: I would say that because investment is now targeted at places where congestion is worst there will be more inducement of traffic and the Government's figure that I mentioned earlier was 8%-10% per annum.

Q253 Graham Stringer: That is just stating that if you build a road, and the best example is to go over an estuary like the Humber, traffic will go over it because it could not go there before, it does not induce it to go somewhere it did not want to go, it is unable to go there. It is a complete misuse of the word "induce", is it not?
Mr Smyth: No, I would disagree with that. Again, the figures show that where there is congestion that is relieved by increasing capacity, people drive more. Some people might be making a trip they would not make before, or it might be people going further on the same trip and so on, but I would say that evidence is crystal clear.
Graham Stringer: It is crystal clear that they go where they could not go before and they wanted to. The implication of induction is that they go somewhere they do not want to. In actual fact, Europe is full of empty roads, is it not, that people are not induced to travel on?

Q254 Chairman: You do not agree?
Mr Smyth: I do not agree.
Graham Stringer: There are lots of empty roads in Europe.

Q255 Mr Martlew: The Campaign to Protection of Rural England says you do not give much attention to, or your campaign is not to help those of us who live in urban areas. Is it not a fact that in reality the majority of the road building has now been done and what we are seeing is very often bypasses, like in my constituency, that will go through rural areas which will relieve major congestion in urban areas and that is what you are opposing?
Mr Smyth: No, it is not. We are very keen on promoting urban regeneration. For example, with the discussion on eco-towns we have been pushing for the need to regenerate urban areas rather than build new towns in the countryside.

Q256 Mr Martlew: I can believe that, yes.
Mr Smyth: In relation to bypasses, most of the road building now if you look at the Government's recent announcement is for increasing the capacity of existing roads, because that is where the congestion is worse, rather than bypasses. It is interesting that a couple of weeks ago the Westbury bypass in the southwest was rejected by an inspector because he found that the case simply did not stack up.

Q257 Mr Martlew: So you are not opposed to bypasses of urban areas then?
Mr Smyth: We tend to be against new road capacity, yes.

Q258 Mr Martlew: So really you do not care about the congestion in the urban areas. Can I take you on to the high speed train. I hope when we come along with a plan for the high speed train that will leave London, go through the countryside and come into Birmingham and then go to Manchester and Carlisle and Glasgow that your organisation will not object to that.
Mr Smyth: It is rather difficult to say whether we will object to something in principle or not when we have not seen any plans.

Q259 Mr Martlew: Did you object to High Speed 1?
Mr Smyth: There were discussions about the detailed design.

Q260 Mr Martlew: You did object to High Speed 1, did you not?
Mr Smyth: I think there were discussions about the detail of the design and where exactly it went, like many other groups.

Q261 Mr Martlew: So really you are objecting to new roads and new railways if they go through a rural area. What you are saying is we should manage on what we have got, is that not correct?
Mr Smyth: Certainly it is a good principle to make the best use of what we have already and in particular when there is pressure on government finances, but in relation to railways, for example, there is the Association of Train Operating Companies' report on *Connecting Communities* and that is something we very much favoured. Having the most number of people connected to the rail network at the cheapest possible price is a very good principle.

Q262 Mr Martlew: We cannot get down to specifics, but I suspect what ATOC were saying is that we should use disused railway lines.
Mr Smyth: Yes.

Q263 Mr Martlew: Mrs Games, on the issue of the northeast—unfortunately my constituency is placed in the northwest but it should be in the northeast—there is an issue on the A69, for example, and over the weekend we had a very serious accident which blocked the road on the Cumbrian/Northumberland border, or near enough. There is a demand for the dualling of the A69. What are your views on that?
Mrs Games: NECTAR would very much view the A69, or the rail equivalent[1], as a key link to the northwest. We have just produced a report, *Within Living Streets*, for information about the links between northwest and Scotland because for the northeast it is very important that we have links to the northwest. We would like to see the northwest links improved.

[1] See ev

Q264 Chairman: Does that mean you want more roads built?
Mrs Games: That is a place where there is an argument for improvement, for more roads possibly.

Q265 Mr Martlew: There is an ongoing issue about whether roads should be dualled or single carriageways, especially bypasses, and I was fortunate to be told at the weekend that there is going to be a new bypass in Carlisle but I think it is going to be single carriageway. Have either of you got views about dual carriageways as opposed to single ones? Is it a big issue or is it just a minor one if you are going to build a road?
Mr Smyth: It depends what the purpose of that road is. Often it may be to bypass communities and in that case CPRE's position is if there is going to be a bypass then it should be to provide for existing traffic rather than to be for predicted increases otherwise it will simply lead to more traffic on that corridor, and although you might have a safety benefit at that place the increase in traffic along the corridor will mean more collisions and more risk overall.
Mrs Games: With bypasses, sometimes dualling might be more effective but at other times it could be that these new roads are cutting swathes across communities and, therefore, we have to be very careful about managing communities and making sure that we are not creating new severances.

Q266 Mr Martlew: I presume it is accepted that new roads tend to be safer than the ones that they sometimes replace or are not there and, in actual fact, we have a very good road safety record in this country. Surely putting a stop to building roads would mean that more people would die, is that not the case?
Mr Smyth: No, I disagree strongly with that. Given there is a certain amount of money to spend on transport, if that money were spent on, say, reopening railway lines, making better walking and cycle routes, that would improve safety, get more traffic off the road and give people travel choices. Spending that money on road building, by contrast, would give people fewer transport choices, it would increase road traffic faster than otherwise and, therefore, there would be serious disbenefits. The actual road itself might be safer for motor traffic but often there would be severance with people trying to walk or cycle and the figures you might be referring to of how many deaths per hundred thousand miles does not actually refer to the risks of people walking and cycling.

Q267 Mr Martlew: But it refers to the number of people, whether they be pedestrians, cyclists, motorcyclists or motorists, who are killed. There is no doubt that new roads tend to be safer. Is that not the case?
Mr Smyth: That is ignoring the fact that people might be scared off walking or cycling in the first place. How can we say roads are safe if you can only feel safe using them in a metal chassis?

Q268 Mr Wilshire: Mr Smyth, why does somebody buy a car?
Mr Smyth: There may be a whole range of reasons?

Q269 Mr Wilshire: Such as?
Mr Smyth: They might want to replace their old one, because of social status reasons, they might have changed their job or moved house and then need a car to get to them, there is a long list of reasons and it is difficult to have a straitjacket or single reason.

Q270 Mr Wilshire: No, but I think it is important to understand exactly why people do buy cars if you are going to decide on a road policy. If somebody decides to replace their old car, why did they buy the old car in the first place?
Mr Smyth: They might have a whole host of reasons. As I said, they might change their job, someone might have passed their driving test and wanted to be able to drive when there were not public transport services or it was not safe to walk or cycle in that area.

Q271 Mr Wilshire: Could I suggest that you are prevaricating. There is one common thread to all the things you are saying, that they buy it to use it, is that right?
Mr Smyth: Yes. A classic car might be an exception.

Q272 Mr Wilshire: Let us not pick over those things. So you buy a car to use it?
Mr Smyth: Yes.

Q273 Mr Wilshire: Having bought your car you pay a very large amount of money in tax. What are you entitled to expect for having paid that tax?
Mr Smyth: You could say the same for anything you buy, you have to pay VAT, or if you are earning money you have to pay tax on that.

Q274 Mr Wilshire: No, we are not talking about VAT, we are talking about road fund licences and fuel duty, specific taxation on the ownership of that car. What are you entitled to expect for the money you just handed over to the Government?
Mr Smyth: I would say nothing in particular.

Q275 Chairman: Nothing in particular?
Mr Smyth: The same as if you pay VAT or income tax you hope that money will be used efficiently by the Treasury in general.

Q276 Mr Wilshire: Your view would probably be that you buy a car for status and you are not entitled to expect anything when you think you might want to use it. Is that your approach to this?
Mr Smyth: No, I would not say that. You want to have a reasonable expectation of safety on the roads, that the traffic law will be enforced so that other people do not get away without paying their taxes and are still able to drive themselves, things like that.

Q277 Mr Wilshire: Why do so many people aspire to having a car rather than using public transport?

Mr Smyth: Because at the moment the public transport network falls short in many areas and also walking and cycling is not an attractive option because of the perception and reality of road danger.

Q278 Mr Wilshire: So in your ideal world public transport will come to my front door and go to exactly where I want to go every time I want to go there. Is that your vision of the future?
Mr Smyth: No, it is not. There is a need for balance in the future. There should be more use of car clubs so that rather than having to have a car you could use the car when you need it but also be able to use public transport when that is a better option, or walk and cycle. Land use as well is key in trying to make it not just easier to get from A to B but also make A nearer to B.

Q279 Mr Wilshire: How can you make A nearer to B? I thought they were fixed points, unless you know some means of moving the world about a bit.
Mr Smyth: For example, post offices, schools, shopping, all these things are affected by government spending decisions, planning policy and the private sector. Over time—not tomorrow—there can be changes in the spatial planning and where things are situated and it can therefore become easier to take public transport or to walk or cycle there. At the moment trip distances are increasing, people are travelling more per trip on average per year, and if that trend was stopped or even turned around then public transport, walking and cycling would be more of an option for more people.

Q280 Mr Wilshire: I thought I heard you arguing earlier that money was short and, therefore, some priorities had to be had and road building would not be one of them. Did I understand you correctly?
Mr Smyth: That is quite correct.

Q281 Mr Wilshire: But now you are arguing that an alternative is to spend a vast amount of money on opening lots more schools and post offices. Where is that money going to come from?
Mr Smyth: There is a balance there, yes. What I think is important is when deciding whether to close down schools, to close down post offices and so on, you take account of the money that people would have to pay to travel further, looking at the whole facts rather than just a few, of the impact on the public purse alone of closing these facilities and services down.

Q282 Chairman: Has any work been done on quantifying what impact could be made on car use by the sorts of policies you are talking about, by changing spatial policies or changing where facilities are? Has anything been done on quantifying what difference this could make?
Mr Smyth: There is not much. One thing that is in our evidence is the Highways Agency and their Post-Opening Project Evaluation which looks at road schemes one year and five years on after they are opened, and in particular the land use implications of opening road schemes, something that CPRE was very interested in. We had a meeting with them earlier this year but, unfortunately, we are still waiting for a large tranche of reports to come out so the jury is still out on this.

Q283 Mr Wilshire: Going back to why people use cars, could I suggest to you that it is a matter of convenience that people choose to do that.
Mr Smyth: Yes, it is convenient, but in some communities there is an issue of social status. People being seen on the bus or on a bicycle feel they are not as high up socially as being in a car, so some people spend disproportionately more on cars than they would otherwise like to. In rural areas certainly people have much fewer transport choices and so they are locked in to having a car.
Mr Wilshire: Let us stick with convenience. You tempt me to say a number of things in your sweeping statement about status but I will give it a miss. As far as convenience is concerned, surely the great problem you have with any form of transport is that the difficulties come when you change mode of transport. Are you in the least surprised why the great majority of people, from my estimation, will always prefer to come out of the front door or the back door and get in the car, which means they do not have to go all the way down the lane to get to the bus stop, and from the bus stop to the station and from the station to the next station and then back on to another bus and perhaps walk the last bit? Is not the problem you have actually got not congestion but the convenience of the car and, however hard any of us try, the love affair with the car will always continue because that is the top of list of priorities for people when they want to move about?

Q284 Chairman: Do you agree with that proposition that whatever is done car use will always be more convenient for the individual?
Mr Smyth: I think that is a fatalist assumption, to use the language of Lord Adonis. It is difficult to generalise. Yes, in rural areas it will be harder to make other options as convenient as the car, but for trips into urban areas, given the amount of congestion there is, public transport, walking and cycle can often do better. Looking at London you can see the increase in cycling and public transport use where there has been investment and joined-up priorities. I think the Oyster Card in particular makes it easy to go from one form of transport to the other and that is what is lacking in other regions.

Q285 Chairman: Mrs Games, do you want to add here? What, if anything, could be done to encourage people not to use their cars on the grounds of convenience?
Mrs Games: There are a number of things that we need to consider about car use, particularly when you are talking about rural communities, for example older people who lose the ability to drive, people who are unable to access public transport because it is not there. If I can use the example of a success story, which is the Darlington Sustainable Travel Town. The Government must have found this a useful mechanism because they are investing more

money in a number of sustainable cities now. If I can quote this: through active travel planning and by encouraging people to consider a modal shift to either walking or cycling or public transport in comparison to using the car, within a three year period they managed to reduce car use by 11%, they showed a 79% increase in cycling trips and a heartening 29% growth in pedestrian trips within that area. The thing about Darlington is that it is slightly cut off from a number of other public transport methods. For example, there is no bus that leaves to go to Stockton or anywhere further after 6.30 at night. Bearing in mind that Darlington has a slightly isolated position, unlike somewhere like Newcastle-upon-Tyne which has more frequent bus trips, Darlington actually managed to succeed in reducing car use.

Q286 Mr Clelland: Does that not bring us back to the argument that CPRE were using before, that if the reduction in traffic volumes as a result of the Darlington experiment mean that it is easier to move about the roads, more people will just come onto the roads so the experiment is self-defeating, is it not?
Mrs Games: The impression I have is that more people are continuing to use public transport. Let us face it, if we have a little bit of capacity at the moment, considering population growth we need some capacity, why should we not reduce now in order to make sure that the capacity is filled without having to over-invest in roads.
Mr Smyth: That is a very good point you make there, that if you free up capacity, whether by building roads or persuading people to get out of their cars, whether by congestion charge like in London or the measures Cynthia has just mentioned, you need to lock in that space otherwise it will fill with traffic again, particularly in urban areas where demand is highest and that means reallocating space to wider pavements, bus lanes, cycle lanes and so on.

Q287 Mr Clelland: How much additional public transport capacity would be required to make a significantly noticeable difference to congestion in the urban areas in particular?
Mrs Games: It is difficult to quantify. However, if you consider a regular service so that people are able to travel after six at night, which in many areas of the northeast they cannot do, and even in Middlesbrough, for example, buses stop after half past six to certain areas within a very small distance, if we could have reliable, and that means not arriving early but arriving on time or a few moments later, public transport across many of the road networks we would see an increase. However, it is impossible to quantify exactly because it is a soft target and that is always very difficult to calculate.

Q288 Mr Clelland: I presume that as you cannot quantify that you will not be able to quantify the cost either. We can only assume if the buses stop after half past six it is because the bus companies are not making any profit and, therefore, if you are going to run buses after that period somebody is going to have to pay for it. Where will that money come from?
Mrs Games: There are other issues to do with the way that is calculated by private companies. Now that people are able to use their bus passes, 11 o'clock is the peak time in the Tyne & Wear area for using the bus, no longer 9 o'clock in the morning. That is because people are able to use the buses but, of course, that does not mean the bus companies are getting more money at 11 o'clock in the morning. We need to find a fairer way of making sure that bus tickets are paid for to make sure that the bus services are reliable and regular.

Q289 Mr Clelland: You say we need to find a way, but all this is going to cost money. If we are going to have the kind of transport system which is going to make a noticeable difference to traffic moving about our roads that is going to take an awful lot of public money, is it not?
Mr Smyth: Can I suggest an alternative, the example of Freiburg in southwest Germany where they have a pretty much perfect transport system and there are far lower levels of subsidy there because the public transport is so good that lots of people have a weekly or monthly card and there is much less public subsidy needed for a much, much better public transport system. Hopefully the Local Transport Act 2008 will allow partnership arrangements to make that more of a reality in this country.

Q290 Chairman: Are you optimistic that will be achieved?
Mr Smyth: It is difficult because public money is being cut just at the time when new measures could be trialled, and that is very worrying, that the Act will not be given the time or the money to flourish.

Q291 Chairman: What criteria should be used for allocating transport funding?
Mr Smyth: It is difficult because if you are trying out new pilots you are going to have to put some money in that does not necessarily produce good results just so that you can innovate. Carbon reduction is obviously a key goal and so is equality of opportunity and economic benefits, but there will be a tension between them.

Q292 Mr Clelland: Can we just move on to freight. I presume that you, like most people, would like to see more freight moved off the roads and onto rail, but I come back to the point how much freight could realistically be moved off the road onto rail given the capacity of the railway system to take it? What real difference would that make to the overall movement of traffic around our roads?
Mr Smyth: It is difficult because there are so many different freight paths across the country. Certainly if we had more wagon loads rather than just long trains and more sidings, and also more smaller rail lines rather than just focusing on the main East Coast and West Coast, there would be great potential. Also, trying to reduce the distance that food travels, for example—CPRE is very keen on local food—is part of the solution rather than just having more freight travelling more miles every year.

Q293 Mr Wilshire: I do not know about you but I am horribly familiar with the A303. You both say that the road network is adequate. Does that apply to the A303?
Mr Smyth: We say it is a question of the use of the road network rather than the road network itself. The adequacy relates to how it is used rather than what is there.

Q294 Mr Wilshire: Whenever I use it, it is used for driving on, what else would you use it for?
Mr Smyth: What I mean is the way everyone is travelling, one person one car, and that makes inefficient use of the limited road space that is there.

Q295 Chairman: Does that mean you would look at active traffic management and use of vehicles?
Mr Smyth: It would be difficult on the A303, particularly the sections that are single carriageway, but as a general principle, yes.

Q296 Mr Wilshire: So you make people fill up their cars rather than have single journeys and when you get to Cornwall you get everybody out of the car and they are car-less apart from the one person who owns the car. Is that your solution to traffic management?
Mr Smyth: It might be a bit more complicated than that.

Q297 Mr Wilshire: I thought it might be.
Mr Smyth: The lift share service helps people match up trips and is a good example of how this can work and, indeed, is a very fast growing service.

Q298 Chairman: More generally, do you think active traffic management is a way of dealing with congestion?
Mr Smyth: As long as the extra capacity is used well. By that I mean high occupancy lanes, so prioritising freight movements where lorries are full rather than three-quarters empty, and also cars have more than one person in and coaches, buses and so on.

Q299 Chairman: How far do you think the Planning Act 2008 will affect the issues you are concerned about?
Mr Smyth: It is a very good question and we will find out more in the autumn when the National Policy Statement on National Networks is published. We would be very keen for that to make clear that any new capacity on the road network will be prioritised to space efficient and carbon efficient transport.
Chairman: Thank you very much for coming and answering our questions. Thank you.

Witnesses: **Chris Mole MP**, Parliamentary Under-Secretary of State, and **Mr Martin Jones**, Head of Strategic Roads Division, Department for Transport, gave evidence.

Q300 Chairman: Good afternoon. Could you identify yourselves for our record, please?
Chris Mole: Chris Mole, Member of Parliament, Parliamentary Under-Secretary of State, Department for Transport.
Mr Jones: Martin Jones, Head of Strategic Roads Division, Department for Transport.

Q301 Chairman: Thank you for coming to the Select Committee and welcome to both of you. The Prime Minister last week said that the spending profile of capital projects would change as a consequence of the current recession. What impact is that going to have on transport?
Chris Mole: I think we will be waiting for a Comprehensive Spending Review in order to assess any impact between the departments. In the first instance we have our long-term spending profile and we are working within that. What we would be confident of is that our business cases for a lot of our transport projects are offering good value for money and, therefore, we hope we would be able to make a good case for them to continue in the future.

Q302 Chairman: What is that future likely to be?
Chris Mole: I think it would be to speculate to try and work out where those reductions would come if they would come between one department or another, let alone the Transport Department.

Q303 Chairman: So you cannot give us any assurances on what projects will be protected and where cuts might occur?
Chris Mole: I would make the point again that we believe particularly many of the road schemes offer good value for money, good benefit cost ratios and, therefore, we think we have got a strong case for them going forward.

Q304 Chairman: We have heard a variety of evidence on the major road network. Do you think in general the major road network needs to be expanded or is satisfactory?
Chris Mole: If you refer back to Sir Rod Eddington's report, his assertion was that the network that we have got is essentially the right one, some 7,000 km of strategic road network split between motorways and A roads, other trunk roads, some of which are directly in the responsibility of the Highways Agency and some of which fall to the responsibility of local authorities. We think that balance is about right.

Q305 Chairman: What about de-trunking, do you think any of that should be reversed?
Chris Mole: De-trunking finished in March this year, having started at the turn of the Millennium. Some 3,000 km of road have been de-trunked and the resources have been switched to the local authorities to enable them to support those through maintenance and to develop them as appropriate. We are happy that has got the balance right in that

those roads which have been de-trunked are ones which essentially are of regional and local importance in terms of the traffic that is on them.

Q306 Chairman: But are you satisfied with the way they are now being maintained or do you think there is a case for reversing the proposal?
Chris Mole: We allocated the resources to local authorities to maintain them in line with what we had anticipated.

Q307 Chairman: Is it being done though? Are you happy with the consequences?
Chris Mole: Government has had wider objectives, as all of us with a background in local government will recognise, not to continue significant ring-fencing, so it is for the local authorities to determine what their investment should be.

Q308 Chairman: Nevertheless, are you satisfied with the results?
Chris Mole: I do not think I have seen any evidence that there is a particular problem with them, but perhaps Martin might be able to give you some more detail.
Mr Jones: The Department has been monitoring the condition of the local authority road network. Over past years there has been a declining level of condition of the road network but that appears now to have been reversed. We have also given a significant amount of money to local authorities to help them to monitor that because obviously being able to measure the problem is the first step towards being able to do something about it.

Q309 Mr Wilshire: Going back to the Chairman's first point about the current financial crisis, I do not want to go down the generality of that but since there is difficulty there, and it is reducing spending power, have you been able to see any impact on traffic levels at all?
Chris Mole: I think we have seen a 2% or 3% reduction in traffic volumes as a result of the economic climate that we are working our way through at the minute.

Q310 Mr Wilshire: Is that spread across all types of vehicle or is it focused on particular sorts?
Chris Mole: I think if you look at the longer term trends where we have seen the volumes of cars on the road begin to become decoupled from economic growth, the area we have seen continue rising is the small and light van traffic which has grown very strongly, even at a time when car numbers have begun to tail off a little. In terms of the current downturn, Martin, I am not sure if I have seen any figures splitting that downturn.
Mr Jones: The provisional figures, and they are only provisional at this stage, do indicate that there is a much greater fall in heavy goods vehicle traffic, I think the figure is something like 10% or 12% as opposed to a rather lower average figure.

Q311 Mr Wilshire: How soon will you have some definite figures?
Mr Jones: I believe the provisional figures are due to be confirmed later this year, but that is from memory.

Q312 Mr Wilshire: The only reason I ask is if it was going to be ahead of us finishing our report it would be useful to have them, but if they are not ready, they are not ready. If they are and you could send them, it would be helpful.
Chris Mole: I think it is one of those things where we have a regular publication date and it will be when it is, I am afraid.

Q313 Mr Wilshire: Have you looked in your crystal ball at all to see how long you think the downturn effect on road traffic will last?
Chris Mole: That is the sort of question we would all like an answer to in general about the length and depth of the downturn. What we would be more confident about would be when we do start to come out of that downturn we would anticipate that traffic volumes would continue to grow, perhaps more sharply at first and then back in line with the longer term trend with GDP which we have seen over decades. I only make that assertion because I think we have some evidence from previous recessions that you get a downturn in traffic volumes which then picks up very quickly before returning to the general trend.

Q314 Mr Wilshire: What are your current estimates of traffic growth over, say, the next ten to 15 years?
Chris Mole: I think we are anticipating that by 2025, which is a bit further away than you are suggesting, we are looking at something like a 32% growth in traffic volumes.

Q315 Mr Wilshire: Again, is that the same sort of figure you are looking at for all types of road vehicle or are you anticipating it varying between the types of vehicle?
Chris Mole: As I was just saying, we have seen a relative slowing in the growth in car traffic compared with other vehicular modes and that is something that we hope would continue at a slightly slower pace than everything else.

Q316 Mr Wilshire: But you are expecting the increase in white van man to continue?
Chris Mole: It has been a very marked trend and I cannot suggest we see any evidence that it will do otherwise at this stage and that is what we are assuming in the forward modelling.
Mr Jones: From memory, I do not think the forward modelling makes too much of a distinction between different vehicle types, it just gives overall traffic levels. It is quite difficult to predict some of these variations within the overall vehicle fleet. On some internal consideration in the Department we suspect that part of what might be driving the increase in use of vans, apart from the fairly obvious things like growth in Internet shopping and the like, might be some other factors, such as changes to the company car tax regime which might be driving people towards vans for personal transport. This is

speculation largely and the truth is we do not fully understand what is happening with vans and, therefore, it is quite difficult to project it forward.

Q317 Mr Wilshire: In making your estimates you must have had some idea of what the cause of the growth is. What do you see overall as the cause of this increase?
Chris Mole: I think it is the same that we have experienced for probably four or five decades now in terms of a strong relationship between economic growth which we anticipate we will have in the future and traffic volumes. That has been pretty consistent over a long period of time. One of our objectives is to try and decouple some of that, but the extent to which we would be able to entirely hold traffic volumes at today's levels is unlikely by any other sorts of measures that can be put in place.

Q318 Mr Wilshire: We have been told by some people that the current major road network is adequate to handle the present and the future. Do you consider the current road network adequate to handle the increase that you are predicting?
Chris Mole: I think we can be quite confident about the majority of the network but would anticipate there would be pinch points within the network where we would need to undertake some investment in order to ensure that we would not see delays and congestion at those points that were going to be unacceptable to road users in the future.

Q319 Mr Wilshire: Can I take that as being, "No, it is not adequate, not in a major way"? I am not trying to trip you up on it. You are accepting that as it is at the moment it will have to be improved or increased or altered.
Chris Mole: We would be saying that doing nothing would not be an acceptable position.

Q320 Mr Clelland: Do you think the funding for the major road network is sufficient and is it distributed evenly across the country?
Chris Mole: We have got some reasonable evidence that the investment across the country is a fair reflection of where the population is, although what we primarily do is seek to respond to the hotspots that I was referring to just now in my answer to Mr Wilshire.

Q321 Mr Clelland: We had a recent debate in Westminster Hall, which albeit was about regional rail systems, and statistics were produced there to show that transport funding in the south of England is many, many times more per head than it is in the north of England. Is that fair?
Chris Mole: I am aware that some figures were produced during that debate, but if you were to look at the current six year period the national roads which could be broadly considered to be in the north are getting some £2.47 billion of investment compared to the national roads in the south which are getting some £3.95 billion of investment. Given some weighting for population, I do not think that looks too out of kilter.

Q322 Mr Clelland: Do you think the regional transport allocation system is really adequate and an appropriate mechanism to meet the priorities of the regions that it serves?
Chris Mole: Looking at what is going into regional funding allocation over the next period of some £10.6 billion we think that the RFA mechanism is the most robust way of informing ministers in the Department of the priorities that exist within a region, whether that is between roads, rail or public transport schemes. At the end of the day we feel that the people in the region have a better view of what those priorities should be than we can, so we are happy to take their advice on those.

Q323 Mr Clelland: As you might be aware, the system can lead ministers to an incorrect conclusion. Let us take the northeast, for example, where one of the big priorities that everybody agrees on in the northeast is the dualling of the A1 from Newcastle to Scotland. That is a road that is within the regional transport allocation funding regime. If the local authorities were to decide that was their number one priority, as indeed it probably is, that would take up the whole of their allocation and they would have no money left to spend on anything else, therefore they do not make that their number one priority, they have to be able to distribute money across the region so ministers, therefore, get the impression that is not a priority because they have not said it is. It is only because of the inadequacy of the funds, so you are not getting the true view by looking at it in that way.
Chris Mole: It is true that we have been told their regional priority is investment in the Tyne & Wear Metro where some £230 million is going in the next funding period. We understand that is the regional priority and we are happy, therefore, to support that. I would not have thought there would be anything to have stopped the regional partners from parcelling up schemes on the A1 if they wanted to put something forward that might fit in with the resource that was available to them.

Q324 Mr Clelland: I accept that, but all I am pointing out is they have to decide their priorities not on what they think is more important but what is affordable and, therefore, what you are getting is not a view of their priorities so much as what they can afford.
Chris Mole: I can only take your assertion on that, Mr Clelland. We can only go with the guidance and advice that the regional partners give us.

Q325 Mr Clelland: Does the recession mean there are going to be cuts in the transport budget?
Chris Mole: I do not think the recession as such means that. To an extent this is the same as the question we have already had about forward public expenditure which will be a matter for a Comprehensive Spending Review at some stage.

Q326 Chairman: Does that mean that at the moment you just do not know what the cuts might be?

Chris Mole: At the moment we have to work with the figures that we have available to us which are in forward published Treasury publications.

Q327 Chairman: Have there been any discussions about possible cuts?
Chris Mole: Between the Department and the Treasury?

Q328 Chairman: Yes, or within the Department.
Chris Mole: Not significantly. We all know there are going to be challenging times ahead.

Q329 Chairman: Have you discussed what those challenges might be?
Chris Mole: We know what the Pre-Budget Report has done in terms of shaping the forward spend and we know where that looks in comparison with our previous long-term expectations and we know we will have to begin to manage within the new envelope.

Q330 Chairman: What is the difference between the two?
Chris Mole: I cannot give you a cash figure on that over a number of years, but clearly there is a difference.

Q331 Chairman: A significant one?
Chris Mole: I think it will be challenging but manageable.

Q332 Mr Clelland: The tightening of the purse strings would then put you in the same position as the regional transport authorities in having to allocate your priorities on the basis of what funding you have. In those circumstances, would road spending be curbed in order to protect funding for high profile projects such as Crossrail, the Olympic transport corridors and High Speed 2?
Chris Mole: Those are judgments that we are nowhere near making yet. Ministers will make those judgments on a mixture of what information we have about the business case for different projects and other views that might help us in that prioritisation.

Q333 Mr Hollobone: Good afternoon, Minister. Congratulations on your appointment. I can confidently predict that for the rest of your ministerial career I shall use every opportunity to ask you about the A14, which is a Highways Agency road that bisects the Kettering constituency. In talking about the A14 it raises lots of issues about the wider major road network. If I could, Minister, take you on a journey to the middle of England, to Kettering. The A14 in terms of traffic growth has been a hugely successful road. The bit that goes around Kettering was originally called the A1/M1 link because Kettering sits in the middle of the gap between the A1 and the M1 and the A14 now links those two roads. Around Kettering there are 70,000 vehicles a day which use the A14, which is at or beyond its design capacity. I am sure Mr Jones is very familiar with all these issues. Another Government Department, DCLG, has plans in place to see the number of houses in Kettering increase by a third by 2021 and that is putting huge pressure on the A14. Does the Department for Transport have a figure for the number of vehicles or car journeys that are generated by each extra house that is constructed?
Chris Mole: Not a single figure.

Q334 Mr Hollobone: Do you have a range of figures?
Mr Jones: Not as far as I am aware, although it is possible that those who do the detailed planning do have formulae to deal with this. As far as I am aware, the way this is done is you look at the development in question, the new homes that are being built, how those might link with businesses, and attempt to model the additional traffic that might come from those. You would need to look at any conditions that surround that development in terms of limitations on parking spaces and that sort of thing. It would be done on a place-by-place basis. It may be that there is some formulaic basis of which I am unaware, in which case I will try and find that out and let you know.

Q335 Mr Hollobone: If there is a formulaic basis, is it the Department for Transport's formula or is it a formula used by other government departments? Are you providing that information to the other government departments?
Chris Mole: I think we provide some guidance to local government, perhaps through CLG or directly, which would give them advice on handling new development and the impact that it might have on the nearby network. One of the reasons it is so difficult to answer your question about number of journeys generated would be that we would anticipate engaging in a process with developers which would seek to discourage individual car trips by a number of methods, either promoting public transport or the design and layout of the development, all of which could help with that.

Q336 Mr Hollobone: Around Kettering the Highways Agency recently announced that it would widen the A14 between junctions 7 and 9, which has been very much welcomed by local people and I am sure by those who use the A14. The problem is that the big bulk of housing development in Kettering is likely to be to the east of the town which is actually around junction 10. The road widening does not extend as far as junction 10. Can I ask you, Minister, why is that? Can I stress to you the fact that if the road is not widened to at least junction 10 then the bottleneck you are seeking to relieve simply will not be relieved.
Chris Mole: I am aware that the junction 7-9 development and some associated works are very much aimed at assisting with the growth of the town of Kettering. I am not aware of why the stretch on to junction 10 that you raised at oral questions recently as well is not currently identified as a scheme, I would have to go back to the Department and write to you about that.

Q337 Mr Hollobone: May I give you an educated guess. That is because between junctions nine and ten flows the River Ise across which is a major bridge. I suggest that if the road were to be widened between those two junctions the cost of the necessary bridge works would be expensive, which I suspect is the reason that it is not in the Government's programme. The reason I am pressing you on this is because we are looking at the major road network against the background of an at least one-third increase in traffic by 2025 but there will be areas of the country, and Kettering is one of those, where traffic growth is likely to be way in excess of one-third because of all of the housing growth being encouraged by another government department. Following on from that theme, can I urge you, Minister, to look at the controversy around the plans for a proposed new junction, junction 10A, which is designed to support the development around Kettering, plans for which are badly needed but which have not come forward. I was wondering, Mr Jones, if you were aware of where they might be in the pipeline?
Chris Mole: I do not think we have that sort of level detail to hand today, Mr Hollobone, but we will commit to looking at it for you and letting you know.
Chairman: Perhaps you could let us know

Q338 Mr Hollobone: The other point I wanted to pursue about the link with planning is what I believe are called section 14 directions whereby if the Highways Agency is concerned that housing development might lead to too great an increase in traffic, the Highways Agency can basically stop that development from taking place. I wondered if you would be kind enough to advise us what triggers that mechanism and whether residents are able to ask the Highways Agency to get involved at that level.
Chris Mole: The Highways Agency is a consultee in terms of the proposals that come forward for new development, and particularly at a strategic level we would anticipate that the regional planning process would clear with the Highways Agency any concerns that it might have at an early stage about the impact on the network. The intention would be to respond to those through the regional transport proposals in order to meet any impact beyond the capacity of the pre-existing infrastructure. I do not know whether there is anything much we can add to that.
Mr Jones: There is probably not much more to say except I think that the Chief Executive of the Highways Agency touched on this sort of issue when he was here, stressing that the starting position is they wished to be co-operative rather than confrontational, so I do not think the approach of the Agency is to use their powers to stop things; it is rather to let us discuss it and come up with a sensible solution.

Q339 Chairman: Should the Highways Agency be expanded?
Chris Mole: I would be interested to understand in what way you felt that it should be further expanded given that if you look at its capacity in terms of employees it has grown significantly with the introduction of the Traffic Officer Service over recent years, which has become a key component of the Highways Agency's role, having moved from essentially just being a provider to an Agency that also manages the strategic road network on behalf of the Department

Q340 Chairman: Who is responsible for the strategic development and oversight of the major road network?
Chris Mole: I would describe that as a joint responsibility between the Agency and the Department. We would anticipate that the Agency would have the expertise to know what can be done and where it can be done, but the Department would take the responsibility for looking at the national infrastructure as a whole and ensuring that where there were areas that needed reinforcing we were ensuring that that could happen.

Q341 Chairman: And are you satisfied with that allocation of responsibilities?
Chris Mole: Yes. We have just republished the Framework Document which sets out that more clearly. In fact, in the past the Framework Document really only set out what the Highways Agency's responsibilities were and in the new one we have set out what the Department's responsibilities are alongside that, so I think that there is more clarity than there has ever been in that relationship which I would assert should remain a joint responsibility.

Q342 Chairman: How much does congestion cost?
Chris Mole: I would argue that that is not a question to which there is a direct answer. What we can talk about more meaningfully is what we anticipate the increase in cost would be from failing to address congestion over a forward period.

Q343 Chairman: You must have a figure on the cost of congestion.
Chris Mole: We would refer you to the 22 billion figure which splits 50/50 between the cost to business and the cost to individuals of lost time anticipated from congestion that would grow as a result of the projected forward traffic volumes that I gave the answer earlier on of about 32% by 2025 and the costs associated with that similar period.

Q344 Chairman: Is that a reliable figure?
Chris Mole: We think it is the best figure that anyone can give you at the minute based on the modelling and analysis and input from economists using known labour costs from lost time and related information.

Q345 Chairman: Is that a figure that your Department works with?
Chris Mole: It is certainly the same approach overall that we would use in the economic appraisal of individual schemes so, yes, it is a consistent approach across the piece.

Q346 Chairman: Do you regard congestion as a major problem or the major problem? How would you rank it?
Chris Mole: We think that it is one of the key challenges over the coming period and it is a view that we think is shared by the general public, who will refer to congestion in surveys as a concern that they have along with the concern about the reliability of journey times, which is another thing they put very highly. We know that congestion is the primary cause of significant delays, as I say, at a number of pinch points in the strategic road network.

Q347 Chairman: The RAC say that investment in roads produces a better return than investment in any of other mode of transport. Do you accept that?
Chris Mole: You can get very good value transport schemes across all modes. Certainly road schemes can have good benefit/cost ratios but so can some public transport schemes and so can some interventions to encourage people to switch modes of transport.

Q348 Chairman: Have you looked specifically at the RAC calculations and what is your view on that specifically?
Chris Mole: We are still looking at them because we want to have analysed them very carefully before we respond to them.

Q349 Chairman: And you have set up a body, Infrastructure UK, to look at priorities for investment. How is that going to operate?
Mr Jones: As I understand it, the First Secretary's proposal is for a body which will look across all sorts of infrastructure—telecommunications as well as transport, water, whatever—and be lobbying and making the case for investment in infrastructure as it has a role in supporting the economy, and I think that is a positive and welcome thing. Whether it will fundamentally change our relationships I am not so sure.

Q350 Chairman: Who will give that body its remit and what will its criteria be?
Chris Mole: I am not terribly clear in my own mind about that one.

Q351 Chairman: Mr Jones, can you tell us what remit will that body have?
Mr Jones: I am not clear at the moment. I think we are at a relatively early stage in government in establishing how that organisation will operate and what its remit will be, but we will research it a bit further perhaps and come back to you.

Q352 Mr Wilshire: Could I pursue the planning issues that arise out of this. The Planning Act of 2008 sought to bring together more than just land use planning in deciding what one does about the growth of population of ten million and 200,000 extra houses in the South East. You have referred to your local government experience and I have got the t-shirt for that as well, and I think my memory of it is that as a consultee one was at a distance if one was the highway authority or the Department for Transport and, generally speaking, directions to refuse were seen as utterly negative rather than anything better. Will the Planning Act enable the highways authorities and yourselves—and I know there is a conflict between those two—to play a more positive, proactive role in the process of land use planning?
Chris Mole: Do you mean the Highways Agency or do you mean local authority highways authorities?

Q353 Mr Wilshire: Both?
Chris Mole: I am not sure that the Planning Act 2008 does specifically find a role for ourselves or local government in those discussions. Across the piece the Planning Act seeks to ensure that where developments come forward they are done within the framework of national policy statements. We anticipate that will be producing ours for the strategic road network for national networks in the autumn and then the Infrastructure Planning Commission will do the detailed work on individual transport schemes within that context.

Q354 Mr Wilshire: But the Planning Act introduces community infrastructure levies on developers. Will you be able to use some of that for spending on roads?
Chris Mole: I think the idea of the CIL was that it would enable some resource to be made available for infrastructure schemes that were of a regional priority rather than a local priority, so to differentiate it from the section 106 resource which could be acquired from developers to address very local impacts of an individual development. I think part of the idea of the CIL was to recognise that the aggregation of schemes could have a wider impact on regional infrastructure such as transport and therefore that was part of the purpose of that. Whether that will come significantly into play until after the recession I think we will all have to wait and see.

Q355 Mr Wilshire: In terms of the planning issues, the Planning Act and everything else, in your written evidence to us you said something that sounds very grand but I have great difficulty in actually working out what it really meant. You say: "The Department's response to housing growth includes an element of capacity increases"—and I am pleased to see that is spending money on building roads—"supported by high levels of sustainable transport, smarter choice initiatives, good quality land use planning and ambitious application of demand management techniques." It sounds good but what does it mean to me the layman that I will see you doing?
Chris Mole: Looking across the generality of transport, and here your point about local highways authorities and local authorities in general comes into play, I think good master planning of a development allows you to ensure that as the development proceeds the opportunities for people to travel in ways which have less impact in terms of

vehicle growth/traffic growth both on the local roads and the strategic network come into play. I would give you an example from my own local area where developer contributions were used to pay for a bus service from day one of a development essentially rather than, as a bus company would normally do, wait until there were sufficient houses in the development to justify the passenger numbers. This was essentially paying to get the bus there so that people would get into the habit of it, otherwise if you start building a new housing development and there is no bus service people will get into the habit of using the car. That is a one positive mechanism that you might use. Others would include the design and layout of the development to perhaps promote bus priority measures within a development from an early stage.

Q356 Mr Clelland: How much of the 2050 target for an 80% reduction in carbon emissions is going to come from road transport?
Chris Mole: We know currently that something like 20% of $C0_2$ emissions come from transport and half of that is car journeys.

Q357 Mr Clelland: Will we see an 80% reduction in emissions from road transport by 2050? Do you think that is achievable?
Chris Mole: That is what the Government's carbon budgeting targets are all about and we have our obligations to make our contributions within that across the gamut of transport. Just last week we published *Low Carbon Transport; a Greener Future* which anticipates as a first step a 14% reduction by 2020 in carbon emissions.

Q358 Chairman: How much was that?
Chris Mole: 14%.

Q359 Chairman: A 14% reduction from transport?
Chris Mole: From transport, yes, across all modes.

Q360 Mr Clelland: That is 14% of the current emissions from transport?
Chris Mole: Yes, from the 2008 figures.

Q361 Mr Clelland: And going back to road transport in particular, how is the reduction going to be achieved? Is it going to come through better technology? You will have heard of the welcome announcement today in Sunderland that Nissan is going to produce batteries for electric cars and the recent announcement by Toyota in Derby to produce hybrid cars. Is this how we are going to reduce emissions from road transport or is it going to be done through reducing traffic movements and travel patterns?
Chris Mole: I think we see some significant gains to be made from the switch to clean technology vehicles and, as you say, there have been a number of announcements this week and over the last few weeks from Nissan, from Toyota, and I think from Honda as well, about their intentions with regards to clean technology and the Government is also putting £250 million into the promotion of clean technology vehicles to try and ensure that Britain can become a leading nation in terms of these technologies and hopefully an exporter of the best vehicle technology in the world.

Q362 Chairman: Is technology going to be the main area that you are counting on to reduce emissions?
Chris Mole: I think at this stage that is where our priorities should be focused because we think that is where the most gain is to be made.

Q363 Chairman: We have had evidence previously that advance traffic management technology is tried and tested but there is no political will to use it.
Chris Mole: Sorry, which technology was that?

Q364 Chairman: The advance traffic management technology is there but there is no political will to use it.
Chris Mole: There are a number of different technologies. I think we might regard active traffic management as something we do as part of, for example, managing motorways and controlling vehicle speeds. Is that the sort of thing you have in mind rather than some of more complex, co-operative road vehicle technologies?

Q365 Chairman: We had specific evidence on advance traffic management technology where we were told that the technology existed to manage the traffic much more effectively but that there was not the political will to use that.
Chris Mole: I think we are doing some of that already. If you look at the managed motorways programme, of which hard shoulder running is but one part, a lot of that is about ensuring that we keep traffic moving smoothly, because one of the things we know is that if vehicles bunch you get a more disturbed flow in the highway which actually leads to an overall reduction in average speeds. There are a number of things we can do such as where we have variable message signing putting up speeds that we expect people then to follow that allows the traffic to smooth out to a higher average speed. There are other things we can do. For example, Mr Hollobone will be aware of some of our ramp metering proposals around junctions onto the A14, and there are another 200 or 300 schemes I think around the country, where we can control the flow of traffic on to particularly busy routes in a way that we can then demonstrate increases the average speed of the traffic on the trunk road.

Q366 Chairman: But you have put a lot of faith in technology as a means of reducing emissions in a significant way. Are you satisfied that there is enough connection with the motor industry to make sure that is a reality?
Chris Mole: In terms of what can be done to promote better driving in-vehicle information systems are an area for development where the driver can get feedback about the efficiency of the driver. We actually have a programme coming up for lorry drivers which is called Safe and Fuel Efficient Driving (SAFED), which is aimed at identifying the

skills for people to drive in a way that is both safer and, as the name implies, makes better use of fuel. That is something that I would envisage we might come to in the future with motorists in private cars and, as I say, possibly facilitated by some requirement for new vehicles to have information that gives drivers feedback about how efficiently they are driving. A number of the hybrids that are coming on the market at the minute have those sorts of systems built into them and do appear to be impacting on driver behaviour. I say that from personal experience rather than anything else.

Q367 Chairman: If I can go back to the production of greener vehicles, are you satisfied that there is enough connection between the Department of Transport and manufacturers to make sure that greater knowledge is actually used in more efficient vehicles that are greener? Is that going to happen? We had an announcement last week from the Prime Minister about certain measures but is that going to happen?
Chris Mole: Martin, can you put more flesh on the bones?
Mr Jones: Alongside that you have got the EU Directive on CO_2 emissions from new cars, which effectively has imposed an obligation on each vehicle manufacturer to ensure that their new car fleet over the years becomes cleaner so, if you like, that is an EU-wide imposition on them just to go away and get on with it and make sure that they drive the technology otherwise they will not be allowed to sell their less fuel efficient vehicles. That is separate from the initiatives that the Government has been pursuing on electric cars.

Q368 Mr Hollobone: Major roads are physically designed and built to allow cars and other vehicles as well to travel up to 60 miles on hour in some cases and 70 miles an hour in other cases yet very many miles of the major road network have speed restrictions on them. Is that not a factual indication of the degree of congestion we have got on our road network because if it was working properly presumably we would not need those additional speed restrictions to be imposed? My question to you both is: what proportion of the major road network has additional speed restrictions upon it?
Chris Mole: Gosh, I would suspect that is a bit of a moveable feast because it will be dependent on any one day on what is going on in the network and whether there have been accidents.
Mr Jones: Just speaking about the motorway network, the only parts of the motorway network where there are variable mandatory speed limits are the M42 active traffic management trial around Birmingham and the south west quadrant of the M25 around Heathrow, although it is anticipated that for any new enhancement scheme variable mandatory speed limits will be introduced as standard so that we can control and manage the motorway. Otherwise any other speed control on other parts of the motorway will simply be the advisory signs which you see in the middle of the road quite often which do not have any legal force.

Q369 Mr Hollobone: You mentioned, Minister, about ramp metering and I actually wrote that down as a question so I am pleased that you have raised that. People in Kettering, Rothwell and Burton Latimer in my constituency are very worried that when this ramp metering is introduced effectively local traffic will back up into the town because its access will be blocked on to the A14 causing unnecessary congestion in the town itself. What would your response to that be?
Chris Mole: It is not the intention of ramp metering to have a significant impact on the local road network. As I understand it, the ramp metering system has a trigger at the top of the ramp and if the queue reaches that point then the traffic is released on to the trunk road.

Q370 Mr Hollobone: We spoke earlier on about section 14 directions. Do you have a figure for how many of those have been issued by the Highways Agency because that would be a factual indication of the degree to which the local authority planning process is not dovetailing with the transport process?
Chris Mole: Not offhand, sorry.

Q371 Mr Hollobone: The organisation J5.SLIPS has contacted us to make clear its concern that the Department is not indicating they want to go ahead with improvements to junction five of the M25 in a development of the major road network. I wondered, Minister or Mr Jones, if you could explain why you have decided not to go ahead with the improvement of that junction?
Mr Jones: This is the junction around Sevenoaks on the M25 where I believe the request is that there should be slip roads to take you east onto the M26. The only answer I can give is that it was not considered a priority when the priority schemes up to 2015 was being put into place. It will have to be considered again when priorities are next considered.

Q372 Mr Hollobone: Would you be able to provide us with more details about why you do not consider it a priority?
Mr Jones: We can provide that.

Q373 Mr Hollobone: My last question is about roadside litter which seems to be a growing problem on the major road network. Some local authorities do play an active role in trying to address that problem. I know in my own constituency Kettering Borough Council, of which I am a member, makes regular efforts to try and clear the roadside verges and the amount of rubbish that is collected is absolutely huge. Other authorities do not seem to bother very much and I am not sure what the Highways Agency's role is in clearing up litter itself. I wonder if either or both of you would be able to explain what the policy is on roadside litter and whether you regard it as an important issue and what is going to be done to tackle it?
Mr Jones: As I understand it, it is the Highways Agency's policy to sweep the sides of the roads on a regular basis. I cannot tell you exactly what that is.

I am sure Mr Dalton would have been able to fill you in in more detail. I am hoping that the Highways Agency might shortly be raising its profile on this issue.

Q374 Chairman: How much freight can be moved from road to rail and what is the Department doing to facilitate that?
Chris Mole: We have been spending considerable capital investment to assist in switching freight from road to rail. I think at the moment about 8% of freight by weight and distance travelled goes on the rail, so it is a relatively small component of freight overall but, as I was saying, I think it is over £700 million that we have been spending on infrastructure investment to enable that freight to be switched where it can be. At the same time I think we are spending something like £20 million annually on support for freight that travels by rail. Actually freight on rail is a success story. We have seen something like a 59% growth in freight on rail over the last ten years or so, admittedly with quite a sharp downturn over the recent year or so with the economic downturn, so there are some concerns at the moment from the rail freight industry, but it is a success story overall and one that we hope can return to being a success story going forwards. However, to answer your question, Chairman, I think there are challenges in the rail network in terms of finding the capacity. There is congestion and other problems that we would face in terms of vastly increasing the amount of freight that we can get on to rail in the short term, although that is our objective overall.

Q375 Chairman: What could be done? We have had evidence that the cost of changing over to freight is prohibitively expensive and there were other issues of transfer and inter-modal depots and interchanges and all those things. Have you any specific plans to make that change easier?
Chris Mole: I think the immediate challenge for us is around ensuring that we have a strategic freight network, and we have set out our vision for that. It focuses largely on issues such as ensuring that we have gauge clearance for the sorts of containers that are coming into UK ports to ensure that they can get under the bridges and through the tunnels that might be on the routes that they would need to traverse. We know broadly where those are and the important objectives are for us to get freight from Felixstowe to the East Coast Main Line and from Southampton to the West Coast Main Line, if I remember rightly, and gauge clearance on those routes are schemes that we are investing in, the European Union is investing in, and a number of regional partners are making the case for very strongly.

Q376 Chairman: And in terms of passengers, how many more passengers could the public transport system take in an effort to move people from cars into public transport? What is the capacity?
Chris Mole: How many more passengers could the rail system take?

Q377 Chairman: The public transport system. If we are serious about changing people's mode of transport, how realistic is it to move people from cars on public transport?
Chris Mole: I think I would have to try to separate public transport into rail and perhaps local public transport. With rail, again, we have had very significant growth in passenger numbers, again over 50% over the last ten years. It has been a real success story from that point of view, but it is the sort of success that brings with it again the problems of overcrowding on some railway routes, which is why a lot of our investment on rail is going into addressing that, whether that be by trying to add coaches through the high-level output specification for the railways, which seeks to address those capacity issues, to longer stations in some parts of the network so that those longer trains could actually stop and carry the volumes that we anticipate in some of the more crowded parts of the rail network. In terms of local public transport, I think the answer would be 'how long is a piece of string?' We would positively want to encourage people to mode-switch and use good, high-quality public transport. We have had the Transport Acts that have introduced the notion of quality partnerships which are all about increasing the availability of local bus services in order to give people those choices. We can do it more through things like giving people access to the information that they need to make those decisions. When we talk about smarter choices that is not just an empty phrase. It really is about getting away from the pro-car and anti-car arguments of the 1980s and 1990s, which were non-productive, and actually getting people to accept that if they make just one journey to work less in a working week of five day by car then we can take 20% out of journey numbers pretty quickly.

Q378 Chairman: And is the capacity there to enable them to do that?
Chris Mole: What I was going to say is I think that capacity will respond to the demand. The more people that make that choice the more the bus companies will find that services are viable and continue to provide them. I was going to go on to say that it is not just about public transport. Some of those journeys could be made on foot, some of those journeys could be made by cycling, and maybe people will work from home for one or more days a week, so these are all factors which hopefully can help with demand management going forwards.
Chairman: Thank you very much.

Written evidence

Memorandum from Steve Saunders (MRN 01)

Introduction

I was prompted to write this proposal by an article in Autocar, 3 December 2008, titled "Have motorways hit a dead end?". I have long held the view that long distance motorway travel is both unnecessary and very tiring and looking to the future, I do not believe that the current proposal to simply tax road users via road tolls, is the most effective solution, from any viewpoint.

Executive Summary

Congestion on UK roads is already at an uneconomical level and is expected to worsen significantly in the future. Therefore there is a need to either reduce car usage, via taxation, road tolling or other measures, or to increase the available road network, if future stagnation is to be avoided.

This proposal suggests an alternative approach, primarily surrounding the motorway network, based on the separation of local and long distance travel, which the author believes will make a significant impact on the future situation.

The use of rail, to carry cars and HGVs to the hub nearest to their final destination, will reduce long distance motorway/trunk route travel, thereby reducing congestion as all traffic is then only undertaking "local" journeys.

Background

UK roads have become increasingly congested over the last 30 years or more and it seems that whenever a new motorway is built, or a key route improved, by the time the change is introduced, it is already too late, as congestion has already increased above the previously expected levels.

There has always been significant opposition to a major road being built, which began long before the current theories regarding global warming were even discussed. This opposition, in view of the current view of climate change and public opinion regarding this, is likely to become even more militant in the future and therefore simply building more roads is not the single answer to this issue.

However, the future position will continue to worsen if no action is taken as car numbers will continue to increase.

Proposal

To introduce a number of solutions, one of which is the extensive use of rail, to supplement road transport. This could be based as follows:

- A system of major rail hubs, similar to Le Shuttle stations, at major travel points (Dover / Ashford, Felixstowe, London, Bristol, Birmingham, Stoke, Manchester, Leeds, Glasgow, Edinburgh, etc), where drivers join a train, in their vehicles, for rapid transit to a major centre. On arrival, the driver then drives to his final destination, from the hub. The hub would not be in the city centre.
- To encourage the above, a system of road tolls on motorways in particular, could be based on relatively low cost per mile for, say, the first thirty miles and then a significantly higher cpm for additional mileage, thus making it significantly more cost effective to travel by the train alternative.
- Certain areas will still require additional motorway provision, such as a second M25 and an alternative M6 route and these should be fast tracked, possibly funded by tolling, as for the existing M6 toll.
- There will also be a need to consider routes to the hubs, which again may need infrastructure improvements.
- City centres could also be included within the train utilisation proposal, with a transit for cars and drivers from hubs to city centres such as London, Manchester etc.
- Obviously, for the rail proposal to be possible, a major improvement programme for the UK rail network is vital, but this is essential to increase passenger numbers in any case.
- For traditional train travel to be expanded, there needs to be attention given to parking provision at stations. It is better, in my view, for people to travel to stations by car than attempting to improve public service alternatives to be viable as an alternative.
- If congestion reduced, it would be logical to review existing speed limits, with a view to potentially increasing them on faster routes, to reflect the improvements in car design and safety and to make faster travel possible.

Benefits

— Reduced congestion on UK roads.
— Reduced major accidents caused from driver fatigue, which I believe is a bigger contributor to major accidents than speed, alcohol or drugs.
— Reduced risk of accidents resulting from foreign drivers, particularly HGV drivers, causing accidents on UK roads, as they would be forced to board a train at their port of entry.
— Reduced overall mileage travelled by UK cars and HGVs overall, leading to less frequent vehicle changes, which is more environmentally friendly than simply taxing users.
— Britain could be a world leader in transport development, compared to its traditional position of laggard.
— Obvious environmental benefits, but avoiding the economic downside of traditional proposals.
— I believe that this proposal would be popular with the electorate, as it does not attempt to reduce an individual's right to travel, it simply encourages a new long distance alternative. It would also make long distance travel far easier and less time consuming.

Future Action

I obviously may have made some totally unrealistic assumptions in this proposal and would welcome the opportunity to explain this in more detail.

December 2008

Memorandum from Association of British Drivers (MRN 02)

Summary

— The motorway network is inadequate to cater for the transport needs of an economy of the size of the UK's and compares poorly with that of other EU countries. There is a pressing need to build more capacity.
— Road works during the maintenance of major roads are significant causes of congestion. Greater resources should be applied to minimise the duration of these works. Adopting a higher value of travel time in economic assessments would reflect the disproportionate impact of unforeseen delays on travellers.
— New roads should be built with a long design life, to reduce the need for future disruption during major structural maintenance.
— The Highways Agency should retain responsibility for all existing motorways and trunk roads. Other major roads currently under local control should be assessed and added to the major road network where necessary. Users of strategic roads should not be subjected to changing traffic management policies when crossing arbitrary local authority boundaries.
— Policies based on the false belief that traffic can be constrained by not building roads are a major cause of congestion today. An adequate network of strategic roads is vital and a major programme of road building should be instigated.
— Hard-shoulder running and active traffic management schemes should be seen only as short-term measures while new capacity is built.
— Measures to constrain demand, including road pricing, would inevitably damage the economy and Britain's competitiveness.
— The majority of passenger and freight miles are carried by road, and with today's diverse economy and rate of technological and social change, there is little scope for moving significant proportions onto other modes.
— The need to travel could be reduced by reforms to the housing market to facilitate mobility, and by encouraging more home working. The transport implications of centralising public services should receive greater consideration.
— More schemes such as park-and-ride and parking provision at railway stations could help people use the best transport mode for each part of their journeys.
— Funding mechanisms should be overhauled to give priority to new and improved roads, and away from schemes that reduce road space.

— The CO_2 reduction targets in the Climate Change Act are totally unrealistic and unnecessary. Attempting to meet them faster than technological progress allows would lead to economic disaster. Increasing the capacity of the major road network would help to reduce emissions and improve air quality.

— Population growth will increase demand on the major road network and this needs to be taken into account in planning its expansion, especially in designated growth areas.

— Intelligent transport systems may help the major road network be used more efficiently, but cannot make up for the lack of capacity in many parts of the country, where alternative routes are equally congested.

I. Introduction

I.1 The Association of British Drivers (ABD) was formed in 1992 to campaign for a better deal for Britain's motorists. One area of concern to the ABD is the lack of adequate investment in the major road network.

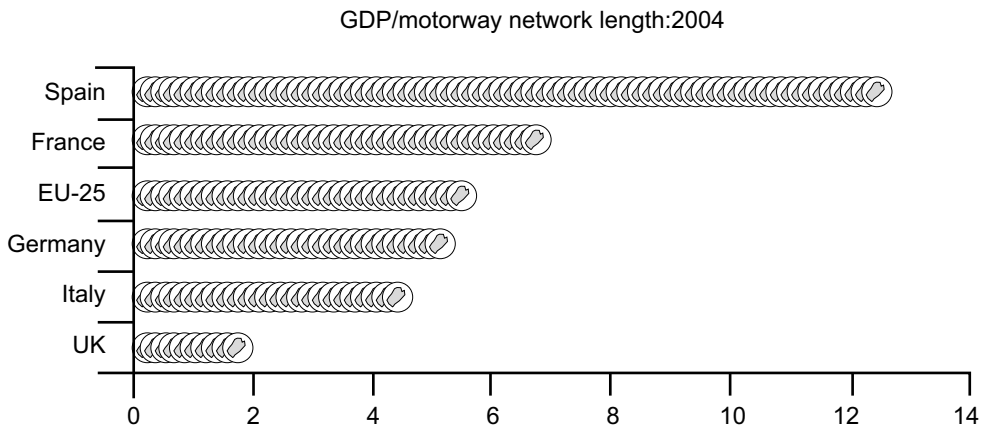
I.2 The ABD is a voluntary organisation funded by subscriptions and donations from its members and supporters. It receives no funds from public bodies or large corporate donors, so is truly independent. The ABD is a member of the Parliamentary Advisory Council for Transport Safety and the National Council of Voluntary Organisations.

I.3 Many of the ABD's active members are from professional or managerial backgrounds. Malcolm Heymer, who is submitting this evidence on behalf of the ABD, holds a master's degree in Transportation Engineering and has over 30 years' local government experience in the fields of transportation modelling, highway engineering, transport planning and traffic engineering. Mr Heymer is willing to give oral evidence to the Committee if requested.

I.4 The following sections of this submission address the questions raised in the call for evidence.

1. *Adequacy of the major road network*

1.1 The UK's major road network is woefully inadequate to support its economy. The figure below compares motorway length with Gross Domestic Product for several EU countries and the EU-25 as a whole: the UK's motorway network is one-third the EU average in relation to the size of its economy. This goes a long way to explaining why much of Britain's motorway network is so congested. Major investment in new capacity is needed urgently.



Source: ERF, Eurostat 2007

2. *Adequacy of maintenance of the major road network*

2.1 With much of the major road network operating at or above capacity, any disruption caused by road works has serious effects on journey times. According to the Highways Agency, road works cause 10% of the congestion on motorways and trunk roads. This leads to missed appointments and late deliveries, or drivers having to allow far longer for their journeys than should be necessary.

2.2 It is essential, therefore, that delays caused by road works are minimised. This requires adequate planning and the use of sufficient plant and human resources to complete maintenance works in the shortest time possible. The planning of road works includes an economic assessment that attempts to minimise overall costs, including capital expenditure on the scheme and the monetary value of delays. Often, however, these calculations lead to methods of working that put saving money before the inconvenience caused to

road users. The assumptions made in these economic assessments need to be reviewed and a much greater value put on travel time, to reflect the disproportionately adverse effects that unforeseen delays have on travellers.

2.3 It is also essential that new roads be built with a long design life, to reduce the need for future disruption during major structural maintenance.

3. *Responsibility for major roads*

3.1 The major road network is of strategic importance to the country as a whole. It is vital, therefore, that consistent policies are applied throughout the network, aimed at facilitating the expeditious movement of people and goods. This can only be achieved by having a single authority responsible for major roads.

3.2 In recent years, significant lengths of former trunk roads have been handed over to local authority control. Most of these roads are still important arteries for long-distance traffic, but many are now subject to the whims of local councillors in respect of policies such as speed limit setting and road space reallocation. It is unacceptable that drivers should be subjected to such differences when crossing the arbitrary boundaries of local authority areas.

3.3 The ABD considers, therefore, that not only should the Highways Agency retain responsibility for all existing motorways and trunk roads, but there should also be a review of the strategic importance of other major roads currently under local authority control. Where necessary, these should be added to the trunk road network.

4. *Road capacity and managing demand for road space*

4.1 As noted above, the extent of Britain's motorway network is much smaller in relation to the size of its economy than that of most EU countries. To enable the economy to prosper and grow in the future, it is essential that substantial investment be made in new and improved strategic routes.

4.2 Road traffic increases in line with economic growth, not growth in the road network. Despite low investment in the motorway network since the mid 1990s (only a 9% increase in length between 1994 and 2004), motorway traffic increased by 37% in the same period, due to the buoyant economy. With a recession now upon us, some classes of traffic are already showing a decrease, and there is unlikely to be a resumption of traffic growth until the economy picks up again.

4.3 The belief that traffic can be constrained by not building roads is false, and recent policies based on that belief are the major cause of today's congestion levels. There needs to be an acknowledgement by government that an adequate network of strategic roads is vital to Britain's economic well being, and a major programme of road building instigated.

4.4 Proposals for hard-shoulder running and active traffic management should be seen only as short-term measures while new capacity is built. Well designed and constructed road schemes need not be environmentally damaging, and can reconcile the needs of the economy with those of the built and natural environment.

4.5 Since traffic growth is related to economic growth, measures to constrain demand would inevitably damage the economy and Britain's competitiveness. There are some who might welcome a shrinking economy, but the impact of rising unemployment and lower standards of living would be unacceptable to most of the electorate.

4.6 The ABD's arguments against road pricing were set out in its evidence to this committee's inquiry into taxes and charges on road users. Its conclusion is that punitive charges would have to be applied to make any significant impact on traffic levels, and these would have serious economic and social repercussions.

5. *Alternatives to private car use and road freight*

5.1 In the context of the major road network, which is primarily inter-urban, walking and cycling are largely irrelevant as alternative modes. Buses, coaches and trains provide alternatives to the car for some passenger movements, but they do not give the door-to-door convenience of the car. Some 85 per cent of passenger journeys are currently made by car, and it is unrealistic to believe that public transport could provide an acceptable alternative for more than a small proportion of those trips.

5.2 It must also be recognised that some public transport services, particularly rail, are already operating at or near capacity, so would not be able to cope with a large-scale transfer of passenger trips from cars.

5.3 Rail freight is most suitable for the movement of bulky, non-perishable goods between industrial centres. With the decline of heavy industry and the increase in service industries, rail does not have the flexibility to provide a viable alternative for most of the goods currently transported by road.

5.4 Better land-use planning has some potential to reduce the need to travel, or to travel shorter distances, by for example bringing employment and retail opportunities closer to where people live. With today's rate of technological change, however, people have to change jobs or even careers more frequently than in the past. Where people are unable or unwilling to relocate in these circumstances, some of the benefits of land-use planning are lost.

5.5 The cost and difficulty of moving house can be a major disincentive for people to relocate close to a new place of employment. Reforms of stamp duty and the regulations governing house sales could help in this regard.

5.6 The amalgamation of services in pursuit of efficiency, such as concentrating NHS facilities at fewer, larger hospitals, also increases the need to travel. The transport implications of such decisions should be given greater consideration than at present. Other ways in which the need to travel could be reduced include encouraging more people to work from home, at least part of the time.

6. *Integration between roads and other transport modes*

6.1 Where there is good integration between roads and other transport modes there is greater scope for parts of a journey to be made by different means. Thus people have the opportunity to choose the most convenient mode of transport for each section of a journey. For instance, park-and-ride sites alongside a major road outside a city enable people from surrounding villages to drive part of the way and then take a bus into the city itself.

6.2 Similarly, good parking provision at suburban railway stations can make rail travel more attractive for journeys into cities. Ebbsfleet and Ashford stations on the Channel Tunnel Rail Link make Eurostar services more attractive than if all passengers had to travel to St Pancras to use them.

6.3 The extent to which such integration exists varies considerably across the country. There is undoubtedly room for improvement in many areas. The ABD has always been in favour of a genuinely integrated transport strategy, as opposed to one that seeks to discriminate against private car users.

7. *Prioritising schemes*

7.1 As already indicated, the ABD believes there is an urgent need for major investment in new and improved strategic roads, so that is where funding should be prioritised.

7.2 Current funding mechanisms are biased against road building because of ideological opposition to private transport. Instead, schemes are favoured that take road space from cars and obstruct drivers. It needs to be recognised that the car is the most convenient or only practicable means of transport for the majority of medium or long-distance trips, and the same is true of road freight. Funding mechanisms need to be completely overhauled to reflect this reality.

8. *Implications of the Climate Change Act*

8.1 From studying all the scientific evidence on climate change, not just the highly selective and misleading publications of the politicised Intergovernmental Panel on Climate Change (IPCC), the ABD does not accept the need for cuts in CO_2 emissions. Even if reductions were desirable, however, the targets set in the Climate Change Act are totally unrealistic and amount to political posturing. Those who set them have no idea how they might be achieved. Britain emits less than 2% of the world's total of man-made CO_2 emissions, so our commitment to a legally binding 80% reduction would have a negligible effect at the global level and is unlikely to be followed by other countries.

8.2 Attempting to meet CO_2 reduction targets faster than technological progress can deliver them is a recipe for economic disaster. With the economy now in recession, attempts to cut CO_2 with measures that reduce economic activity still further will worsen the damage caused. The costs of attempting to implement the Climate Change Act's targets will be greater than the costs of mitigating the effects of warmer temperatures, should these come about. This was recognised in the report of the House of Lords Select Committee on Economic Affairs, "The Economics of Climate Change", published July 2005.

8.3 Since vehicles are at their least fuel-efficient when travelling in congested conditions, increasing the capacity of the major road network would help to reduce emissions and improve air quality. Coupled with the need to provide Britain with a road system capable of servicing its economy, the case for an expansion of the major road network is overwhelming.

9. *Implications of anticipated population growth*

9.1 It is self-evident that population growth will increase demand on all public services, including the major road network. This extra demand needs to be taken into account in planning expansion of the network, especially in designated growth areas.

9.2 It is unrealistic to assume that measures such as restricting residential parking spaces or building allegedly "self-contained" developments such as eco-towns will have more than a marginal impact on demand for road travel. More people mean more trips, and a high proportion of those trips will be by car. That is the reality.

10. *Emerging road and vehicle technology*

10.1 Some intelligent transport systems can help drivers complete their journeys more quickly. Variable message signs can provide real-time information at the roadside, such as those appearing on motorways to warn of accidents or other delays. The latest satellite navigation systems are capable of receiving information about congestion, so they can advise a change of route.

10.2 Such developments may enable the major road network to be used more efficiently, but the lack of alternative routes and overall congestion levels in many parts of the country means that a problem on one link in the network quickly brings a much larger area to a standstill. Ultimately there is no substitute for additional capacity.

10.3 As already mentioned in Section 4, active traffic management and hard-shoulder running should only be considered as interim measures to relieve congestion prior to new capacity being provided.

The ABD requests the Committee to give serious consideration to the points raised in this submission.

December 2008

Memorandum from Brian Summers (MRN 03)

To whom it may concern, I would like to offer my personal view as to one part of the inquiry; namely:

> "To what extent should responsibility for major roads be given to local highway authorities and how much control should the Highways Agency retain?"

Before I convey my view may I just state that, in my time, I have worked for local highway authorities (both County Council & Unitary Council), jobbing civil engineering consultants, a DBFO highway company, & a Managing Agent Contractor for the Highways Agency. I believe this gives me a balanced view of the road environment & how it is best looked after.

In my view local highway authorities are too parochial to look after the trunk road network. The relatively small area which a local highway authority covers will lead to integration problems with other contiguous authorities regarding Works on the trunk road network. The many meetings that will no doubt come into being to manage Works on the trunk road network (if responsibility is to be handed over to councils) will waste precious resources that are better spent on the network itself.

Also, the internal skills-sets generally available to councils are, in my opinion, not sufficient to design, implement and manage Works on the trunk network. Clearly, trunk roads need to continue to be designed & implemented to the good standards published in the Design Manual for Roads & Bridges, & the Manual of Contract Documents for Highway Works. Councils are too used to deploying what they see as their own brand of engineering judgement to bring about a better situation & sometimes do not design & implement schemes to standards. This would pose a problem if this attitude was transposed to the trunk road network & may compromise safety.

Also, if there are two tiers in the management hierarchy (ie the Highways Agency feeding down to local highway authorities) this will just add another tier of management at a no doubt increased transaction cost to the Treasury. This is supported in that both the Highways Agency and local highway authorities are currently either unwilling, or unable, to undertake all of the required tasks to manage their road networks in house &, therefore, rely heavily on private organisations to fulfil this role.

Furthermore, local highway authorities are sometimes unduly influenced by local councillors, leading to decisions being made not on logical engineering need but, instead, on who shouts the loudest or has the most sway. This may pose a problem if the trunk road network is given over to local highway authorities & local councillors divert monies needed by the trunk road network to local roads to favour them at times of re-election.

The above problem of reallocated monies may well be rolled-up within a local authority; in that other areas of spending (education, health etc) may poach monies from the highways pot (including the trunk road pot), leading to degradation of the trunk road network. An efficient trunk road network is needed now more than ever, owing to the economic downturn.

Clearly, what I am saying probably is not new to you, but I felt compelled to convey the view of someone that has been at the coalface from both sides.

I hope you make the correct decision.

December 2008

Memorandum from John Hartley (MRN 04)

Road Pricing is likely to cost around £65 billion by the time you put a black box in EVERY vehicle plus the enforcement and collection hardware. Why not spend this money on new transport infrastructure instead?

Our railways need a forty year programme to electrify and rebuild to the continental loading gauge. Building Crossrail with tunnels too small for double decker carriages is very short sighted.

However, half this money should be kept for new roads.

I think it a scandal that main A roads still run through our towns and villages. They should have dual carriageway bypasses by now. Perhaps a local vote to decide?

Have our transport officials noticed that there are new, cheaper methods of road tunnelling nowadays?

One way is to gouge a trench and drop in prefabricated sections, cover it over and replant. Another method is a digger/JCB style machine with two spiked turning balls at the end of its arm. One of these machines built an economical dual carriageway bypass through a hill for a small Austrian town.

If they can do it, why is it impossible for us?

On 11 July 1988, the Guardian reported a study of 48 routes to ease London traffic. One option was a four mile tunnel under Wandsworth from the A3 to Trinity Road. I think this is needed.

I would add an A6 extension. From Warden hill, it would be a dual carriageway bypass to the east of Luton, running past the Airport, over the M25 and into a tunnel to emerge out of the new redevelopment of land above Kings Cross Station.

I would also extend the M2 though a tunnel under the Thames to the M11 at Stansted airport. Combined with John Prescott's idea of extending the M11 to the Humber bridge, this would link the North to the channel ports while avoiding London.

I think the A303 dual carriageway should be extended from the M3, past Alton & Cranleigh to Gatwick airport and on to the A21 north of Tunbridge Wells.

This would take some pressure off the Southern M25.

I would extend the A404 dual carriageway from the M4 to the spur off J11 of the M25. A route from Gatwick to the Midlands avoiding Heathrow congestion.

Birmingham should have a Western dual carriageway bypass from the M42, past Kidderminster, Wolverhampton business airport to the M54 at J3.

Bristol needs a Southern bypass to the airport.

So do many other places.

Building roads would create jobs in the slump.

My VW Golf does 25mpg in stop start traffic. This improves to 35 mpg at a cruise on a motorway/dual carriageway. CO2 emissions also drop by two thirds. There is a good "Green" case for building new roads.

The Labour transport minister in the late 1970s wanted to raise the speed limit from 70 to 75 mph, as it would work out as 120 kph. This would be easier for foreign visitors and I think we should do it now.

December 2008

Memorandum from Kapsch TrafficCom AG (MRN 06)

EXECUTIVE SUMMARY

— Transport and the infrastructure it requires is vital to economic success in modern economies. Individuals and businesses need to be able to rely on an effective traffic system for work and leisure.

— The UK's roads are not currently meeting the demand for road journeys causing congestion which costs the UK £20 billion each year. Public transport is not a viable option for many, being expensive, congested and unreliable.

— There are two options for reducing congestion on the UK's roads:
  1. Building more roads. However these can be expensive and are also time consuming to construct. However the private sector has successfully built and managed toll-roads which can effectively increase network capacity.
  2. Increase capacity through technology. Advanced traffic management, hard shoulder running and the "managed motorway" can all use existing space more efficiently at a lower cost than constructing new roads.
— The technology which can enable more efficient use of the existing road network is already available and in use in successful schemes in Austria and Czech Republic. It can easily be applied to support wider policy agendas such as climate change and air pollution.
— Current technology can be readily applied to the requirements of the UK's road network, reducing the need to construct additional capacity. It can also raise revenue for improvements to the existing transport network, including rail and bus services.
— The UK Government must decide which option, or a balance of both options, is best suited for Britain's roads. Technology can also aid the construction of new roads through tolls, or used to manage the existing network more efficiently via active traffic management schemes.

Introduction

1. Kapsch welcomes the opportunity to respond to the House of Commons Transport Select Committee's inquiry into the major road network. Kapsch has previously responded to the Committee's inquiry into taxes and charges on road users, however a number of the points raised in this context are also instructive for this inquiry due to their ability to increase road capacity.

2. Kapsch TrafficCom, originating in Austria, is a supplier of advanced electronic toll collection and traffic management systems. We have considerable experience in the development of technical and operational solutions for tolling, congestion charging and active traffic management projects, as well as in the implementation, management and enforcement of specific schemes at both a national and local level. We provide technology for projects across the world, including the Austrian National Lorry Toll System, the Czech Republic's National Truck Toll System and a number of multilane free flow systems in Australia. Kapsch's technology is used in over 200 projects in over 30 countries.

3. Kapsch also has considerable experience in the UK. We have been involved in a number of congestion charging projects, including the Department for Transport's DIRECTS trials, the supply of on-board charging units for the M6 Toll Road and technology trials in London to develop the next generation of congestion charging systems. We were recently selected by the Department for Transport to demonstrate our technology for their trials of pay-as-you-go motoring. We continue to follow developments in the UK with interest.

4. As a technology supplier, we do not seek to dictate the factors the UK government should prioritise when determining the use of roads. However, we do have experience of a variety of different systems across Europe and the World and therefore have knowledge of what works and what does not work in motorway and road network management.

The Importance of the UK's Road Network

5. Transportation and transport infrastructure are vital to economic and social life across the globe. As the Eddington Transport Study stated, "A good transport network is important in sustaining economic success in modern economies. The transport network secures connectivity between different parts of a country as well as to the rest of the world; linking people to jobs; delivering products to markets; underpinning supply chains and logistics; and supporting domestic and international trade. The quality of infrastructure, and how comprehensive the transport network is, will influence the role transport plays and its contribution to the functioning of a successful economy." Individuals need a reliable traffic system and the knowledge they will be able to get to their work, school and leisure destinations quickly, efficiently and within a predictable timescale. This is just as important for public transport as is for the private car.

Problems with the UK's Current Road Network

Is the current major road network adequate for the needs of the UK economy and for individuals?

6. The greatest concern with the current UK road network is the volume of traffic on a limited network—noted in the introduction to the Committee's terms of reference and call for evidence for this inquiry. This causes congestion which costs the UK £20 billion each year according to a 2004 report by Phil Goodwin, Professor of Transport Studies at University College London. There are also other costs associated with congestion, such as those associated with road traffic accidents, social exclusion and environmental impacts. This is coupled with one of the most expensive but least effective public transport systems in Europe making the private car an increasingly favourable option for most.

7. The problem of congestion is not unique to the UK. All countries are experiencing delays and economic costs caused by the volume of traffic on the roads. The International Transport Forum stated in 2007 that the cost of congestion, for all modes of transport, in the EU amounted to 1% of European GDP—approximately €100 billion[1].

8. Road transport accounts for 22% of the UK's CO_2 emissions and 95% of the UK's domestic transport CO_2 emissions. These will need to be reduced significantly if the country is to meet its ambitious targets for reducing CO_2 by 80% by 2050.

9. It is clear that this is a prominent and pressing issue which has been recognised by the establishment of this inquiry and the creation of the National Networks Strategy Group set up by the Secretary of State for Transport in October 2008.

Options for Improving the UK's Road Network

What should the relationship be between measures to increase road capacity and measures to manage demand for road space?

10. The problem of congestion is caused by either too many vehicles or not enough capacity, depending on which stance is taken when appraising the problem. There are two options for alleviating the problem of road congestion—(a) adding more physical capacity to the roads through new construction or (b) use the existing capacity more effectively. It is likely to be the case that a combination of both road building and more efficient management of the existing network is the best solution.

Increasing capacity with tarmac

11. Transport can be expensive to provide, especially in terms of investment in new infrastructure, and costs continue to rise. The Department for Transport's recent report Roads—Delivering Choice and Reliability states that the high rate of inflation experienced by the construction industry, driven by the global demand for raw materials in China and India, is one of the reasons behind this. As the demand to travel continues to grow the situation seems unlikely to change in the long-term. The Campaign for Better Transport has researched this problem and found that some road building costs have risen by over 80% since 2003 making road building an increasingly unattractive option.

12. If new roads are considered essential on a large scale, the increasing sums of money needed to construct such capacity are unlikely to be available directly from the Exchequer. There would be a need to raise additional revenues to ensure that the capacity could be funded. This could take the form of a private venture which designs, builds and maintains a road while charging a toll for accessing it—an option which the Department for Transport's report alludes to. Alternatively, charging drivers on existing roads would also allow the government to receive increased revenue (if a revenue raising toll regime were to be approved) with the proceeds being used to fund further capacity.

13. Due to the general unpopularity of tolls, a considerable and proactive case will need to be made for this concept to gain public acceptability. However, in our experience once drivers see the benefits derived from toll roads, such as shorter and more reliable journeys, they become a more popular option.

14. While both these options are entirely possible and have been utilised in other countries, such as the United States and the Czech Republic, there remain other factors which need to be taken into account if building more roads is seen as the solution, not least environmental costs.

15. The alternative method would be to make the existing infrastructure act as efficiently as possible.

Increasing capacity with technology

16. Governments across the world are working on innovative solutions to address the issue of congested and inefficient road networks. Many are embracing technology to ensure that traffic moves efficiently, including schemes which allow revenue raising mechanisms from roads to pay for additional improvements in all forms of transport.

17. Roads—Delivering Choice and Reliability outlines an interesting way forward, but more thought will need to be given about the specific technology needed to introduce this on a large scale. Kapsch looks forward to outlining its experience in its work with the UK Government on these proposals. Ultimately, technology providers will meet whatever brief is set for systems—different technologies suit different schemes and can aim to achieve a variety of objectives.

[1] ITF, 2007, *Congestion: A Global Challenge, The Extent of and Outlook for Congestion in Inland, Maritime and Air Transport*, http://www.internationaltransportforum.org/sofia/pdf/KeyMessages/ITF200703e.pdf

18. Government also needs to consider the cost of providing the infrastructure to make such schemes possible, although this will of course be highly cost-effective when compared to the economic efficiency gains and the alternative of building new roads.

19. The following provides more information on how technology can benefit the road network and its users.

To what extent do emerging road and vehicle technology (intelligent transport systems) change the requirements for the major road network?

Traffic Management—efficient use of space

20. Roads—Delivering Choice and Reliability, sets out the Department for Transport's options for making the road network operate more effectively without large scale increases in infrastructure which are expensive, time consuming to build and have environmental impacts. The report recognises this fact, stating: "adding capacity does not necessarily mean constructing additional lanes through conventional road widening." Instead, advanced traffic management techniques and the possibility of hard shoulder running following a successful trial, are realistic options for reducing congestion on much of the UK's major road network.

21. We are encouraged by the fact that the Department for Transport is continuing to explore the technology options which enable these types of schemes to go ahead, especially now that a National Networks Strategy Group has been established. However we would urge the Department for Transport and the Committee to look closely at what has worked successfully elsewhere. The technology currently being trialled in the UK is already fully operational and working effectively in other countries that are seeing the benefits today.

22. The concept of the managed motorway—adding and managing capacity through technology—is an increasingly attractive option. The European Commission recently (December 2008) proposed an Intelligent Transport System Action Plan. This recognises the problems of congestion on a large scale and the need to address it without major road building. The action plan arrived at a similar conclusion to the Department for Transport, that:

> "relatively small investments in Intelligent Transport Systems can allow better use of existing infrastructure and would be much more cost effective than building new infrastructure or enlarging the existing one. At the same time, the environmental impact would be much lower."

23. Much of the technology utilised in other schemes, such as gantry Automatic Number Plate Recognition (ANPR) and imaging cameras and Dedicated Short Range Communication (DSRC) or "Tag and Beacon" equipment from the truck tolling schemes in Europe (outlined below), is also effective in operating active traffic management schemes which would involve some form of payment.

Environmental—reducing emissions

24. The following case studies highlight how different policies for tackling problems associated with a congested and expensive road network can be alleviated through the use of technology.

Case Study: Austrian Ecopoint system

25. Austria, in the centre of the European road network, sought to reduce the emissions from heavy goods vehicles which travel through the country. This was an acute problem for Austria due to the high levels of pollution concentrated in the Alps. In 1991, the Austrian Government set up an environmentally focussed traffic management system based on vehicle emissions which sought to limit pollution from truck traffic.

26. The scheme involved limited and non transferable quotas of "Ecopoints" which were allocated on an annual basis to EU Member States depending on the amount of HGV travel originating from their country. Member States then allocated these Ecopoints to their domestic hauliers who travel through Austria. The European Commission provided oversight to the allocations.

27. An Ecopoint is equal to 1 gram of Nitrogen Oxide per kilowatt-hour, so a vehicle emitting 10 grams of Nitrogen Oxide per kilowatt-hour used 10 Ecopoints to cross Austria. These Ecopoints are deducted through an electronic tag in the vehicle which is identified by an overhead gantry on the motorway network.

28. During the operation of the scheme there was a dramatic decrease in the use of more polluting vehicles as hauliers sought to limit the amount of Ecopoints used for each journey. In 1993, 51% of vehicles used 15 Ecopoints when crossing Austria; by 1999 only 2% of vehicles needed to use 15 Ecopoints.

29. This scheme has now been superseded by a nationwide truck-tolling system, which is described below.

Revenue—funding new transport

Case Study: Austrian Truck Tolling

30. Austria was facing increasing pressure to maintain and improve its interurban road network and needed a source of revenue to recuperate the costs associated with an increasing level of traffic. Foreign registered hauliers were frequently using their road network but not paying for its use through fuel duty or road tax.

31. In response to this Austria became the first EU member state to implement a nationwide truck toll system which charges hauliers electronically. The scheme uses technology supplied by Kapsch.

32. The scheme utilises a Multi Lane Free Flow system characterised by gantries placed above the highway lanes, using microwave transceivers mounted on the gantries to communicate with On Board Units which work to complete the tolling transaction. In this system, road users are charged according to distance travelled and the number of axles of their vehicle—greater the number of axles, the greater the charge. From 2009 onwards, emission levels will also be reflected in the scheme.

33. To ensure that the charge is correct, the declaration of vehicle classification, based on the number of axles, needs to be verified. Any anomalies need to be recorded accurately and fines collected from the road user based on secure, legally admissible evidence. Enforcement is therefore a key part of the system concept.

34. Every working day the system collects and processes over two million transactions in real-time which results in a daily income of between €2 million and €2.5 million for the operator. The system went into operation on 1 January 2004 on time and within budget. The cost of installing the technology was recovered after only eight months of operation.

35. The funds raised by this toll have been used exclusively on the road network and paid for expansion of the road network, improvements to existing roads and junctions, safety measures in tunnels and the provision of traffic management schemes and driver information services.

Conclusion

36. The options outlined above demonstrate technology's ability to make better use of the road network, fund its expansion and maintenance and capture negative externalities such as emissions. All the technology in the schemes mentioned above could be adapted and installed to meet the objectives of the UK government in its aim of reducing congestion and providing individuals and businesses an efficient, cost effective and less polluting major road network. Any UK scheme can, and should, also be interoperable with existing schemes across Europe. This does not require a complete replication of the scheme design or technology from another country, allowing individual nations the ability to run a variety of schemes based on the same technology platform.

January 2009

Memorandum from the Public, Commercial and Services (PCS) Union (MRN 07)

1. This submission is made on behalf of the Public, Commercial and Services (PCS) Union, who are the major union within the Department for Transport.

2. In the preamble of the Select Committee's notice setting out the terms of reference and call for evidence for the inquiry the committee said it would consider "how capacity can best be used". In the body of the notice it asked "how much control should the Highways Agency retain". In this submission we set out our views on those two points.

Summary Of Our Proposals

- The coverage of the Traffic Officer Service be extended to the all–purpose trunk road network.
- There needs to be specific route strategies to identify areas where increased capacity might be needed, where changes to gradient or curvature, or other road geometry could improve traffic flow and where junction improvements could reduce congestion or improve safety.
- Highways Agency to retain responsibility for key parts of the secondary trunk road network and that the de-trunking programme should be reconsidered and in some cases reversed.
- Consideration should be given to extending the remit of the Agency to cover key parts of the secondary trunk road network.
- The Highways Agency should do more to improve morale of its workforce and improve its in-house capability.
- The Highways Agency should ensure that it dedicates sufficient and appropriate staff resource to all its projects.

— The Highways Agency should return to a regional structure operating within a national framework.

— Motorway and Trunk Road network should remain the responsibility of the Department for Transport operated through the Highways Agency.

The Current Road Network

3. The Motorway and Trunk road network is mature. It is worth recalling the original purpose of the trunk road and motorway network which was to provide inter-urban links and access to key ports and airports. This was the guiding principle behind development and expansion of then network through to "Roads for Prosperity" and "Trunk Roads England" into the 1990s.

4. Following the completion of key schemes within these programmes the motorway and trunk road network within England was considered mature. Yet there followed a move to de-trunk significant parts of the network. This de-trunking programme continues.

5. As the emphasis has changed from providing additional road space to better management the Highways Agency introduced the Traffic Officer (TO) Service and invested in better telecommunications. Recent data shows that in 2008, HA Traffic Officers attended an incident on Motorways in England every two minutes (HIGHWAYS AGENCY News Release (HA59-08) issued by COI News Distribution Service, 29 December 2008).

How Capacity Can Best Be Used

Extend Reach Of Traffic Office Service

6. Experience has shown that TO Service is effective.

7. PCS therefore believes that the coverage of the Traffic Officer Service be extended to the all–purpose trunk road network. Extra funding would be required to ensure this but we think that it would be cost effective. For this extension would not only release police officers from road duties but also improve the flow of traffic on these routes and hence improve capacity.

Making Better Use Programme

8. Until attention was switched to focus on the introduction of the Traffic Officer service (2003) the Highways Agency had a Making Better Use (MBU) programme of work that concentrated on small scale construction schemes, and better technology. In support of this programme the Agency invested heavily on the production of a series of route strategies for key inter-urban links. These route strategies identified areas where increased capacity might be needed, where changes to gradient or curvature, or road geometry could improve traffic flow and where junction improvements could reduce congestion or improve safety. The strategies were quietly shelved sometime in the past couple of years.

9. These strategies should now be revived, updated and implemented to increase capacity and traffic flow. They should also reflect the Eddington and Stern reports and the Department for Transport/Highways Agency Sustainable Development plans.

Trunk Roads

10. Highways Agency should retain responsibility for key parts of the secondary trunk road network and that the de-trunking programme should be reconsidered and in some cases reversed.

11. Consideration should also be given to extending the remit of the Agency to cover key parts of the secondary trunk road network.

12. Currently, if there is a major incident on a Motorway or primary trunk road there is little that the Highways Agency can do to ensure that suitable alternative routes are available. Many of the secondary trunk roads simply cannot cater for increased volumes of traffic. Nor are Traffic officers able to patrol these roads because of limitations in their role. Similarly there is no control room coverage meaning that if an incident occurs on a diversionary route the Highways Agency is unable to react. This issue was identified in the NAO report on tackling congestion HC 15, Session 2004–05.

Highways Agency Capability

13. The human element is often overlooked when considering the work of the Highways Agency. It is all too easy to become mesmerised with the strategy plans, project management plans and the full range of management speak. Yet in the end the success of any organisation rests on the staff and how they work. This truism has unfortunately been forgotten by the agency and DfT.

14. In its 2002–03 report the Transport Select Committee highlighted the relationship with the supply chain as problematic. Since then the PAC and NAO have identified shortcomings. The Secretary of State invited Mike Nichols to review the Agency's approach to cost estimating and project management in 2006. The Department for Transport was subject to a capability review around the same time and the NAO issued its report on estimating and monitoring the costs of building roads in England in March 2007 (HC321 Session 2006–07).

15. The Nichols review was published in March 2007 and the DfT Capability Review was published in June 2007. Both reports concluded that there was a need to improve project management capability. Nichols and the Public Accounts Committee in its report on the procurement of the National Roads Telecommunications Services (46th Report) similarly concluded that insufficient or inappropriate staff resources are dedicated to projects.

16. The Highways Agency response to Nichols was initially ill-considered. All staff involved in major projects were essentially made to re-apply for their posts and an external recruitment exercise costing around £400,000 was instigated to bring in new project managers at salaries significantly higher than existing staff. A cut in administrative support—and an Agency wide freeze on replacing junior staff was also instigated.

17. The external recruitment exercise was not successful. It resulted in the promotion of a few internal candidates and the recruitment of just two external project managers. The impact of this and the other changes in response to Nichols was widespread loss of morale—evidenced by the results of the 2008 staff engagement survey which showed a worse position than for 2006. This low morale needs to be urgently addressed.

18. The Agency response to Nichols has been counterproductive. Specialist staff with proven project management skills feel undervalued and the loss of administrative support posts together with a freeze on filling vacancies has meant that project managers have to spend more time on non-productive administrative tasks themselves. The Agency has also changed from having dedicated administrative teams working on a project or portfolio of projects to wider administrative pools. PCS believe that this is inefficient and leads to poorer project delivery because staff do not have the time to develop in-depth knowledge of schemes/projects, nor are they able to develop relationships with key stakeholders. We consider that a return to a mix of dedicated and general support would provide better support to operational teams and specialist staff whilst providing a better range of posts for administrators.

19. Capability can best be improved by developing the skills and experience in-house. Highways Agency should resurrect its graduate engineering scheme and give consideration to sponsoring university places with a golden handcuffs arrangement. Key administrative functions such as drafting Orders associated with projects should also be seen for the specialism that they are rather than as "back-office" functions.

Highways Agency Organisation

20. Operation of the Highways Agency network and Improvement of the network are the responsibility of Network Operations and Major Projects Directorates. Network operations is organised on a regional model covering seven regions—East, North East, North West, East Midlands, West Midlands, South East and South West.

21. Major projects is organised differently with Divisions covering South, North, Midlands & South West, and the M25. The National traffic Control Centre and external communications are the responsibility of Information Directorate and HRS who are organised differently again. Similarly Network Services who develop and advise on standards and safety have yet another structure.

22. The Local Government Act requires operational Agencies such as the Highways Agency to better align with the Government Offices and regional accountability is a key element of the Green Paper "The Governance of Britain" (Cm 7170).

23. To that end the agency should look for a return to a fully integrated regional office structure. Nichols recognised the importance for involving network operations and network services early in the life of major projects. Having integrated regional offices would facilitate this involvement.

24. If HA is to align with the Government Office structure and be a customer-first organisation, then offices in the East Midlands and North East would be needed.

How Much Control Should The Highways Agency Retain?

25. The capacity improvements suggested above cannot be made if the Highways Agency, or more accurately DfT, were to be stripped of responsibility for major roads.

26. Whilst we have major criticisms of the way that the department runs the road system, fragmenting that responsibility across a number of highway authorities will make matters even worse. For example without unified command and control of the Traffic Officer Service it is difficult to see how these officers could be used to best effect.

27. Without DfT having responsibility for the major roads it is hard to see how the Eddington report, for example, could be most effectively implemented.

28. Therefore, in our view, the key task is to improve the working of the Highways Agency (HA) and the wider DfT; not to have yet another major re-organisation. To improve the working of the agency, supposedly mundane matters, yet vital issues such as staff morale and in-house capacity must not be overlooked.

January 2009

Memorandum from PIPS Technology Ltd (MRN 08)

OVERVIEW

PIPS Technology is an industry leader in the development and manufacture of (ANPR) Automatic Number Plate Recognition systems. Its broad range of systems provide the next generation of information technology for:

- Journey Time Measurement Systems.
- Police, Toll Enforcement.
- Congestion Charging.
- Road User Charging, Parking Systems.
- Traffic Monitoring and Automated Site Security.

PIPS is certified to ISO 9001:2000 conforming to the highest International Standards for design and manufacture of our range of products.

1. DIGITAL TIME OVER DISTANCE SPEED ENFORCEMENT

PIPS Technology has developed SpeedSpike, a time-over-distance vehicle speed measurement system, which comprises of distributed PIPS Spike ANPR Cameras communicating with a central SpeedSpike instation.

The Spike ANPR Camera is an integrated unit containing all the functionality required for roadside ANPR enforcement. The Spike ANPR camera is deployed as the enforcement technology throughout the Transport for London Congestion Charging Scheme. Spike has been extended for the SpeedSpike product by adding a local GPS receiver to provide an accurate local time and position source.

Spike has an Infrared camera with an integral LED illuminator to acquire high quality Infrared images of number plates. It has an integral colour overview camera, a built in automatic number plate recognition processor and wireless communications module. This combined technology results in number plate capture in all weather conditions, 24 hours a day.

Spike was first installed with the Police in 2005 and to date many thousands have been deployed around the world. Spike won the Queen's Award for Innovation in 2005.

2. APPLICATIONS

The following applications apply to all vehicles including motorcycles.

SpeedSpike can be deployed as:

- Main road enforcement for congestion reduction and speed enforcement.
- Urban speed enforcement, to eliminate rat-runs.
- For the removal of speed curtailment ramps and pinch points.
- Local short distance speed enforcement of school entrances.
- Road works.
- Motorways/A-roads.

3. KEY FEATURES AND BENEFITS

- Cost:
  - Cost effective Wireless communications.
  - Images retrieved only when required thus saving on communications costs.
  - Ability to mount onto existing street furniture.
  - Low installation costs.
  - Multi nodal, point to point e.g a to b, b to c, a to c.
  - Simple power-only installation possible.

- Size:
  - Small urban streetscape impact.
  - Spike is the size of a thermos flask.
  - Single integral ANPR unit, easy to install.
- Scalability:
  - Fully scaleable solution.
  - Site to site (any lane to any lane).
  - HA approved pole or bridge mounts.
  - Distributed ANPR cameras with central server.
- Performance:
  - Automatic enforcement, 24 hour operation, 365 days a year.
  - Evidential Record from each camera includes plate patch, IR whole image, Overview (colour) image and contextual views (pre-event & post-event overviews).
  - Generates full Violation record combining images from offence detection cameras together with link definition, camera site-ids, enforcement speed and measured speed.
  - Supports timed Enforcement Sessions for highest security.
  - Resilient to communication outages, storing up to 60,000 vehicle events locally.
  - Distributed accurate time with primary and secondary time references.
  - Full SHA-1 authentication and AES 256 encryption for financial level security.
  - Open interface to Offence Viewing and Decision System (OVDS) back office.
  - SpeedSpike In-Station security is of the highest standard and is in excess of many of the current HOSDB requirements.

4. SpeedSpike Specification

- Spike + ANPR Enforcement Camera:
  - Infra-Red plate read.
  - Wide-angle colour context image.
  - Integral invisible LED Illuminator.
  - Time-synced locally via GPS.
  - Site referenced by name and GPS.
  - GPRS or ADSL communications.
  - Time-stamped VRM's sent in encrypted batches for low comms cost.
  - 2–2.5m Field of View.
  - Site and Time-stamp overlay on all images.
  - Only "Pull" images for violators.
  - Encrypted "Evidential Record" Image Set (ER).
  - Up to 48hr local storage of ERs'.
  - HA compliant to TR2130C.
- Baseline Correction:
  - Camera is set up for the number plate to be horizontal.
  - Top and bottom edges of picture therefore must be straight line at right angles to the road.
  - Position of vehicle across the image does not matter.
  - Always favour the driver.
  - Enforce on minimum distance—(latest leave point, earliest arrival point).
  - Simple road marks for fast camera replacement without the need to re-measure.
  - PIPS will offer an installation service, if required.

SpeedSpike can be used site to site, (any lane to any lane), as a road network solution. The SpeedSpike system consists of a single integral ANPR unit, which is easy to install with minimal urban streetscape impact, and a SpeedSpike server. The SpeedSpike Server is configured with the site-ids and camera-ids of the deployed cameras, with the distances between sites and the enforcement speed for the linked sites. The enforcement speed may be independently set site-A to site-B and site-B to site-A, with each link having a separate enforcement speed if required. Violations are detected between any camera on one site and any camera on another site. SpeedSpike is a cost effective solution, which can provide a complete road network solution for up to 1,000 cameras, linked via GPRS (or ADSL), to the SpeedSpike in-station.

The Spike + ANPR Cameras are independently time-locked using GPS time, as a primary time-reference and SNTP time-lock, as a secondary reference. When a vehicle passes a camera, the licence plate is read and time-stamped, and this together with the site-id, camera-id and event-id form a Summary record which is sent to the SpeedSpike Server. This occurs at every camera, which the vehicle passes. The cameras may be overlapped for total road coverage.

The cameras authenticate and encrypt the compressed image, set into an Evidential Record associated with the event-id. Up to 60,000 Evidential Records may be stored locally.

5. SpeedSpike In-station

- SpeedSpike In-Station:
  - Designed for up to 1,000 cameras.
  - A Site may have multiple cameras.
  - Directional Links are between Sites.
  - Supports Enforcement Speed per Link.
  - All communications encrypted.
  - Session Manager (SM) and Evidential Retrieval Control Unit (ERCU) functions are split for maximum security.
- Instation Architecture:
  - Evidence Retrieval and Control Unit (ERCU):
    - Receives time-stamped VRNs.
    - Detects violators.
    - Requests and receives the images.
    - Assembles (encrypted) Violation record to CD.
  - Session Manager (SM):
    - Runs the enforcement timetable.
    - Ensures the network is all in GPS time-lock.
    - Generates the dynamic security keys.
  - Offence Viewing and Decision System (OVDS):
    - Generates the enforcement network.
    - Generates the enforcement timetable and threshold.
    - Previews offences and provides interface to back-office (Serco, StarTraq etc.
- Instation Security Philosophy
  - Security is of a very high standard, in excess of the current HOSDB requirements.
  - Only share what has to be shared.
  - Never expose the Shared Secret.
  - Only expose the KEK as necessary.
  - Encrypt all communications.
  - Use rolling keys for the ER chain.
  - Use AES256 for camera to instation comms.
  - Use RSA 2048 PPKP for computer to computer comms.
  - No user access to machine with Shared Secret.

The SpeedSpike Server computes the average speed of every vehicle detected at every site, and compares this with the enforcement speed. If a violator is detected, a combined Violation Record is generated, comprising the link definition, camera site-ids, enforcement speed, measured speed and times. The authenticated and encrypted Evidential Records, containing the images of the vehicle passing the linked sites, are pulled from each camera for the offence. The violation record is authenticated and encrypted as a whole, at the time of generation, and can be written to CD, in order to be passed across an air-gap.

6. Environmental Impact

The development of Spike and thus SpeedSpike has not only had a beneficial effect on the character and street scene, it has also resulted in decreased disruption to traffic as there is no civil engineering work required, ie no roads to be dug up (and then badly repaired) and no ugly roadside cabinets. Prior to the development of Spike ANPR solutions from both PIPS and its competitors required numerous pieces of bulky technology. Typically an ANPR installation would comprise of:

- Monochrome CCTV camera.

— Colour CCTV camera.

— Infrared Illuminator.

— PC or Roadside processor with environmental cabinet.

— Interconnecting cables.

Not only did all of these items look unsightly and have a detrimental effect on the character and street scene, it also resulted in increased disruption to traffic as the civil engineering work was completed. Typically power had to be taken to the site via trenches and ducting and roadside cabinets had to be fixed to the ground via an existing platform or new concrete base. Roadside poles needed to be cemented into position enabling location for the camera to be mounted. Added to the environmental issues were the major costs involved in building and commissioning a system of this type.

Dimensions & Aesthetics

The main camera body is 210 mm long when fitted with any lens other than 50mm and is 107mm diameter. When fitted with a 50mm lens, the length is increased by 21mm. The hood is finished in powder coat, typically in grey, white or black but may be Traffic Yellow if preferred for visibility purposes. The hood also serves the function of reducing dirt on the front window of the camera, such that a wash-wipe is not required and six-monthly periodic cleaning with soapy water is sufficient. The Camera is silent. Weight Spike + SpeedSpike with hood 2.5kg, integral quick release memory bracket 2.2kg and pole-mount bracket kit 4.2kg.

7. Communications

With the SpeedSpike system there is a choice of GPRS or ADSL communications.

Prior to the development of Spike communication costs in operating a system far outweighed the investment cost of the initial system. In terms of ongoing communication costs PIPS approach has been twofold. Firstly by the use of the new technologies, which are now available as an alternative to fixed line connections and secondly to enable the customer to be able to select the volumes of data that needs to be transmitted.

Adding the GPRS modem control logic, so that the modem is fully managed with local buffering. Time-stamped vehicle registration numbers can be buffered automatically in the camera and sent in automatically when communications is re-established. Integral GPRS has resulted in only a single power connection being required.

Packaging an IEEE 802.11b "WiFi" (802.11.b) wireless Ethernet bridge within the product as an alternative to GPRS for wireless communications over short distances, with high-gain directional antenna options providing wireless Ethernet connections at up to one mile.

An integral GSM/GPRS or 3G modem is fitted within the camera and the per-vehicle communications protocol is lightweight with just 32 bytes per vehicle transferred, so that effective operation is possible over GPRS with images being pulled for violators (only).

8. Existing Network of Cameras

PIPS Technology has both the capability and technology to enable total data sharing to multiple agencies from existing and future deployments.

Existing PIPS solutions include:

- NTCC — 1,400 cameras
- Trafficmaster — 4,000 cameras
- Police Fixed Sites — 800 cameras
- London Congestion Charging Zone — 1,750 cameras

9. Home Office Type Approval Process

SpeedSpike began Home Office Type Approval early 2008. We have an urban test site at Salter Road in Southwark and are working in conjunction with the Metropolitan Police. We also have an inter urban test site located on the A374 from Torpoint to Antony at which we are working with the Devon and Cornwall Constabulary.

High speed testing has been completed and the technical file has been submitted to Dr Steve Lewis. We are awaiting the approval of the technical file to enable Home Office Type Approval to progress.

10. Previous Experience

PIPS Technology has supplied its ANPR system technology for the following high profile projects and many more projects around the globe:

Congestion Charging—London

Transport for London (TfL) required an ANPR based solution for providing vehicle information on those people entering the capital, as part of a Congestion Charging Scheme. TfL conceived a scheme in order to reduce the number of vehicles entering the capital, while simultaneously reducing the cost of the public transport network. PIPS supplied Automatic Number Plate Recognition (ANPR) cameras to Siemens, as part of a contract awarded by Transport for London (TfL) to provide an enforcement infrastructure for the western extension of the Central London Congestion Charging Scheme. The contract was worth £5 million to PIPS.

Low Emission Zone (LEZ)—London

The objective of the Low Emission Zone (LEZ) is to improve air quality in the city of London by deterring the most polluting vehicles from driving within Greater London. Reduced traffic pollution will improve the health and quality of life of people who live in, work in and visit London. As with the Congestion Charging Zone there are no barriers or toll booths for the administration of the system. The LEZ is enforced via PIPS fixed Spike+ ANPR cameras, which read the vehicle registration number plate as vehicles enter the LEZ, whereupon a comparison is made against a database of vehicles which meet the LEZ emissions standards, or are either exempt or registered for a 100% discount, or if the LEZ daily charge has been paid.

Toll Enforcement—Sydney, Australia

Sydney's Cross City Tunnel (CCT) project has provided a number of significant benefits to the city. These include improved traffic flow, enhanced public transport, dedicated cycle ways and improved pedestrian amenity. The CCT is a fully "electronic road", with no toll booths or barriers. This improves the flow of vehicles through the tunnels, improving travel times and reducing carbon emissions.

Tax Evaders—UK

The UK Government estimates that it loses many millions of pounds per annum in unpaid Vehicle Excise Duty. The Driver and Vehicle Licensing Agency awarded National Car Parks (NCP) the contract to recover this lost revenue through the use of mobile ANPR. The PIPS Pagis Mobile ANPR application was selected as the basis of this system. Alistair Cooper, Business Controller at NCP commented "PIPS were chosen to supply the ANPR system due to our existing relationship with them in the enforcement element of the Transport for London Congestion Charging scheme. It's excellent performance in identifying persistent evaders resulted in a 60% increase in the clamping and removal of congestion charge evaders". Recent figures on road tax evasion show that the (DVLA) collected an estimated 98.5% of all potential revenue from road tax in 2007. The survey was based on the use of ANPR cameras, providing a more accurate picture of Vehicle Excise Duty evasion. Previously road tax evasion figures were mainly collected manually but the figures are now primarily compiled using Automatic Number Plate Recognition technology, giving a more precise reading of evasion levels.

Vehicle Overweight Enforcement—Netherlands

The Dutch Ministry of Transport, the "Rijkswaterstaat", was concerned about the excessive damage to main roads caused by overweight trucks. In view of this, the Rijkswaterstaat awarded PAT, a German company the contract to install seven weight-enforcement systems on the motorway network. The ANPR cameras deployed at these sites capture the number plates and images of overweight vehicles detected by weigh-in-motion (WIM) sensors built into the road. Each monitoring point has four lanes monitored by PIPS ANPR cameras.

Debt Collection—UK

Equita, one of the UK's major debt collection companies chose PIPS ANPR technology to help locate the vehicles of individuals with outstanding debts. PIPS Technology equipped the vehicles with the latest ANPR cameras and software: four dual PIPS' P362 cameras, a PC running PAGIS and ANPR software, controlled by a touch screen display and onboard computer.

Enforcement for Charging Scheme—London, UK

Transport for London (TfL) required a company to provide the enforcement element for the Transport for London Congestion Charging Scheme. The contract was awarded to NCP (National Car Parks) who then approached PIPS to supply the ANPR system. PIPS P362 cameras are mounted on vans and connected to a purpose built mobile computer, which runs the PAGIS mobile ANPR software. PIPS ANPR cameras scan and record the vehicle registration numbers of every passing vehicle. The captured numbers are then cross-checked against the database of persistent congestion charge evaders. Even with millions of records in the database, PAGIS will return an answer within a fraction of a second.

11. Summary and Next Steps

Automatic Number Plate Recognition (ANPR) is growing in acceptance and adoption around the world. This is due to acknowledged improved performance and a better understanding of the benefits provided. The technology assists in enabling an improved quality of life for the General Public through reduced congestion, improved driver information systems, reduced crime and a safer environment.

The PIPS ANPR solutions are acknowledged as industry leading. These solutions can be readily integrated with our customer's existing products and systems, thereby optimising the performance and increasing the user value of the system as a whole. Designed to provide the highest levels of performance while passing the long term "cost of ownership" to our customers, PIPS is ideally positioned to meet and exceed your current and future needs.

January 2009

Memorandum from ITS (UK) (MRN 09)

1.0 Overview

1.1 Intelligent Transport Systems refers to the use of combinations of sensors, telecommunications, information processing and location referencing to deliver improved transport systems and services. These systems are widely used and can be readily seen on the Managed Motorway section of M42, the M25 Variable Speed Limits, and Traffic Control Centres used in the Motorway environment and by major cities, and in Urban Traffic Management & Control. These systems are also evident when deployed for traveller

information systems such as Variable Message Signs on trunk roads and on arrival time displays at bus stops. "In-vehicle" ITS systems include the delivery of real time information to "in-vehicle" units to inform drivers and travellers of travel restrictions.

2.0 Current Situation

2.1 This submission seeks to outline the current and future technology options that will assist in effective Major Road Network management. In particular ITS UK would like to respond to the specific issues raised by the Transport Committee under the three main categories of The Current Road Network, Meeting Demand and New Developments as follows:

The Current Road Network

2.2 Question 1: *Is the current major road network adequate for the needs of the UK economy and for individuals?*

2.2.1 This question has been addressed extensively by the Eddington Study. What has to be borne in mind is that the major road network must serve the needs of both the UK economy and individual travellers and the "mix" of the two will change as a result of either user demands or alternative supply policies and priorities. In order to be best placed to deal quickly and effectively with changing demands future strategic planning for the management and maintenance of major road network services will need to make more extensive use of Intelligent Transport Systems. These technologies can help to ensure that network capacity is managed efficiently, in order to deliver the highest reliability and throughput thus reducing the need to construct new capacity, and in ways that maximise safety and minimise environmental impact and influence travel behaviour.

2.3 Question 2: *Is the maintenance of the major road network adequate to ensure optimal efficiency?*

2.3.1 The infrastructure of the major road network is undergoing radical change as emphasis has moved from construction to active management and the associated technologies have developed from single function hardware-based devices to wide area networks of powerful modules controlled by software from a small number of command centres. This process is still underway and therefore road maintenance programmes need to be organised with great care to ensure the continued delivery of a reliable and "fit for purpose" network in the short term but with strategic planning that takes into account both new and emerging ITS technologies in order to support the migration to the future managed Network vision, the Intelligent Transport Systems environment. This will endeavour to ensure that as operational maintenance is planned the latest developments in technology are included in any strategic overview. Over time, the requirement to optimise network availability will reinforce moves to deploy new maintenance techniques that minimise physical possession of the carriageway.

More traffic on the existing network requires more active management as delays from incidents increase as less slack to absorb re routing. Also maintenance should be better planned to reduce emergency repairs.

2.4 *Question 3: To what extent should responsibility for major roads be given to local highway authorities and how much control should the Highways Agency retain?*

2.4.1 In general ITS (UK) considers that this issue is best addressed by other agencies that are considered better placed to comment. However from a practical management aspect ITS (UK) would like to emphasise that the idea of seamless travel with easy mode-to-mode transfers and consistent availability of quality traveller information and network services is not helped if responsibility for delivery is spread across large numbers of independent parties.

Meeting Demand

2.5 Question 4: *What should the relationship read between measures to increase road capacity and measures to manage demand for road space?*

2.5.1 There is no single or simple answer to the Committee's question. Road capacity can be increased by physically adding carriageways which is a slow, expensive and usually contentious process. But capacity can also be increased much more quickly—and much more cheaply—by actively managing the flow of traffic on the road or by releasing the dormant capacity of the hard shoulders, which were incorporated into motorway design many years ago when vehicle failures were far more common, and which are arguably not needed in the 21st century.

2.5.2 Managing the demand for road space can be done using a number of measures—controlling the flow on to the network using ramp metering or direct links to urban traffic management centres; applying Road User Charging; controlling flow within the network using variable speed limits, messages to drivers

through roadside infrastructure or directly to vehicles by wireless. The ITS toolbox contains all the products that are likely to be needed in the short term; the key issue is deciding what policies they are to be required to support. For example, what is the primary purpose of the motorway network? Is it to serve the needs of industry and commerce and thus the UK economy in which case demand management tools could be deployed—probably based on road user charging and active management of the carriageways—to deter the private motorist between 0700–1000 and 1600–1900 on weekdays to maximise benefit for that sector? Or is the network to continue to be freely available at any time to all classes of user? These two scenarios are not mutually exclusive: provided the network infrastructure has been properly thought through either policy could be selected at different times of day or to meet different traffic and environmental conditions.

2.6 Question 6: *How much integration is there between the road network and other modes of transport?*

2.6.1 The quality and quantity of physical integration between road networks and other modes is very uneven and unfortunately reflects the idiosyncratic governance of transport in the UK with a complex mix of free market operations, subsidised transport, franchised activities, socially-demanded services and publicly-provided facilities all operating with no over-arching planning or service integration. There are a number of good integration examples such as a roll-on-roll off ferries and airport transport hubs but there are many poor examples where narrow spatial planning responsibilities and commercial rather than social factors regarding service provision combine to deliver exceedingly poor examples of what was described in the 1998 White Paper as "Seamless Transport".

2.8.2 There is a much better story to tell regarding integration of other transport services such as traveller information where the UK is among the leaders world-wide in the use of ITS to give travellers coherent information before and during the journey well as alternative route choices when journey planning. The UK is also one of the pioneers of e-payment where for example the deployment of the ITSO smart card standards by DfT as part of the national concessionary travel scheme has put down a platform which can enable the integration of a wide range of transport services to travellers as well as non-transport local community activities.

2.7 Question 7: *What types of scheme should be prioritised and current mechanisms reflect in these priorities?*

2.7.1 A number of studies have suggested that over the longer-term access to the national major road network cannot continue to be entirely the choice of the vehicle's driver. In much the same way as aircraft and trains use their network only when allocated a "slot" and are managed throughout their journey the best use of national road network capacity will be achieved by a combination of managed access and managed journeys where vehicles and infrastructure are closely coupled and work cooperatively. Such an approach would maximise the network's capacity and reliability with associated benefits for safety and environmental impact.

2.7.2 However although the "totally managed motorway" is some years away it is possible to anticipate its arrival and get enhanced value from investments by ensuring that all procurements of roadside infrastructure take maximum benefit from the current capabilities of ITS products. Systems need to be designed and purchased to be flexible, extendable, and capable of meeting not just the 2009 requirements but those of 2019 and 2029. The equipment for Advanced Traffic Management, for example, must be seen as the purchase of a basic platform of functions that can be reprogrammed to support alternative policies.

New Developments

2.8 Question 8: *What are the implications of the climate change Bill for the development of the major road network?*

2.8.1 Improved efficiency of the major road network will deliver improved traffic management and thereby reduce CO_2 emissions. ITS technology such as Urban Traffic Management & Control and the deployment of Managed Motorways (as seen on the M42) has demonstrated both efficient traffic management and the capability to reduce CO_2 emissions. ITS technology can also inform travel planning and freight logistics planning capabilities. Travellers can plan the most efficient routes to utilise to reduce their carbon footprint. ITS technology can also be used to inform travellers of the best route to undertake, thereby strategically managing the major road network, with a key target of carbon emission reduction.

2.9 Question 9: *What are the implications of anticipated population growth in the UK, particularly in designated growth areas for the development of the major road network?*

2.9.1 It has been noted earlier that installing physical capacity such as upgrading a dual-two or dual-three motorway to dual-three or dual-four is expensive and slow. ITS products represent the few tools able to squeeze more capacity from a busy road and simultaneously help to reduce the demand to use roads by supplying reliable traveller information and costs about alternative modes and re timing of journeys or rerouting. In general the timescales for ITS projects will be 12–24 months compared to 10+ years for significant road building.

2.10 Question 10: *To what extent do emerging road and vehicle technology (Intelligent Transport Systems) change the requirements for the major road network?*

2.10.1 It would be a disastrous mistake to plan the development of the national road network on the assumption that it will be a separate "standalone" entity from the vehicles that use it. Over the last 15 or so years the typical family car has evolved extensively. The engines produce more power using less fuel and emitting less toxic gas than in the past. The vehicle is physically much stronger and will protect the occupants in collisions using stronger materials, better designs and a mix of active and passive safety technology. The vehicle might be fitted with a number of safety technologies such as lane departure warning, lateral blind spot warning, electronic stability programme, speed limit warning, active cruise control; it might also have satellite-based navigation with real-time update on road conditions. A really up-to-date vehicle might have vehicle-to-vehicle communication so that if, for example, the first vehicle on the road detects black ice and very low temperatures it can warn all the following vehicles of the threat of skidding and general loss of control.

2.10.2 The road of the future—and this is five years away rather than 50 years—will need to be actively managed in order to deliver maximum output and minimal environmental impact; it will also need to work cooperatively with the vehicle fleet in order to help push down the numbers of accidents and the associated killed or seriously injured. Thus the future design, development and maintenance of the major road network needs to be based on the deployment of ITS infrastructure that works seamlessly with what is already being installed in vehicles. This will include:

- Traffic monitoring systems.
- Traffic signalling.
- Overhead gantry signalling.
- Traffic signalling technology.
- Traffic control centres.
- Variable message signs.
- Co operative Vehicle to Highways Infrastructure Systems.
- Telecommunication services.
- Back office processing capabilities.
- Information systems for all travellers and for freight logistics planning.

2.10.3 These developments reinforce the need for a critical examination of a number of fundamental principles. The question of the principal customer for the network has already been raised; other key issues are the extent to which an extensive and expensive of roadside traffic signals and variable message signs will be needed when it will be possible to communicate directly with each vehicle on the network; the extent to which a new Road Safety Target could be delivered by extensive adoption of cooperative vehicle-highway principles; the extent to which overall network delivery could be enhanced by separating the carriageways into freight and not-freight, "registered and managed" and free access.

3.0 Summary

3.1.1 ITS products and services are now well-understood and deployed across the UK. They offer the potential to join services together—Local Authority to Local Authority; Local Authority to Highways Agency—and to maximise the benefit from the national major road network by a range of new management techniques as well as by co-working with in-vehicle systems. They also support the provision of information to all travellers, through a range of devices, on route choices, prices of traffic and traveller information, warnings of congestion, prevailing speed limit etc, and the in-vehicle display of traffic signs including mandatory and hazard warnings.

3.1.2 It is essential to think of the major road network not as an isolated entity but as a part of the UK transport system and therefore one that now needs to be developed as part of a road–vehicle cooperative system in order to achieve maximum gain for safety, economic development and environmental impact. ITS products and services can support this key policy.

January 2009

Memorandum from the Royal Automobile Club (RAC) Foundation for Motoring (MRN 10)

1. Summary

(a) Planned transport capacity is inadequate to meet realistic forecasts of need.

(b) A long-term strategy and a construction programme for national roads is required. This should be financed by reform of road taxes and charges to secure a more efficient use of the road network and an independently regulated, fairer charging regime.

(c) The Department for Transport (DfT) should set up a transport planning capability to assess national transport needs over the next 30–50 years and determine ways to meet them. It is essential that the national network is comprehensively defined.

(d) Motorway widening, hard shoulder running and active traffic management are sensible short-term solutions but they do not address the longer-term growth in demand.

(e) Using congestion to choke-off the growth of traffic will only add to pollution and an increase in greenhouse gases. The investment programme we advocate would increase CO_2 production by about 5%, but this would be more than offset by the improved fuel efficiency of vehicles. National road pricing would reduce carbon emissions by about 15%.

2. About the Royal Automobile Club Foundation

2.1 The Royal Automobile Club Foundation explores the economic, mobility, safety and environmental issues relating to roads and the use of motor vehicles, and campaigns to secure a fair deal for responsible road users. Independent and authoritative research for the public benefit and informed debate are central to the RAC Foundation's standing.

2.2 Many of the questions posed by the Select Committee are directly addressed in the RAC Foundation's study, *Roads and Reality*[2]. We have drawn on that study, which contains detailed evidence and supporting argumentation.

3. Overview

3.1 This inquiry relates to the major road network, the motorways, trunk and principal roads. Responsibility for this is spilt between central, regional and local government. Central government responsibility is confined to the motorways and the A14, failing to recognise that other major roads have a national function in carrying substantial inter-regional and international traffic.

3.2 Despite the sensible reasoning for devolving to a regional level, the reality is that, with the exceptions of Wales and Scotland the arrangements have not served the national strategic road network well.

3.3 In Roads and Reality[3] we argue for the identification of a more extensive national network to be managed and developed for a primarily national role, providing connection between all major economic and population centres, and to key transport interchanges. Such a network should also recognise the need for alternatives to the principle links if it is to function effectively.

3.4 The government should:

— Publicly state a rationale and objective criteria for roads of national interest.

— Review and identify a network of such roads.

— Plan, fund, construct and manage the network.

3.5 Introducing road pricing as a national policy is now the more necessary due to the failure of Manchester's local Transport Innovation Fund scheme.

3.6 The Select Committee's terms of reference do not explicitly mention road safety but it has a national strategy. Motorways are the country's safest roads, which goes someway to illustrate how new road engineering and design standards can help reduce casualties.

3.7 Policies on roads and public transport should not be in conflict: as emphasised in the Eddington Transport Review.[4] The oft-implied dichotomy between private vehicle travel and public transport is artificial: all modes rely on roads. Balance is the objective.

3.8 The Foundation supports cost-effective investment in public transport, which has suffered a lack of investment. However, the scope for transferring private passenger and freight movements from roads is severely limited. The public transport alternatives could only be given sufficient extra capacity at an unaffordable cost. Any claim that the solution to the problems of congestion, emissions or pollution can be solved by improved public transport needs to be scrutinised.

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[2] *Roads and Reality*, RAC Foundation, December 2007, and the supporting technical document which may be downloaded from http://www.racfoundation.org/index.php?option=com_content&task=view&id=535&Itemid=31

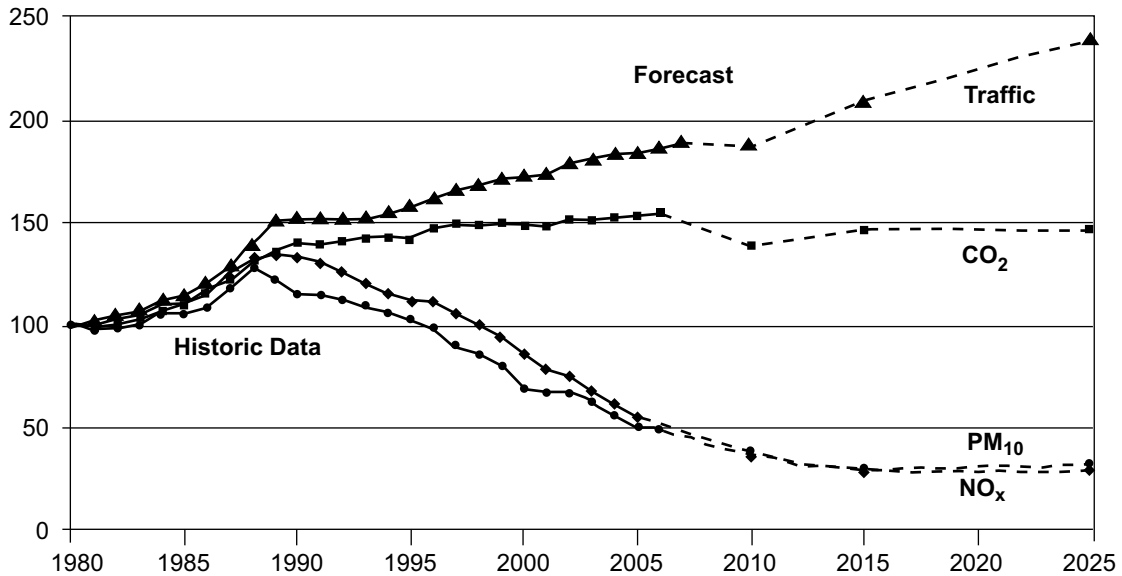
[3] RAC Foundation (2007) *Roads and Reality*. p 67 2nd para.

[4] HM Treasury, Department for Transport (DfT) (2006) *The Eddington Transport Study: The Case for Action*. (London: TSO)

3.9 Policy should not be unduly distorted by the current economic circumstances. The demand for all transport services is closely related to the level of economic activity (GDP) and population. On the reasonable assumption that economic growth will return and current demographic forecasts remain valid, the demand for both road and rail must be expected to increase.

Figure 1

ROAD TRAFFIC AND ROAD TRANSPORT EMISSIONS, PAST AND FORECAST



Source: Historic traffic data from DfT (2007); Historic emissions data from DECC (2007); Forecasts from the NTM

3.10 Figure 1, taken from the DfT's Road Transport Forecasts, 2008, summarises the government's own estimate of traffic growth following economic recovery. The government has a responsibility to say how they will respond to these forecasts. Our own Roads and Reality concurs and shows how the trend is expected to continue beyond 2025.

3.11 The Figure also illustrates how the need to reduce greenhouse gas emissions from vehicular traffic is not the same as reducing traffic. The first report of the Committee on Climate Change also makes this clear.

3.12 We recognise that government is finding reform of road pricing an increasingly difficult policy. It is inescapable that if government chooses not to reform charging then the need for extra capacity will be even greater: as emphasised by Eddington.

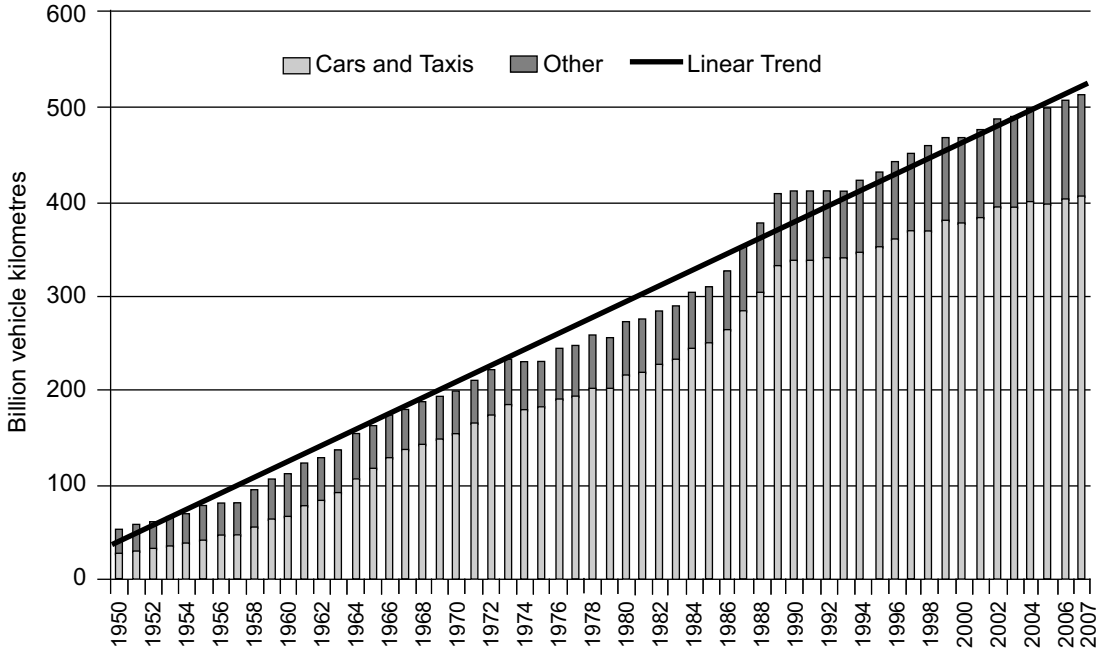
3.13 Either way some new road capacity is necessary. Government needs to take undertake some proper planning. Whilst we can now welcome such a system for the railways with the High Level Output Specification (including a strategy on pricing) and the complimentary Statement of Funds Available, this has rarely been attempted for roads.

4. The Current Road Network

The adequacy of the road network

4.1 Figure 2 shows the growth of traffic between 1950 and 2007. Effects of government policies—such as the 1998 Transport White Paper or the 2000 10-Year Transport Plan—are hard to detect.

Figure 2: All motor vehicle traffic in Great Britain: 1950-2007



Source: Road Statistics 2007, DfT.

4.2 The rate of provision for new Trunk road capacity has fallen far behind this growth (See Figure 4, p 9) and so congestion has got worse.

4.3 Public attitudes to congestion and road pricing, DfT (May 2008)[5] finds:

- 87% of adults believed congestion to be a very serious or serious problem.
- 77% of adults believed it to be very or quite important for the government to tackle congestion in relation to its other responsibilities.

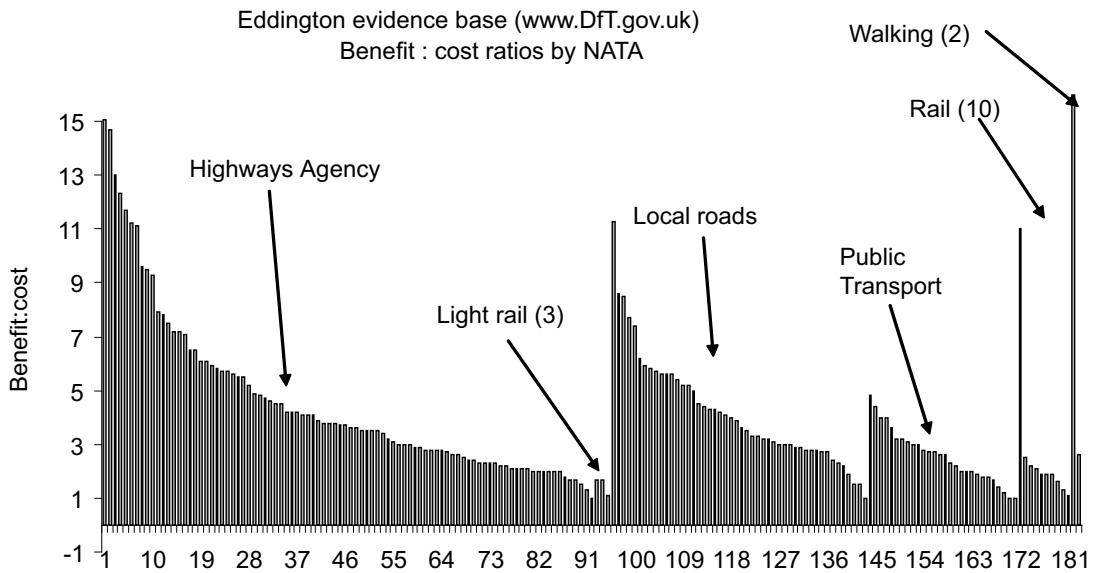
Business puts a particularly high cost on congestion[6]

4.4 Eddington and the Department for Transport both recognise[7] that freight users and personal road users have become concerned about the unreliability of road journeys. This represents an important, additional decline in the quality of service offered by the road network.

4.5 The RAC Foundation estimates that by 2041 the number of cars will be 44% higher than today and that car trips will increase by 24% when forecasts for population growth, the number of households and incomes are taken into account. Traffic will also grow by 39%. Economic downturns and changes in fuel prices have a short-term influence, as documented in the RAC Foundation/Trafficmaster annual Congestion Index.[8]

[5] http://www.dft.gov.uk/162259/162469/221412/221513/337726/congestionroadpricing.pdf
[6] British Chambers of Commerce (2008), *The Congestion Question: A Business Transport Survey*, BCC, London, November.—£23.2 billion in 2008.
[7] http://www.dft.gov.uk/about/publications/apr/ap/autumnperformance08.pdf
[8] http://www.racfoundation.org/index.php?option=com_content&task=view&id=580&Itemid=31

Figure 3



Source: www.dft.gov.uk

4.6 Figure 3 is taken from the Eddington report showing the importance of good transport links to the economy. Each vertical bar represents the DfT's estimate of the benefits divided by the costs for one transport scheme. It illustrates the outstanding performance of road investment schemes, which is probably a reflection of historical under-investment for a growing market.

Road maintenance

4.7 The situation in respect of Trunk roads seems adequate (see the DfT's *Road Conditions 2007*[9] tables 2.1, 4.1, 4.2, 5.1 and figure 4.3). It appears that Motorway maintenance maybe better than all-purpose Trunk roads which, in turn may be better than Principal roads. The picture is confused by recent changes in the ways that road conditions are assessed.

4.8 According to the ALARM survey[10] the picture for local roads is worse. About three quarters of the Trunk and A road network is under local authority control and there are allegations that some of these roads are not being optimally maintained because local authorities do not spend the funds allocated for roads on their intended purpose.

4.9 Highway authorities can and should measure, predict and analyse road condition to demonstrate that their rate of expenditure on maintenance is appropriate. Artificial budget restrictions should not be allowed to distort the optimum balance between revenue and capital spending.

Responsibility for major roads

4.10 Central Government is now only directly responsible for the Motorways and the A14. The recent Report on the A12[11] illustrates the difficulties that can occur. In this case when funding responsibility was devolved to regional government, the funds were not adequate to provide for the rapidly growing demands on the major route.

4.11 The first, most urgent steps we recommend can be carried out without the delay that major change in organisation would cause. We recommend that:

— The Department of Transport should set up a long-term transport planning capability.

— The relationship between the Department and the Highways Agency is adapted. The Highways Agency should progressively take responsibility for the development of a wider network of major routes to help deal efficiently with congestion.

4.12 A new organisation would be needed to plan, operate and be accountable for road pricing. The changes involved would be a major exercise, and implementing them should not get in the way of planning and carrying out the necessary investment. In due course the new organisation's responsibilities for the use of pricing revenue for the benefit of road users could include:

— managing and maintaining the strategic road network;

[9] www.dft.gov.uk/pgr/statistics/datatablespublications/roadstraffic/maintenance/rce2007
[10] Asphalt Industry Alliance, ALARM Survey 2008, Key Findings.
[11] *The A12, Report of the Commission of Inquiry*, Essex County Council, 2008.

— collecting and distributing revenues and;

— strategic road planning and enhancement.

4.13 Under the new Planning Act the Government will prepare national policy statements for major infrastructure, including transport. We support this.

5. Meeting Demand

Increasing road capacity and managing demand

5.1 General objections to increasing road capacity are often based on beliefs sustained by over-simplifications and misconceptions.[12] Roads and Reality argues that:

— There is a strong economic case for more strategic road capacity in Great Britain at an annual rate of at least 600 lane kilometres a year whether or not road pricing is introduced. This is about the average level of road building achieved in the 1990s.

— Road building combined with efficient pricing would result in a higher economic return because mobility would be enhanced while congestion is reduced. It would also be fairer. The extra capacity would reduce the price needed to contain congestion, and travel by car would be affordable for more people on lower incomes.

5.2 The Eddington Report estimated that in the absence of action, the cost of congestion would rise by £25 billion between 2003 and 2025. It would go on growing thereafter. Eddington forecast an increase in delays on trunk roads of 28% between 2003 and 2025 with his "economically justified" road programme (but no road pricing).[13]

5.3 Pricing in congested urban areas would need to be implemented with a complementary package of additional road capacity, public transport and other measures.

5.4 A crucial issue not covered by the Eddington Study is how the income from pricing should be spent. There is a need for clarity on this issue.

5.5 The British inter-urban road network is already intensively managed and scope for improving traffic conditions through conventional traffic management is quite limited.

5.6 Active Traffic Management (ATM) can involve a range of more intensive interventions to improve traffic flows and safety.[14] This policy is being taken forward.[15] It is understood that the cost of ATM is about a third of that of carriageway widening but it is not much more cost effective than carriageway widening. Neither approach, on its own, deals with the problem of junction capacity.

5.7 High Occupancy Vehicle lanes, with or without tolling, can improve and potentially optimise the utilisation of congested roads but do not increase capacity and may well reduce it.

5.8 For many years automated highway operations have been discussed but the problems of realising this safely are such that they have remained elusive although some component technologies (eg intelligent cruise control) may have a contribution to make.

Alternatives to private vehicle use

5.9 The RAC Foundation considered the contribution that improving public transport could make to relieving congestion in *Motoring towards 2050*.[16] It would have some effect in reducing the expected growth in road traffic but this would not be substantial.

5.10 Over the last decade or so attention has been increasingly turning to initiatives that will reduce "the need to travel". Conclusive evidence on the impacts of these as general policies is hard to come by.

5.11 Table 1 suggests that the two most effective measures are workplace travel plans and tele-working/conferencing. Total inter-urban road traffic is currently about 160 bn vehicle kilometres a year. If these effects were fully achieved over ten years they would amount to about 10% of the expected trunk road traffic growth.

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[12] Ten such are discussed in D Bayliss, *Misconceptions and Exaggerations about Roads and Road Building in Great Britain*, RAC Foundation, November 2008 http://www.racfoundation.org/index.php?option=com_content&task=view&id=600&Itemid=31

[13] Eddington Pricing and Investment case table 5.1.

[14] ATM Monitoring and Evaluation 4-Lane Mandatory Speed Limits, 12 Month Report, Summary.

[15] Better managed motorways and more funding to tackle urban congestion.

[16] *Motoring Towards 2050*, RAC Foundation for Motoring, 2002.

Table 1

POSSIBLE REDUCTIONS FROM TRAVEL DEMAND MEASURES FOR INTER-URBAN ROAD TRAFFIC

Measure	*Possible effect*	*Comment*
Workplace travel plans	1bn vkms/year	20% of 5bn total.
School travel plans	Negligible	Relatively small effects are localized.
Higher education travel plans	Probably very small	Lack of evidence to suggest that these are significant.
Hospital travel plans	$<\frac{1}{2}$bn vkms/year	Resistance growing.
Personal travel plans	$<\frac{1}{4}$bn vkms/year	Would require considerable sustained effort.
Car clubs	Negligible	Very small effects in towns and cities.
Promotion of walking and cycling	Negligible	Effects confined to short trips mainly in urban areas.
Integrated Travel Planning	Not much greater than the sum of the above—< 3bn vkms/year	Effects confined to short and medium length trips mainly in urban areas.
Land use changes	Uncertain	Consolidation may reduce urban but increase inter-urban. Changes will be slow. Development needed for population growth will increase travel.
Tele-working and tele-conferencing	2bn–3bn vkms/year	This is already happening.
Internet shopping and e commerce	Negligible	Could result in net traffic generation.

Integration

5.12 Integration is not new, and is a goal often expressed and never fully delivered. The RAC Foundation would support a more consistent approach to transport integration but integration on its own will not encourage wholesale movement from car to public transport.

5.13 The fundamental elements of integration, which central government should be primarily concerned with are: rational pricing/taxation, consistent regulation, congruent evaluation criteria and resource allocation.

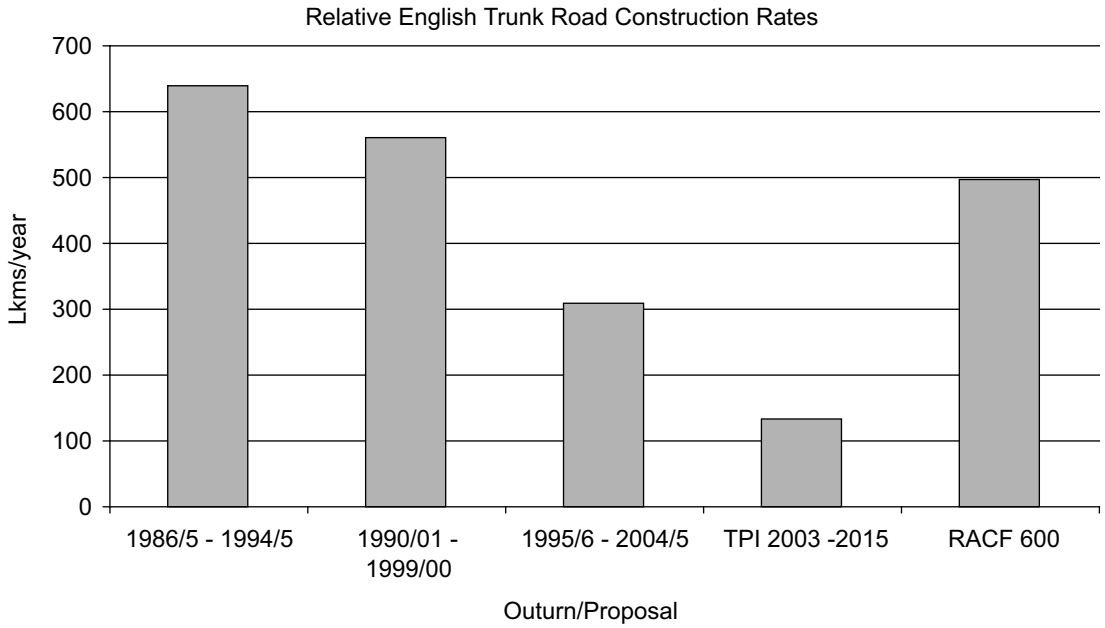
Priorities

5.14 Our recommended programme for the future would provide good value for money with scheme benefit-cost ratios above 2:1. We recognise that there are pressures on public expenditure, but the programme we advocate is capital expenditure, producing a higher rate of economic return than most other forms of public spending. It is also self-funding.

5.15 Figure 4 shows for the strategic road network in England how Roads and Reality's conclusions compare with past rates of construction and the Highways Agency's current Targeted Programme of Improvements (TPI) which should be substantially completed by 2015.

Figure 4

ACTUAL AND PROPOSED RATES OF ROAD CONSTRUCTION



5.16 The Government has rightly decided that any long-term planning should be prepared on a multi-modal basis. But we would counsel against following the pattern of local Multi-Modal Studies of the late 1990s. These took a long time, were expensive and had little effect. We hope the review under the chairmanship of Lord Adonis will provide a brisker, more focussed piece of work. But it will need to consider how to look at the longer-term strategic issues for roads, to complement the work of several bodies that will do this for railways.

5.17 Considerations of planning may point towards completely new roads (and rail routes), to reflect changes in location of population and economic activity or the establishment of new ports and airports. Providing parallel alternative route capacity would not only relieve the major Motorways, but would provide diversionary routes when accidents or other events cause disruption. It would also relieve the excessive pressure on existing Motorway junctions.[17]

6. New Developments

Climate Change

6.1 It is mistaken to argue that constraining road-building and massive investment in public transport will cut greenhouse gases. Even if the use of public transport were doubled, it would make only a small difference either to the demand for car travel or to carbon emissions. Congestion wastes fuel and so adds to the production of carbon dioxide. Roads and Reality estimates that road building on the scale we envisage would increase carbon dioxide by no more than 5% assuming no other change: but improvements in fuel and vehicle technology will achieve greater reductions by then, and road pricing would more than counteract any effects of road building.

6.2 If the aspirations of the Committee on Climate Change to substantially de-carbonise road vehicles are realised then climate change policy will be less relevant to the need for road infrastructure.

Population growth

6.3 Roads and Reality adopted the official demographic forecasts which assume an 11% growth in people by 2041. Differences in location of population growth by Region account for the differences in forecast traffic in Table 2.

[17] *See* D Bayliss, *What Pattern of Motorway Network is needed?*, RAC Foundation, (December 2008), http://www.racfoundation.org/index.php?option=com_content&task=view&id=599&Itemid=31

Table 2

FORECAST GROWTH IN VEHICLE KILOMETRES BY AREA

Area	*Vehicle Kilometres % growth in demand 2005–41*
Great Britain	37
Scotland	23
North East	31
North West	34
Yorkshire and Humber	40
West Midlands	32
East Midlands	41
East	46
London	41
South East	39
South West	44
Wales	31

6.4 It is apparent that above-average growth is to be expected in those regions of the country where the road infrastructure is already particularly stressed. The most recent DfT forecast are for overall congestion to increase because of "brownfield" development policies.

Vehicle technology

6.5 Higher levels of control and automation using modern technology are much more practicable on purpose built traffic routes.

January 2009

Joint memorandum from the Institution of Civil Engineers and Institution of Highways and Transportation (MRN 11)

Institution of Civil Engineers

The Institution of Civil Engineers (ICE) is a UK-based international organisation with over 75,000 members ranging from professional civil engineers to students. It is an educational and qualifying body and has charitable status under UK law. Founded in 1818, the ICE has become recognised worldwide for its excellence as a centre of learning, as a qualifying body and as a public voice for the profession.

Institution of Highways and Transportation

The Institution of Highways & Transportation (IHT) serves the transport profession for the benefit of society and its members. With over 11,000 members, working across a wide range of disciplines, it aims to promote the exchange of knowledge, improve policy formulation, stimulate debate on transportation issues, recognise and develop individual competence (through qualifications and continuing professional development) and encourage best practice in the industry.

Summary

— The major road network is not realising its full economic, social and environmental potential while it suffers record levels of congestion. A combination of intervention measures such as better public transport and systems of demand management will reduce car use, enabling free flowing traffic to allow people and goods to move quickly and reliably.

— Reactive road maintenance has improved road conditions but does not deliver value for money or improve efficiency, yet reactive work levels are increasing, particularly at the local level. Planned preventative programming provides better value for money and is more efficient.

— There should be a symbiosis between increasing road capacity and the management of road space. Targeted network capacity increases should therefore be tied into a system of demand management to secure the benefits.

— Increasing public transport capacity is essential to providing attractive alternatives to road use.

— Supporting infrastructure should be implemented before the construction of housing developments planned to meeting rising population demands.

The Current Road Network

1. *Is the current major road network adequate for the needs of the economy and for individuals?*

1.1 ICE and IHT do not believe the UK's major road network is realising its full economic, social and environmental potential—both nationally and locally—while it suffers record levels of congestion, and its management and operational structures are fragmented.

1.2 The UK's major road network is severely congested and reducing it must be a top government priority.

1.3 Forecasts for levels of road traffic in England predicted 29% and 38% increases for the 2015 and 2025 respectively from the level in 2000. The figure for cars and taxis were 27% and 33% respectively. In addition, it is predicted that the number of cars will rise by 40% by 2025 (again from the year 2000).[18] Overall, traffic volumes are growing at far greater levels than the overall length of the road network.

1.4 This congestion has a negative effect on the economy, environment and our quality of life. Hold-ups on our motorways and trunk roads cost the economy £15 billion every year[19] and according to Eddington, the rising cost of congestion will waste an extra £22 billion of time in England alone by 2025.[20]

1.5 ICE and IHT agrees with Eddington that investment in transport generally makes economic sense; indeed spending on transport offers very high returns compared with other policy areas. We also agree with Eddington that the economic case remained strong for both public and private investment in new capacity, although most economic benefit is derived from network improvements which are gradual or incremental, and targeted at the existing network.

1.6 An extensive road building programme is not sustainable on cost or environmental grounds, with alternative measures needed to reduce the growth in traffic volumes. With the possible exception of London, congestion (particularly on motorways and in urban areas) is becoming increasingly problematic with increases in delay and decreases in average traffic speeds and journey time reliability. It will take a combination of intervention measures such as road pricing and better public transport to persuade car drivers to use another mode of travel to allow the road network to fulfil its economic potential by enabling free flowing traffic so people and goods can travel around the country quickly and reliably.

2. *Is the maintenance of the major road network adequate to ensure optimal efficiency?*

2.1 ICE and IHT believe that while reactive and proactive road maintenance has improved the road condition, reactive work is far from delivering value for money or improving efficiency.

2.2 In July 2000, the Government set out a target, using the surface condition defects index, to halt the deterioration in the condition of local roads in England by 2004, defined as non-trunk or principal roads. A significant decrease in the index indicates an improvement in the road condition. Between 2000 and 2006 there was a reduction in the average defects index for English roads (112.5 in 2000 reduced to 91.2 in 2006). The combined defects for England and Wales fell by similar levels, mainly because 90% of all local roads in England and Wales are located in England.[21]

2.3 There has been a link between the levels of maintenance expenditure on principal roads in England and their surface road condition measured by the defects index. Expenditure remained fairly constant in the early 1990s but was approximately 25% lower towards the end of the decade. Since then, levels of funding have increased, which have been associated with an overall improvement in conditions.

2.4 Increased funding has delivered an overall improvement, budget shortfalls still exist and inefficient use of the investment on reactive work, is adding to an ongoing backlog of more cost effective proactive maintenance.

2.5 According to the results of the Annual Local Authority Road Maintenance (ALARM) Survey 2008,[22] there is still a shortfall in the principal road structural budget of an average £7.5 million per local authority in England (£4.2 million in London and £3 million in Wales) which constitutes only half of the required budget. At least a quarter of that budget was spent on reactive maintenance (eg repairing potholes),

[18] DfT (2007). *Transport Trends: 2007 Edition*. HMSO, London.
[19] ICE (2006). *State of the Nation*. Institution of Civil Engineers, London.
[20] Eddington, R (2006). *The Eddington Transport Study: Main report: Transport's role in sustaining the UK's productivity and competitiveness*. HMSO, London.
[21] DfT (2007). *Transport Statistics Great Britain: 2007 Edition*. HMSO, London.
[22] AIA (2008). *Annual Local Authority Road Maintenance (ALARM)*. Survey 2008). Asphalt Industry Alliance, London.

the total cost of which is estimated at £52.3 million across England, London and Wales.[23] This is the clear indication of the cost inefficiency of reactive maintenance. The same amount would have paid to 1,000 lane miles of carriageway to have been completely resurfaced.

2.6 Reactive maintenance is extremely inefficient yet levels are rising. The ideal proportion of annual budgets dedicated to reactive maintenance is 16% in England, 14% in London and 20% in Wales. However, the average spend in 2007 were 26%, 32% and 23% respectively.[24] According to AIA estimates, reactive work costs as much as 10 times more than a planned maintenance programme.[25] Reactive work rarely tackles the underlying cause of damage, will likely need to be repeated regularly and fails to prolong the life to the road. Planned preventative programming provides a far better value for money and is much more efficient.

2.7 Another particular problem can be the deep trench excavation carried out by utility companies which can reduce the remaining life of a particular stretch of road by 30% or more. These "utility openings" per local authority can have a real impact on the maintenance budgets and therefore the overall road condition. Premature resurfacing, often on roads which are a patchwork of trench reinstatements, is an extremely inefficient use of funds.

2.8 In addition there is a problem with considerable highways maintenance backlog. Based on current resources and funding, it will take 11 years in England (excluding London), 10.4 years in London and 16.1 years in Wales to clear carriage way maintenance backlogs.

2.9 Mirroring continuing budget shortfalls, there is nothing to suggest that there will be any significant reduction in this backlog. If anything, backlog will increase if budgets remain the same, ie 50% of what they should be.[26]

2.10 In addition, road user safety is at risk from underfunding in asset improvement. This can also lead to expensive user compensation claims; money that could be better spent on proactively improving principal road conditions to avoid such claims.

2.11 Central government appear to have recognised the value of roads as a national asset and local authorities have been urged to place an equal value to their roads through the implementation of transport asset management plans, which will give them a clearer basis on which to put their case for increased highway maintenance budgets. However, the preparation process of transport asset management plans is complex and time-consuming, putting additional pressures on already busy local authority highways departments.

2.12 Finally, within the overall investment framework there are artificial hurdles in central government investment and funding decision making processes that stand in the way of delivering efficiency and value for money. In a typical year, for example, providers must cope with the following:

- *First Quarter*: Funding is not confirmed from day one and the list of schemes is short because of the high level of maintenance activity in the preceding Fourth Quarter.
- *Second Quarter*: This is the only time of the year when maintenance schemes are delivered in a controlled manner, ie when the weather is good and better value of money can be acquired through the supply chain.
- *Third Quarter*: This quarter sees a downturn in performance and efficiency and funding streams dry up. While future funding in inevitable, since it is not released until the Fourth Quarter, operations become inefficient.
- *Fourth Quarter*: New funds are released in the New Year, which leads to an annual peak in workload, but at the worst time in respect of the weather and higher prices from the supply chain. Consequently value for money and efficiency are significantly reduced.

2.13 Funding and the timing of funding decisions are therefore directly related to the efficiency of a principal road maintenance operation. It could be argued therefore that efficient road maintenance is only delivered during 25% of the year. Further effort must be placed on improving the efficiency of road maintenance management and procurement.

3. *To what extent should responsibility for major roads be given to local highway authorities and how much control should the Highways Agency retain?*

3.1 ICE and the IHT believe the giving responsibility for motorways and trunk roads to local authority political control would be a step backwards. The establishment of the Highways Agency and the changes introduced have provided and demonstrated a more coherent and tighter management control of the motorway and truck road network.

[23] AIA (2008). *Annual Local Authority Road Maintenance (ALARM)*. Survey 2008). Asphalt Industry Alliance, London.
[24] AIA (2008). *Annual Local Authority Road Maintenance (ALARM)*. Survey 2008). Asphalt Industry Alliance, London.
[25] AIA (2008). *Annual Local Authority Road Maintenance (ALARM)*. Survey 2008). Asphalt Industry Alliance, London.
[26] AIA (2008). *Annual Local Authority Road Maintenance (ALARM)*. Survey 2008). Asphalt Industry Alliance, London.

Meeting Demand

4. *What should the relationship be between measures to increase road capacity and measures to manage demand for road space (or example road pricing)?*

4.1 ICE and IHT believe there should be a symbiosis between increasing road capacity and the management of road space. Targeted network capacity increases should therefore be tied into a system of demand management/pricing to secure the benefits.

4.2 A clear link between transport costs and transport funding should be created with at least a portion of the proposed revenue from any road pricing scheme being ploughed directly back into the transport network, to increase public transport capacity and ease pinch points on the major roads network.

4.3 Change can be encouraged in a number of ways, from charging for parking at work and the reallocation and reduction road space for private motor vehicles, to congestion charging and a full road user charging system.

4.4 A fundamental change in the way motorists pay for journeys, created by the introduction of an up-front payment system and a corresponding reduction in taxes would allow people to effectively measure the direct cost of their journeys against the price of public transport. This flexible system would help nudge people towards a change in their travel habits, easing highway congestion and thus easing road wear and tear. Ring-fencing some of the money raised from a road pricing system could then be used for public transport and highways maintenance budgets.

4.5 Finally, ICE and IHT support greater use of road space reallocation, eg dedicated bus lanes and high-occupancy vehicle lanes as demand management tools to make better use of existing road space and enhance public transport journeys.

5. *To what extent can alternative modes of transport, travel planning and land-use planning provide alternatives to private car use and road freight?*

5.1 ICE and IHT believe that increasing public transport capacity is essential to providing attractive alternatives to the private car and supports the government strategy to reduce greenhouse gas emissions in the UK. Rail offers the most practical alternative for inter-urban travel between major towns and cities on radial routes or strategic cross-country routes. However, rail capacity is already severely strained. Patronage has grown by 40% over the past 10 years[27] but rail capacity has failed to increase correspondingly. To become a truly viable alternative, capacity must be increased. For smaller towns or towns not located on the radial national of strategic cross-country network, buses and coaches remain the only viable inter-urban mode of transport other than the car.

5.2 Buses, trams and light rail are excellent modes for intra-urban travel. However, bus travel outside of London has been in decline over the past 50 years. The biggest falls have been in English metropolitan areas where the number of journeys almost halved between 1985–86 and 2006–07.[28]

5.3 ICE and IHT encourages the government to move forward its plans to reform the bus services operators' grant by removing the link between fuel usage and bus subsidy levels, which would allow the introduction of better targeted support. More frequent, predictable and reliable bus routes would also mean lower waiting times, and mixing stopping and express services would mean a more rational services and quicker journey times.

5.4 However, improvements to public transport alone will not be enough to dramatically change the way we travel—most of the population are too reliant on cars to adjust immediately. Government must address the culture of car dependency if meaningful grassroots change is to occur.

5.5 ICE and IHT also support the greater use of travel plans. The 2004 DfT report *Smarter Choices* helped to publicise and promote what can be achieved by this method. The government has encouraged local authorities, business, hospitals and schools to introduce travel plans to reduce car use. We also believe that the assumption that journeys need to be made in the first be needs to be challenged, and that flexible working practices, such as remote access and video conferencing have a valuable part to play, particularly when packaged together within a workplace travel plan that includes environmentally public transport alternatives when travel is unavoidable.

5.6 As for freight, rail produces between five and 10 times less carbon per tonne that road transport[29] and over the past six years rail freight has saved an estimated 2 million tonnes of pollutants—equal to 6.4 billion lorry kilometres and 31.5 lorry journeys. In addition, despite being safer and better for the environment than road freight, rail only accounted for 9% of all goods moved in 2006.[30] More must be done, therefore, to increase the attractiveness of rail as an alternative for moving freight.

[27] DfT (2007). *Transport Statistics for Great Britain 2007 Edition*. HMSO, London.
[28] DfT (2007). *Transport Trends: 2007 Edition*. HMSO, London.
[29] DfT (2007). *Transport Trends: 2007 Edition*. HMSO, London.
[30] DfT (2007). *Transport Trends: 2007 Edition*. HMSO, London.

5.7 Short-sea shipping—moving goods around the British coast line to their destination, with local ports services a "coastal ring-road"—could provide a vital method of removing some of the pressure freight puts on our congested highways. However, the issue of greenhouse gas emissions from short-sea shipping would need to be addressed in order for the government to meet its and the EU's carbon reduction targets.

6. *How much integration is there between the road network and other modes of transport?*

6.1 Integration between roads and other transport modes is growing, particularly in urban areas and this trend is set to continue. There are also exemplar transport hubs that provide excellent integration between the roads network and other modes of transport, such as Birmingham City Airport.

6.2 ICE and IHT welcomes the Government's proposals within the Local Transport Bill, to create integrated transport authorities (ITAs), which would be compulsory in England's six metropolitan areas and voluntary elsewhere. ITAs will have more powers to manage road space and public transport capacity. However, outside London this control does not go far enough. For example, ITAs will not have the power to define the routes and frequency of buses in order to make them a real alternative to the private car.

6.3 Transport for London (TfL) is an example of successful cross-modal integration. Since the Greater London Authority (GLA) took responsibility for many modes of city transport, bus use is rising[31] and the introduction of congestion charging appears to have helped reduce the growth of traffic in the city centre.

6.4 ICE in its recently published *State of the Nation: Transport*[32] report supported the use of the TfL model elsewhere in the UK, creating authorities with responsibility for all aspects of the planning and enhancement of integrated transport networks.

6.5 In addition to handing over power to ITAs, government must step back and allow them to manage their own integrated transport solutions.

6.6 ICE and IHT welcome the government's plans to produce a series of national infrastructure policy statements (NPS) on transport. These NPSs should be used to inform the development of a 30-year integrated transport strategy, which would provide a vital framework in which local decision-making can contribute to overarching goals.

7. *What types of scheme should be prioritised and are current funding mechanisms reflecting these priorities?*

7.1 A balanced portfolio of investment is required to extract the maximum value from the supply chain and best serve the major roads network in the longer term. The decision on which schemes should receive investment should be asset-performance backed. On the national levels, the balanced portfolio should include widening projects, major maintenance schemes and better road management. At the local level, clearing the principal road maintenance backlog through a planned programme should be a top priority.

New Developments

8. *What are the implications of the Climate Change Bill for the development of the major road network?*

8.1 The Government has committed to reducing the UK's GHG emissions by at least 80% below 1990 levels by 2050.

8.2 The Committee on Climate Change is confident that reductions of that size are possible without sacrificing the benefits of economic growth and prosperity. The UK's Climate Change Act makes that commitment, establishing a system of five year "carbon budgets". However, these budgets have not been agreed by government yet so it is unclear what responsibilities the major road network will have to help meet these targets.

8.3 The Committee does, however, see "significant potential for emissions reductions through changed driver behaviour, modal shift and better journey planning".[33] While the Committee has not carried out detailed analysis of the opportunity to reduce surface transport emissions via demand side measures, their estimates suggest a potential to deliver cuts of up to 10 $MtCO_2$ in 2020, if a range of "levers" are deployed.

8.4 ICE and IHT believe therefore that government should commit to these recommendations, yet at the same time not cut back on essential maintenance and upgrade programmes.

[31] DfT (2007). *Transport Trends: 2007 Edition*. HMSO, London.
[32] ICE (2008). *State of the Nation: Transport*. Institution of Civil Engineers, London.
[33] Committee on Climate Change (2008) *Building a low carbon economy—the UK's contribution to tackling climate change*. TSO, Norwich.

9. *What are the implications of anticipated population growth in the UK, particularly in designated growth areas, for the development of the major road network*

9.1 The UK population is predicted to rise from around 60.6 million in 2006 to 65.00 million in 2016, and 71.1 million by 2031.[34] In order to meeting growing demand the Government introduced plans to build two million new homes by 2016 and three million new homes by 2020.[35]

9.2 However, ICE and IHT are concerned at the lack of planning of transport, including roads, infrastructure to accommodate this new demand. Supporting infrastructure should be implemented before the construction of new homes or at least in conjunction with housing development.

9.3 While ICE and IHT welcome the £14 billion Government spent on infrastructure in the three main regions of growth (London, the South East and East) during 2006–07,[36] we believe that the UK still faces an infrastructure deficit that requires significant investment across all sectors and in regions other than just the South East and East of England.

10. *To what extent does merging road and vehicle technology (intelligent transport systems) change the requirements for the major road network?*

10.1 ICE and IHT support the investment that is being made in ITS to maximise capacity and operation efficiency, and to inform the public about road conditions and accidents. The Government must continue its dialogue with the ITS industry and related manufacturers, eg the automotive industry, to ensure that the infrastructure supports or provides an enabling platform for technology investment and innovation, by others, to have optimal effect.

January 2009

Memorandum from the Department for Transport (DfT) (MRN 12)

THE CURRENT ROAD NETWORK

Is the current major road network adequate for the needs of the UK economy and for individuals?

1. Sir Rod Eddington's Transport Study published in December 2006 showed that, in broad terms, the UK transport system provides the right connections in the right places to support the journeys that support economic performance. It also showed that the connectivity of the UK strategic road network compared favourably with other European countries providing a higher percentage of the UK urban population with direct access to the strategic road network and more direct routes between major cities than European countries such as France, Germany and the Netherlands.

2. Because the UK is already well connected, the key economic challenge is to improve the performance of the existing network. Eddington recommended that to meet its economic goals for transport, Government should prioritise action to tackle congestion, capacity constraints and unreliability on those parts of the system where networks are critical in supporting economic growth. Therefore, the Government's programme for improvements to the strategic roads network is focussed on addressing the current pinch-points within the network rather than building whole new links. This includes looking at innovative solutions to increase capacity and manage traffic, such as hard shoulder running, variable speed limits, and ramp metering, as well as conventional schemes such as widening and junction improvements.

3. Another significant issue for the major roads network is safety and although road safety is improving and comparatively good compared to other European countries, it can always be improved. The Government and local authorities are, therefore, investing to improve road safety, both as part of schemes to improve congestion and through specific safety schemes.

Is the maintenance of the major road network adequate to ensure optimal efficiency?

4. The optimal condition for a road is based on minimising the whole life cost of the infrastructure to achieve a balance between the cost of construction and maintenance and the benefits delivered by the road. This whole life cost calculation will vary for different roads depending on the type of road and the composition of the traffic using it. Maintaining the whole network in an "as new" condition does not represent optimal efficiency as the additional costs of maintenance, both in terms of maintenance charges and the increased disruption to traffic during maintenance, is not outweighed by any additional benefits delivered by a road in an "as new" condition.

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[34] Office of National Statistics (2008) *Population Trends No 131: Spring 2008* (as at 9 May 2008).
[35] DCLG (2007). *Homes are the future: more affordable, more sustainable*. HMSO, London.
[36] DCLG (2007). *Homes are the future: more affordable, more sustainable*. HMSO, London.

5. The Highways Agency (HA) maintains the road surface to minimise the whole life cost of the asset. This ensures that maintenance is undertaken at the right time to balance minimising the cost of maintenance and maximising the benefits that it delivers. The HA has a business plan target to maintain the road surface condition index at a steady state representing optimal condition from a whole life costs perspective. The HA has met this target for the last 4 years and in 2008–09 are expected to spend almost £900 million maintaining the strategic road network.

6. The Government has also increased capital funding for local authority road maintenance in England outside London by 160% from 1997–98 to 2007–08. Although it is for local authorities to determine their own priorities for investment this increase in funding for road maintenance has coincided with a significant improvement in the road condition in England. According to the most recent National Road Maintenance Condition Survey in 2006 the defects index for local roads in England which measures the average condition of roads has improved by 21 i points since 2000. This improvement has been most significant for those urban roads that form part of the major road network with an improvement of over 45 points.

To what extent should responsibility for major roads be given to local highway authorities and how much control should the Highways Agency retain?

7. Government policy as set out in the *Review of Sub-National Economic Development and Regeneration*, published in July 2007, is that policy should be managed at the right spatial levels, with responsibilities allocated in line with economic impacts and a devolved approach, with local authorities and regions given the power to respond to local challenges and improve economic outcomes. The scope of the strategic road network was reviewed in 1998 and a programme of detrunking implemented resulting in the gradual transfer of almost 2000 miles of road to local highways authority (LHA) responsibility. This has allowed the HA to concentrate on the operation of a core network linking the main centres of population and major transport hubs, whilst still enabling benefits both in consistency and in economies of scale. It has also allowed LHAs to set priorities for routes that primarily serve local needs and to integrate them with local land use planning and local transport plans.

8. The success of this approach is shown by the fact that although the HA network only represents 2% of the total road length in England it carries a third of all traffic and two thirds of all road freight. The HA network still carries a mix of national, regional and local traffic and, although there are no plans for further significant changes to the balance of ownership of the major roads network, the Government has been seeking ways to enable regional and local stakeholders to have greater input into the priorities for the HA network. Therefore, in 2005 the strategic road network was categorised into routes of national and regional importance. On routes of national importance the investment decisions about improvements are reached centrally by the Department for Transport, but major improvements on routes categorised as of Regional importance are considered within the Regional Funding Allocation process. This allows all major transport improvements on routes which serve a predominantly regional purpose—whether operated by the HA or by LHAs—to be considered together, and for Ministers to be advised on priorities for investment in the region.

9. In addition the HA is working closely with local authorities and our major cities, where the HA network makes an important contribution to local objectives, through agreement of local targets and the delivery of Multi Area Agreements.

Meeting Demand

What should the relationship be between measures to increase road capacity and measures to manage demand for road space (for example road pricing)?

10. Our approach to tackling congestion recognises the close relationship between capacity and demand. As we noted in our July document: *Roads—delivering choice and reliability*, a theoretical case could be made for building significantly more new road capacity. We recognise that, in the longer term, further expansion of the road network will be necessary in some places, as Sir Rod Eddington said, but large-scale road-building would be environmentally damaging, harmful to people's quality of life and financially unaffordable.

11. Against this background we need to explore how to get the best possible performance out of our roads, balancing the rights of everyone to enjoy a safe and clean environment, and deliver a good service for road users, particularly in terms of journey reliability.

12. In recent years, the debate has been running about the case for implementing a widespread road pricing scheme as one element in managing demand for road space. Sir Rod Eddington highlighted the potential a well-designed system might have for tackling congestion, whilst acknowledging the very significant risks and uncertainties involved in delivering such a system, particularly around the technology needed for its delivery. Work is ongoing across the world to explore the new technologies and systems that could make such a scheme practicable in the future. In time, this should help identify answers to the very real concerns people have about what widespread road pricing might mean for them, for example on the sort of equipment that might be involved and the way their personal privacy could be safeguarded.

13. In the meantime, while we are still a long way away from having these answers, our priority, over the next decade, must be on the things we can be doing to relieve pressure on the most overcrowded routes. There are a range of measures we are investigating to maximise the usable capacity of the network, ranging from the use of hard shoulder running, as successfully trialled on the M42, targeted enhancements to major roads, ramp metering and integrated demand management, and giving local authorities the tools they need to address congestion, whether through better traffic management or local congestion charging schemes.

To what extent can alternative modes of transport, travel planning and land-use planning provide alternatives to private car use and road freight?

14. Alternative modes, travel planning and land-use planning can reduce the propensity for the use of private cars. Effective land use planning, especially for new developments, can be a powerful tool to reduce the use of private cars by reducing the need to travel or encouraging modal shift to public transport, walking and cycling. The importance of integrating transport and land use planning is set out in *Planning Policy Guidance Note 13 (PPG13) Transport*, published in March 2001, to assist local planning authorities in the decisions they make about transport. The planning system further contributes by, where appropriate, making travel plans a condition of planning consent.

15. The wider "Smarter Choices" approach for influencing travel behaviour towards more sustainable options, including encouraging school, workplace and individualised travel planning and promoting car share schemes and teleworking, has been shown to deliver reductions in car trips. The initial results, covering 2005–06, for the three Sustainable Travel Towns (Darlington, Peterborough and Worcester) showed that public transport trips in each town had increased by over 10%, walking trips had increased by over 15%, cycling trips have increased by at least 25% and car trips had reduced by over 10%. These are very encouraging results for investment of around £2 million a year.

16. This initiative is complemented by the Department's significant increase in investment in cycling to £140 million from 2008–11, to support cycle training and the provision of infrastructure to target the quarter of all car journeys that are under two miles. The benefits of these measures are likely to be felt most on the local road network rather than the major road network but the HA's work on travel planning for the Cambridge and the Solent Business Parks has shown that the principles are transferable to the Major Road Network, with travel plans delivering 5.6% journey time improvements on the A14 (Cambridge) and 7.3% journey time improvements on the M27 (Solent) through reductions in trips by car.

17. In addition to encouraging alternatives to private car use the Government is committed to developing sustainable methods for logistics in order to reduce the impact of moving freight around the country. The Department offers grants to help with capital and operating costs of using rail or water for movement of freight. The Freight Facilities Grants in 2008–09 has a budget of £4 million increasing to £25 million in 2013–14 making a total of £82 million available over six years. Grants available for help with operating costs between 2007–08 and 2009–10 totals over £54 million. Last year this investment is estimated to have removed around 1.1 million lorry journeys from the UK roads.

18. However, the car, van and lorry are likely to remain the predominant mode of domestic transport for the foreseeable future, particularly for interurban journeys. Therefore, investment in roads is required to complement investment in alternative modes.

How much integration is there between the road network and other modes of transport?

19. There are two aspects to integration between the modes: integration to allow multi-modal journeys; and integration to facilitate shift between the modes. The provision of reliable, up-to-date information is important to both of these, enabling people to plan their journeys and make informed choices.

20. Sir Rod Eddington showed that the integration of the UK's strategic road network with its international gateways compared favourably with other European countries with a higher percentage of the urban population being within an hour of a port and an airport than France, Germany and the Netherlands. Although good compared to the rest of Europe, we are investing in links to our international gateways, improving access to railway stations and investing in transport interchanges to improve people's ability to make multi-modal journeys. We have recently announced £300m to support the delivery of a small number of high value for money schemes offering strong international and national productivity benefits, including schemes to improve access to Felixstowe and Harwich, Immingham and Manchester Airport. Significant additional car parking (more than 4,500 places) has been provided at the main West Coast Main Line stations, as well as investment in interchange facilities such as the Barnsley Public Transport Interchange, opened in 2007, enabling bus, rail interchange and a new rail station at Coleshill Parkway with bus interchange facilities.

21. To encourage mode shift, the Highways Agency has worked with the relevant Train Operating Companies, to provide signs adjacent to the M1 and the M40, giving information about rail services from Luton Parkway Station to London, and Warwick Parkway station. In addition in April 2008 we published revised policy on service areas and other roadside facilities on motorways and all-purpose trunk roads in England. This included guidance on coach interchange/park-and-ride/park-and-share Motorway Service

Area (MSA) sites, but it would be for the private sector (as operators of MSAs) to consider development of such facilities. In March 2008 we also opened the first HOV lane on the strategic road network near Bradford to encourage car sharing.

22. Regarding information, it is important to provide information both on the networks and prior to the journey. We have developed Transport Direct, a web based journey planner that helps people to plan end-to-end journeys from door to door. The Highways Agency has recently introduced journey time information on the motorway network and it provides traffic information via Traffic Radio.

What types of schemes should be prioritised and are current funding mechanisms reflecting these priorities?

23. The major road network contributes to and impacts on the full range of the Department's national transport goals—economic development, climate change, health and safety, equality of opportunity and quality of life. Therefore, there is no one "type" of scheme that should be prioritised as the needs of the major road network will differ in different areas. Instead there should be an appropriate balance in investment.

24. The Department's New Approach to Appraisal (NATA) system allows the costs and benefits of schemes to be appraised against the contributions that they make to our national transport goals. This ensures that only schemes that contribute to our goals and represent value for money are funded.

25. The Department's funding mechanisms are designed to ensure that decisions are taken at the appropriate level. Therefore, Ministers set the HA's priorities through the annual Business Planning process and define the major improvements to the national strategic road network that the HA should deliver. Ministers also set the HA's priorities for improvements to the regional strategic road network; but since 2005 this has been informed by advice from the regions.

26. Most support for capital investment in local transport outside London—currently about £1.3 billion a year—is distributed to authorities on the basis of formulae designed to reflect their relative needs. These funds are not ring-fenced in any way, and it is for the authority to decide both how much to spend on roads and what projects to take forward. Only where authorities wish to seek additional funding to pursue schemes which cannot be afforded through the normal annual allocation must they seek Departmental approval.

27. In summer 2008 the regions were invited to advise not only on priorities for major schemes, but also on the relative proportions of funding for majors, integrated transport and maintenance, and the appropriate allocation to authorities. We would expect the advice to reflect the region's ambitions as set out in their regional economic and spatial strategies.

New Developments

What are the implications of the Climate Change Bill for the development of the major road network?

28. The Climate Change Act requires the Government to set targets and 5-year carbon budgets to reduce greenhouse gas emissions across the economy. The UK target for reductions in 2050 is at least 80% lower than 1990 levels. All transport sectors, including the major road network, have a role to play in ensuring these targets are met whilst supporting national economic competitiveness and growth.

29. Since the passing of the Act all polices across Government will need to be assessed for their greenhouse gas impacts and their fit with meeting the carbon budgets. The Government is looking to make carbon reductions across the economy where they are, and in ways that are, most economically effective and will meet its targets. The Department is developing a strategy for reducing emissions from transport which will help inform the Government's policies and proposals package for reducing greenhouse gas emissions, to be published mid-2009. This will build on the range of existing measures relating to the road network such as developing mandatory emissions standards for new cars, the Renewable Fuel Transport Obligation, supporting low carbon vehicle technology development and the implementation of variable speed limits, which can reduce per vehicle carbon emissions by reducing stop-start traffic.

30. The Act also requires Government to produce a programme for adapting to climate change informed by an assessment of the risks to the UK. The Department is aiming to ensure the UK transport network is resilient to the impacts of climate change. The Highways Agency is developing a Climate Change Adaptation Strategy to ensure the resilience of the strategic road network, both existing and new, to future climate impacts.

What are the implications of anticipated population growth in the UK, particularly in designated growth areas, for the development of the major road network?

31. The major road network provides an important role in enabling housing growth and the Department is a cosignatory to the Government's PSA20 *Increase the long term housing supply and affordability.* This aims to see housing growth at a rate of 240,000 net additional homes per annum. The major road network could not cater for unconstrained traffic generated by new developments, as such growth would be unsustainable and highly damaging to the environment. As such, the Department's response to housing

growth includes an element of capacity increases, supported by high levels of sustainable transport, "Smarter Choice" initiatives, good quality land use planning and ambitious application of demand management techniques.

32. With the Department, the HA is continuously seeking to improve the way that it works with regional and local planning bodies to ensure that the traffic implications of land use planning decisions are properly considered. This includes encouraging use of Circular 02/2007 *Revised Circular on Planning and the Strategic Network* and seeking to identify "opportunity locations"—where there is existing capacity on the strategic road network that might accommodate further housing growth.

33. To complement investment in additional road capacity, reducing the need to travel must be achieved through a combination of soft and hard measures. Softer measures, such as information provision, travel planning and the facilitation of home working need to be backed up by hard measures such as improvements to walking, cycling and public transport infrastructure and in some case traffic restraint (such as demand management). The nature of traffic restraint will need to be location specific.

34. The Department has been involved in developing early examples of good practice; in Kent Thameside an innovative traffic management solution has been developed that, with demand management in place on both the strategic and local road network, is supporting the development of some 50,000 new homes.

To what extent do emerging road and vehicle technology (intelligent transport systems) change the requirement for the major road network?

35. The broad requirements of the major roads network have not changed significantly since roads were invented—to enable people and goods to travel between the main towns and cities at relative speed, safety and comfort. Emerging road and vehicle technology does not change these requirements but open up additional options for meeting them.

36. The Advanced Motorway Signalling and Traffic Management Feasibility Study showed that deployment of "Managed Motorway" technology such as variable speed limits and hard shoulder running have the potential to deliver most of the benefits of conventional motorway widening at a lower cost and with fewer environmental impacts. Therefore, Managed Motorways technology provides an alternative option for addressing journey time reliability issues on the network, whilst also contributing to improved safety. The Government bas been exploring where this technology should be rolled out more widely on the motorway network and will announce its plans early in 2009. This is likely to mean the increased deployment of technology on the motorway network and more active management of the traffic using the network.

37. There is a wide range of other vehicle and road technologies at a more formative stage of development that have the potential to offer further opportunities. These include co-operative vehicle–highway systems that allow the provision of real time information into the vehicle and adaptive cruise control with the potential to reduce accidents and improving traffic flow. The Government is monitoring progress with these new technologies but they do not at this point represent a viable option to be used on the road network.

January 2009

Supplementary memorandum from the Department for Transport (DfT) (MNR 12a)

A statement to the inquiry that explains the main powers that are devolved or reserved, relating to the scope of the inquiry.

ROLES AND RESPONSIBILITIES

1. Responsibility for roads in England lies either with:
   - the Secretary of State, for trunk roads (motorways and all-purpose trunk roads, also known as the "strategic road network"); and
   - local authorities for other roads

as set out in the Highways Act 1980, which consolidated a variety of existing legislation.

"MAJOR ROADS"

2. The Select Committee's inquiry has examined "major roads" in England, which it has defined as trunk and principal roads. "Principal roads" is a categorisation that DfT uses in its published statistics which also covers A roads run by local authorities. Therefore, in practice, the Select Committee's inquiry has considered all motorways and A roads.

Devolved Responsibilities

3. Responsibility for roads in Scotland, Wales and Northern Ireland is devolved to the Scottish Executive, the Welsh Assembly Government and the Department of the Environment in Northern Ireland respectively (though standards for training, testing, road signing etc. are common throughout Great Britain).

The Highways Agency and its Role

4. The Secretary of State for Transport (the Secretary of State) is the highway authority and traffic authority for the strategic road network of England.

5. The Highways Agency (the Agency) is an executive agency of the Department for Transport and its responsibilities for the strategic road network and the Department are set out below. The Agency is led by a Chief Executive accountable to the Secretary of State.

6. The strategic road network includes most motorways and the major "A" roads. It is valued at over £84 billion and carries a third of all road traffic in England and two thirds of all road freight traffic. A map of this network is shown at Annex One.

Responsibilities

7. On behalf of the Secretary of State, the Agency is responsible for the stewardship, operations and (where appropriate) development of the strategic road network. This includes:

I. delivering a programme agreed with the Secretary of State for additions and enhancements to the strategic road network;

II. supporting users of the strategic road network by managing traffic, tackling congestion, providing information and improving safety and journey reliability on the strategic road network particularly through the Traffic Officer Service;

III. acquiring, managing and disposing of land and property and paying compensation in relation to schemes on the strategic road network;

IV. delivering a cost effective programme of day to day maintenance of the strategic road network; and

V. informing and influencing the development of the Secretary of State's longer term planning and policies for the strategic road network, including advising on the case and options for:

(a) additions and enhancements to strategic road network including the provision of advice to regional partners;

(b) changes and improvements to the operation of the strategic road network; and

(c) the transfer of sections of the strategic road network to other highway authorities.

In addition the Agency is responsible for supporting:

VI. the Department's policies and objectives in relation to the environment and climate change;

VII. the delivery of the Government's objectives in relation to sustainable development by:

(a) informing and influencing the pattern of new development through the planning system; and

(b) responding to specific development proposals in respect of the potential impact on the capability of the strategic road network;

VIII. the Government's objectives for national and regional economic growth; and

IX. the Government's priorities for efficiencies and value for money by discharging its responsibilities in an efficient and effective manner.

The Agency will engage with other organisations to develop standards, and to ensure the transfer of knowledge and the promotion of best practice. This includes:

X. engaging with other organisations whose business involves interfaces with the strategic road network, including other highway authorities, network operators, transport service providers, Government Offices, and local and regional planning bodies;

XI. providing professional highways engineering advice to and on behalf of the Secretary of State, and promoting best practice by the sharing of best highway management practice with other highway authorities;

XII. developing, publishing and maintaining engineering and other standards in concert with the office of the Scottish Executive, the Welsh Assembly Government and the Department of the Environment in Northern Ireland, or any successor bodies;

XIII. carrying out a programme of research and development aimed at supporting delivery of the aims and objectives of the Agency, in consultation with the Department's Chief Scientific Adviser to ensure programmes complement each other;

XIV. representing the Government's interests on relevant international technical committees where appropriate and recognising opportunities for the UK; and

XV. collaborating with other Executive Agencies of the Department in the planning and delivery of services.

Investment Decisions

8. For funding purposes, DfT has subdivided the strategic road network into roads deemed of national significance, where the central department decides on investment priorities, and roads of regional importance, where the regions can prioritise improvement schemes through regional funding advice which the Government considers in deciding which schemes to take forward on regional Highways Agency roads. The criteria for this distinction are as follows:

National Roads

9. Based on criteria established in 2005 to qualify as a national route a road needs to:

— have average daily traffic flows, along the length of the route, of more than 60,000 vehicles;

— link at least two of the top 20 English cities by population; or link one of the top 20 English cities with an airport/seaport or Wales/Scotland;

— carry heavy good vehicle traffic equal to or in excess of 15% as a percentage of all traffic, as an average along the length of the route; and

— be represented on the European Union's trans-European transport network.

Regional Roads

10. These consist of all the routes within the strategic network that do not meet the criteria above. Major improvements to regional roads are funded through the Regional Funding Allocation (RFA) process on the basis of advice about priorities from the Regions.

11. Routes categorised as of primarily regional importance are not downgraded in importance. They are still protected, managed and maintained by the Highway Agency alongside strategic national routes as part of a single strategic network serving each region and connecting it to the rest of the country.

Post-2014 Reclassification

12. The split between Highways Agency routes of national importance and routes of primarily regional importance is to change in 2014 as a result of the Department's longer term investment planning process as set in out in its November 2008 strategy document *Delivering a Sustainable Transport System* (DaSTS). This will see more roads being categorised as of national importance as a result of their inclusion in 10 Strategic National Transport Corridors.

13. For a route to be included in the Strategic National Corridor (SNC) infrastructure it must first be linked to a Strategic Destination. These are defined as the 10 largest urban areas in England, the 10 busiest English ports (by tonnage) and the seven busiest airports for passenger and freight. It must also show evidence of substantial long-distance flows in the form of consistently high levels of traffic. This meant being in the top 20% of GB trunk roads for either all traffic or HGV flows for the whole, or a substantial part of, their length. Exceptions were made for access to ports where the lack of "non-strategic" traffic may lead to lower flows, and here the busiest port access has generally been identified.

14. The purpose of defining the SNC Infrastructure was to provide clarity on those routes for which DfT will take the lead in identifying and prioritising challenges.

Local Roads

15. These represent about 98% of roads in England. They are owned and are the responsibility of local authorities, who are the Highway Authority for the non-strategic roads in their areas.

De-trunking

16. Since 2001 the Department has pursued a phased programme of "de-trunking" non-core roads, that is, transferring their ownership from the Highways Agency to local authorities. The aim has been to transfer some 3,000 km (30%) of the non-core trunk network (as it was in April 1999) to local authorities. The programme was completed on 31 March 2009. At the end of 2008 the Agency was responsible for approximately 7,000 km of motorways and trunk roads of a total road length in England of around 300,000 km (c 140 km were retained for strategic or operational reasons).

17. De-trunking was initiated to enable the Agency to concentrate on the operation of a strategic road network that links the main centres of population and major transport hubs; and to allow local highway authorities (LHAs) to set priorities for routes that primarily serve local needs, and to integrate them with local land use planning and local transport plans.

London Roads

18. Transport for London (TfL) is responsible for implementing the Mayor of London's transport strategy. It manages a 580 km network of main roads and all of London's 6,000 traffic lights. It takes a strategic lead in traffic management across all of London's roads.

Supplementary memorandum from the Department for Transport (DfT) (MRN 12b)

During my appearance on 20 July as part of your Inquiry into the Major Road Network, I undertook to write with further information on a number of points.

Mr Wilshire asked when our provisional statistics relating to traffic levels are confirmed. Our most recent final annual estimates were published on 25 June and relate to the 2008 calendar year. The subsequently revised and adjusted quarterly data were published on 6 August, alongside the provisional data for the second quarter of 2009. The 2009 quarterly figures will be made final during summer 2010.

During the hearing we gave an indication of recent falls in traffic levels. The committee may find it useful to have the precise figures that we published as part of our most recent provisional estimates. These were 3.5% for the fall in all traffic between Q1 2008 and Q1 2009, and 12% for the fall in heavy goods vehicle traffic for the same period.

Mr Hollobone asked how our modelling and assessment accounts for additional traffic generated by new housing development. He was interested to know, in particular, whether there is a formula to determine the estimated number of journeys per new home and if so, who utilises that formula.

The Department for Transport's WebTAG (online Transport Assessment Guidance) recommends that when appraising transport interventions, traffic forecasts are based on the planning projections (of population, households, employment and workers) provided in the TEMPRO database.

TEMPRO combines official projections of population growth from the Office for National Statistics, CLG household forecasts and plans established by the regions in their Regional Spatial Strategies, to provide an internally consistent and geographically detailed database. Areas with planned housing growth will have increased trip generation forecast in TEMPRO. Thus, existing appraisal methods using the TEMPRO database will generate evidence to reflect the transport impacts of new housing developments. The increased trip generation arising from planned housing growth will usually improve business case benefits of a transport intervention.

This guidance is available online for a variety of users (transport planners, developers, local authorities etc) and relevant elements of it have been developed in partnership with CLG.

You asked about the proposed remit of the new Infrastructure UK body that the Government envisages will look at priorities for investment in infrastructure over the next five to 50 years. I understand that Terms of Reference for this body are due to be announced in the pre-Budget report in November. The Department will engage fully with it in due course.

Mr Hollobone asked a number of questions about the planned improvements to the A14 around Kettering. Firstly he asked why the planned widening between junctions 7 and 9 does not extend to junction 10 and suggested that this may be due to the presence of a major bridge between junctions 9 and 10.

In fact, assessment of the costs and benefits of a potential scheme to widen the road between junctions 9 and 10 has not been carried out. The stretch between junctions 7 and 9 has been identified for widening as it represents the most congested section of the route. The section from junction 9 to 10 is under less pressure, and this is the reason it has not been selected for widening at this time.

Secondly he asked whether plans for an additional junction on the A14 ("junction 10a") to service the proposed housing development, had come forward to date. I can confirm that as part of the planning application for the Kettering East Site (5,500 houses), the developer is proposing to improve junction 10 by providing a replacement junction slightly to the east of the existing junction. As part of this scheme the slip roads to the existing junction will be closed.

This scheme is the developer's responsibility, both in terms of taking it through the necessary statutory processes, and its delivery. For the latter, they will be required to enter into an agreement with the Highways Agency (HA) under section 278 of the Highways Act 1980, and will be responsible for the full cost of the scheme.

Mr Hollobone requested some further information on why a scheme to provide east facing slip roads at junction 5 of the M25 has not been considered a priority in the period to 2015.

In January 2009, the Department published details of its investment programme for national roads to 2014 in Britain's Infrastructure: Motorways and Trunk Roads, within which details of the prioritisation process were outlined.

In deciding priorities for the first tranche of investment to 2014, the prioritisation process reflected recommendations made by Sir Rod Eddington in his report to the Government. He recommended that investment should focus on improving the performance of the congested national and city networks, and improve access to our international gateways to best support the national economy.

Our prioritisation process also took into account the role that national roads play in supporting wider government aims, and practical delivery considerations such as the requirements for planning approval and the time taken to develop, design and construct road investment projects.

Taking those issues into account and the scale of the transport problems identified at junction 5 of the M25 compared to other locations on the national road network, our conclusion was that proposals for the provision of east facing slip roads were not of sufficient priority for investment in the pre-2014 period.

In fact, from our analysis, the evidence of the scale of future challenges from traffic on this section of the strategic road network is such that we do not think that they will be of a sufficient priority nationally to consider funding possible interventions at this location in the foreseeable future. From the evidence considered to date it appears that provision of east facing slip roads at junction 5 of the M25 would have only a marginal impact on the current and predicted future performance of the relevant sections of the national network, namely the M25, M26 and M20. This supports the Department's view that the problem is predominantly a regional or local issue rather than a national one.

Our strategic planning process does however allow for the Regions to consider whether the challenges on the national network are priorities from a regional perspective and to consider funding the investigation and development of possible options themselves. It is also open to the local authority to make the case for a study to be funded through the regional funding process.

Mr Hollobone enquired about speed restrictions on the network. I can confirm that Mr Jones was correct in stating that the only parts of the motorway network where there are currently variable mandatory speed limits are the M42 active traffic management scheme around Birmingham and the south west quadrant of the M25 around Heathrow. However, in addition to these, variable mandatory speed limits are soon to be introduced on the M20 between junctions 4 and 7, the M1 between junctions 6a and 10 and junctions 25 and 28, and the M25 between junctions 1b and 3, junctions 8 and 10 and junctions 16 and 23.

The HA also have a number of Managed Motorway schemes to be delivered over the next few years, which will incorporate technology such as variable speed limits to better manage road space. The Britain's Infrastructure: Motorways and Trunk Roads publication mentioned earlier lists the projects under consideration.

Mr Hollobone also asked how many "Article 14" responses had been issued by the HA relating to new developments. Article 14 of the General Development Procedure Order 1995 (SI 1995 No. 419) permits the Secretary of State for transport (and hence the HA) to respond to planning application consultations. Consequently all responses, including those which raise no objection, count as an Article 14 response, and the HA deals with several thousand cases annually.

Under the GDPO, the HA's powers are limited to impose conditions on any planning permission that may be granted or to tell the Local Planning Authority (LPA) that they cannot give approval to an application. The HA cannot order them to refuse an application. Any "direction of non-approval" that the Agency imposes can either be indefinite or for a defined period of time. The latter is used to permit the appraisal of complex transport assessment that cannot be completed within the 21 days normally allowed or to give time for negotiation of amendments or conditions.

Over a period since the start of 2008 to the end of June 2009, approximately 78 indefinite directions of non-approval ("the planning authority shall not approve this application") have been given; 368 definite directions of non-approval "the planning authority shall not determine/give approval for the next [ ] months/ before [date]" have been given of which 207 have been resolved.

Some of the generic reasons where there have been indefinite directions of non-approval include:

— highway safety concerns;

— missing information (eg transport assessment or travel plan missing from application documentation);

— insufficient information to allow a decision to be made (eg based on out-of-date data, or information that does not consider impacts on the strategic road network);

— travel plans that do not conform to current policy; or

— the development relates to an ongoing public enquiry.

Where indefinite directions of non-approval are given it is for the developer and planning authorities to consider if they wish to revise their proposals and resubmit.

The impression can be given sometimes that the HA comes in at the end of the process and blocks a development which has been approved by everyone else. In fact, the Guidance on Transport Assessment actively encourages developers to engage early in pre-application discussions to allow all parties to have a better understanding of, and reach a consensus on, the key issues to be addressed in respect of a particular development proposal and avoid indefinite directions of non-approval.

I hope this information is useful.

October 2009

Memorandum from NECTAR (MRN 13)

Summary

NECTAR (North-East Combined Transport Acitivists' Roundtable), in reply to this call for evidence, argues:

— that the current major road network is too large,
— that alternatives to road and private car use must be sought urgently,
— that these should be mainly rail-based, or involve shipping,
— that environmental considerations forbid an increase in reliance on fossil fuels, and
— that emissions, mainly of CO2, must urgently be reduced, nation-wide and world-wide.

Preliminary Remarks

1. The Terms of Reference define the "major road network" as measuring 31,261 miles and including "motorways, trunk roads and "principal" roads that serve the country's strategic transport needs". But in practice it is rarely clear whether a given stretch of road does or does not fall within this definition. NECTAR considers that much clearer signs should be devised for use on all A and B roads and maps, to show their status as national or regional. (A&B shows major and minor). We point out also that:

(i) there will be potential conflicts of interest where "lesser" roads join the "major road" network and *vice versa*, and

(ii) the public perception of the status of a road may not agree with the official classification, be it because of excessive traffic, ill-enforced speed-limits, or whatever else.

However, it may be that a nation-wide clarification of which road has what status leads to easier distinction between roads for which the Highways Agency is responsible and those which, as the responsibility of local highway authorities, may the more easily be made part of the putative Integrated Transport Authorities in due course, though we realise that ITAs will not cover the whole country.

2. In general, NECTAR strongly argues that, in environmental and health terms, this country is over-stocked with roads in many areas, and that government policy should therefore be focussed on reducing the total mileage of roads and rationalising the remaining network, of whatever status, so as to curb CO_2 emissions, to discourage growth in mileage motored, and to support those people in this country who would dearly love not to have to use cars so often (or, indeed, at all) but now find the short-comings of alternative travel methods prohibitive.

The Current Road Network

1. *Is the current major road network adequate for the needs of the UK economy and for individuals?*

1.1 The two parts of this question need very different answers. Despite occasional crowding, most roads are enough for normal purposes; where congestion occurs, it can often be relieved by directing road-users to alternative routes. We also consider that the question ignores two important environmental considerations, *viz*:

(a) "Will use of the existing UK road network go up or go down as oil supplies diminish in the next 20 years?" and

(b) "How will the UK meet its targets for reduced CO_2 emissions, even if road use overall remains no higher than at present?"

1.2 From the point of view of "individuals", however, the entire road network, major or minor, is less than adequate for pedestrians, cyclists, and other non-motorised users, actual or would-be. It should be modified accordingly, but not increased as such.

1.3.1 *Pedestrians*: facilities for crossing roads range from the dangerous to the technically-non-existent. Zebra crossings alone give pedestrians anything like their deserved importance on the road network: pelican crossings pay little more than metaphorical lip-service to pedestrians' existence. For walking along major roads, pavements range anywhere between the non-existent, the adequate, and the cyclist-infested, with some few now divided reasonably sensibly between the two user categories. But, even in urban areas, examples exist of major roads bordered by one pavement rather than two, and in rural areas their existence is rare. On motorways, of course, they are by definition non-existent.

1.3.2 Even so, we consider that much better provision should be made for pedestrians and other non-motorists to cross motorways and major roads, preferably by lowering the roads rather than putting non-users into subways.

If, as we consider, roads need clearly identifying as major or minor in terms of motor traffic, so too do we need comparable classification of routes that are major or minor for non-motorists, leading to the recognition that, by nature, cars and trucks do no mix well with pedestrians, cyclists, riders and users of mobility vehicles—all of whom have just as strong a claim to be catered for by a public road network. As things stand now, provision of crossings is seriously restricted by the financial constraints of even a benevolent Highways Agency. Criteria by which extra crossings are authorised are not always to the pedestrians' advantage.

1.4 *Cyclists*: mis-use by some cyclists of pavements alone shows that provision for them is less than sufficient. Indeed it may cogently be argued:

(i) that far fewer people cycle along main roads than would wish to do so, simply because of the perceived threats from motorised traffic, and

(ii) that those who do cycle at all find themselves obliged to take to the pavement now and again from motives of sheer self-defence.

Annoying though pedestrians may find this, we really cannot entirely blame cyclists for this, if they thereby reduce levels of motor car use, even marginally. And it is relevant here to quote some statistics from Sustrans about the cost/benefit ratios of investment in different transport modes: whereas spending £1 for car-users produces, on average, a "benefit" of £3, the same pound spent to improve cycling conditions is said to produce £20 of benefit.

2. *Is the maintenance of the major road network adequate to ensure optimal efficiency?*

2.1 As will be seen from our answers at 1(a) and 1(b) above, efficiency for the motorist is too often achieved to the detriment of pedestrians and cyclists. That said, we would regard "adequate" maintenance of all roads as of great importance: we are not here to advocate more road accidents as a deterrent to road use and hence as an incentive to use rail and/or modal alternatives where possible. But, again, we note that in places the maintenance of the road surface is carried out where that of the corresponding pedestrian and cyclist provision is, by comparison, minimal.

2.2 If we are commenting on the motorways and major road networks as strictly defined, then the effects on these roads caused by heavy goods vehicles need a mention. Maintenance levels have to be much higher where the axle-loading figures are high (HGVs being the main cause of these), so that "optimal efficiency" is best ensured by strictly limiting such vehicles to using routes in the stated major road network and nowhere else.

2.3 As little or no account is at present taken of these other points, our over-all answer to this question is "No".

3(a) *To what extent should responsibility for major roads be given to local highway authorities?*

3(b) *How much control should the Highways Agency retain?*

3.1 At present, road "development" policies seem to differ according to whether the roads concerned are or are not under Highways Agency control—and this leads to problems when, as with a proposed new regional hospital in north Tees-side, for instance, potentially-traffic-increasing additions to an area's infrastructure straddle the two categories of road, with corresponding conflict of ground rules to be invoked to justify alterations to the road network around them.

3.2 Insofar as, at present, many regions' Highways Agency officials incline to a policy of damping-down aspirations for extra road provision rather than of predicting and providing more and more tarmac, we incline, if anything, to support greater Highways Agency influence even over supposedly local authority roads; but in practice this can too easily back-fire, either if the Highways Agency changes its policy on traffic-limitation or if it is made too easy for one type of authority to swap specific roads' responsibility away from itself, for whatever reason.

3.3 Arising from this last point, among others, we think that another question arises—how far should members of the general public be able to make effective representation to highway authorities at any level, but especially to the Highways Agency as such, about poor road conditions, for instance? Such a facility should be available the better to gauge public demand for more visible provision for non-motorised users, or crossers, of major roads.

Meeting Demand

4. *What should be the relationship between measures to increase road capacity and measures to manage demand for road space (for example, road pricing)?*

4.1 Anyone answering Question 1, part 1, with "yes" cannot, a fortiori, favour measures to increase road capacity. A more even-handed framing of this question would have been achieved if it mentioned the possibility of reducing over-all road provision, especially in some country areas where usage, even of "major" roads, is light.

4.2 Apparent demand for more road space may often be met by laterally-conceived improvement in alternative travel modes, and we comment on these at Question 5. Here we point out that measures can be devised to avoid a need for road as such, by developing coastal shipping links, for instance—or, better still, as imminent in Teesport, adding capacity such that ocean-going cargo ships may eschew ports in the south-east in favour of those further north. If, as is often the case, their cargoes are destined largely for northern destinations, not the home counties, many thousands of miles of heavyweight road or rail transport are to that extent avoided, and the overall demand on the major road network, especially from potentially-damaging HGVs, goes down.

4.3 Resistance to road-pricing in the form of a Congestion charge has so far been the norm, although the urban areas concerned only incidentally included major roads as such. But even so, the inescapable fact is that, sadly, we simply do not, in the UK, have anything like enough land to allow everybody the trouble-free, cost-free go-as-you-please motoring conditions that are popularly (but wrongly) regarded as the aspirations of all. Some form of road-use rationing will have to be devised, if only to remind car-users of the same need to pay for their travel as applies to users of longer-distance public transport modes.

5. *To what extent can alternative modes of transport, travel planning, and land-use planning provide alternatives to private car use and to road freight?*

5.1 Three questions here, in effect—if anything the third element, land-use planning, is the most likely one to achieve the implied alternatives. But, as a general comment, we remind the parliamentary committee of the erstwhile emphasis on Multi-Modal Studies—appraising road proposals and considering modal alternatives at the same time. Despite many hopes placed on these, as a way of at long last reversing the "default" status of roads as the universal transport panacea, modification or replacement of a road-scheme with a modal alternative or set of alternatives has so far been virtually unknown.

5.2 Alternative modes of transport have long existed, of course, but have either been run down (rail routes) or closed, or made to show a narrow profit-and-loss viability, leading to continuing service-level trimming (urban and rural bus routes), or been put forward by forward-looking local transport authorities, only to be rejected on (to us, spurious) high cost grounds by the Department for Transport. Happily the tide is turning very slightly here—the Local Transport Act, for instance—but, with rare exceptions, opportunities for small-scale, low-cost improvements to rail services—restoring short but vital track links, building stations, by adding some more trains, by electrifying existing routes to reduce fuel costs and CO_2 emission levels—are put to government, only to be dismissed, one by one, on (again, to us, spurious) grounds of Cost-Benefit inadequacy.

5.3 At least, that is how it works up to now in England. The picture in Wales to an extent and in Scotland particularly is far brighter—even if some of the cost predictions may prove over-optimistic in places—since the devolution process has led to a more far-sighted approach to public transport than before. And it may not be out of place here to mention the numerous instances from Continental Europe of investment in rail transport at all levels, from street tramway (thereby reducing road space for motorised use) to High-Speed line (to reduce short-haul air travel as well as stemming growth in car use for medium to long distance journeys). Possibly as a result, many European countries' car-ownership levels per head of population are higher than ours, yet their public transport, as shown in Chart 9a, DETR Transport 2010, in all modes, is used far more than is ours.

5.4 Travel planning by whom? better or worse-informed individuals? ditto firms, offices, public enterprises? Even when, or especially when, public-transport-minded individuals do try to produce workable travel plans for themselves with or without colleagues (even car-sharing agreements), difficulties often outweigh advantages. Yet some towns in England have been pilots for "Sustainable Travel Town" initiatives, an example in our region being Darlington. Some aspects of its public transport network are notably deficient—no service-bus, by any route, to Stockton and beyond after 18.30, for instance—yet figures for the last three years show a 79% increase in cycling-trips, and 11% fewer car-journeys, with a heartening 29% growth in pedestrian trips. And elsewhere in England, similar growth has been seen—in fact, on one estate in the south-east, whose houses were equipped with individual "monitors" to tell the occupants when the next bus was due, noticeable reduction of car use followed. Clearly there is an excellent case for installing such monitors more widely (and for supplying good bus and rail services to match, of course).

5.5 Land-use planning is where the Regional Spatial Strategy could and should make a significant difference, and in that spirit NECTAR, along with many other local voluntary interest group representatives, took part in the North-East's most recent revision in 2006. It has been galling, therefore, to see that several of the more environmentally-favourable recommendations made by the Inspecting Panel have been modified (to put it kindly) by government before being agreed on as policy henceforth.

6. *How much integration is there between the road network and other modes of transport?*

6.1 In a sentence—not nearly enough. This applies at all levels—bus services rarely if ever "connect" with trains at stations, even if they actually pass them: factories have lost, or deliberately removed, rail sidings linking them with the (formerly) nationwide rail network, and/or studiously ignore the rail freight possibilities that—in a few notorious cases in the Tees Valley area—actually pass their premises. Supermarkets, even those purporting to support greener modes of transport, back on to rail routes, but do nothing to link with them, either for receiving goods or for improving access by rail passenger service for their local customers. Of course, that is often not the whole story—applications to the local rail operator for such improvements may have been made unsuccessfully, thanks not to rail operator reluctance but to the stifling limitations imposed by franchise agreements.

6.2 Looking towards a more international horizon, some examples do exist of good practice, either intended or achieved, eg where a port actively encourages rail-borne freight to and from its wharves, allowing (or, in effect, obliging) northern-based firms to use road or even rail haulage for exports through their nearest port. Teesport, mentioned in 4.2 above, is a good local example—but not every port or airport that handles freight can boast of such environmental credentials.

6.3 The word "integrated" in transport contexts has a less-than happy history, with—at a very local level—the tacit assumption that it is achieved simply by adding, to a bus timetable, the bland information that "buses pass the railway station", as if that on its own solved all passengers' travel problems. It is pertinent to compare, also, the approach taken to modal integration by several Continental localities, where one ticket may often cover a journey (taxi, bus or tram) to a rail station, the rail journey, and any other connecting bus, trolley-bus, tram, taxi, water-bus or ferry journey needed to complete the full process seamlessly. Where in England does any such one-ticket-covers-all system prevail? Yet this, we consider, is a prerequisite to increasing use of public transport at every level including that meeting our strategic transport needs. If demand for road-space is thereby reduced, everybody—including the users of major roads—benefits.

7. *What types of scheme should be prioritised, and are current funding mechanisms reflecting these priorities?*

7.1 Given the general public's increasing concern for the environment, these should be judged on whether they make life easier and safer for non-motorised users, mainly pedestrians and cyclists, on whether buses and coaches may keep reliable time on them, and whether they improve links between different modes of public transport, especially those that do not rely on the roads. Schemes not meeting these priorities should be rejected, whereas present funding mechanisms seem to take no account of such priorities at all.

7.2 Following on from this, and the general need mentioned elsewhere to reduce the need for road capacity and for road use, we advocate far greater priority for minor and major schemes to improve the capacity of the rail network. Contrary to some beliefs that several years must elapse between having an idea for a rail project and starting to build it, many small-scale improvements (as summarised in 5.2 above) could start within weeks, if not days, of a formal go-ahead. This is as true of infill electrification schemes as it is of, say, releasing more passenger rolling-stock from store, to relieve peak-hour and other rail overcrowding conditions. And one consequence of such rail improvements is, again, noticeable reduction of demand for space on busy roads.

New Developments

8. *What are the implications of the Climate Change Bill for the development of the major road network?*

8.1 We cannot usefully comment in scientific detail, but we see no way in which any increase in major road mileage works towards reduction of emissions in line with what this bill prescribes. Even now, figures suggest that much of what is done in the name of "climate change" avoidance proves to have the opposite effect, with CO_2 levels going up rather than down.

8.2 From the point of view of the innocent but interested transport-using bystander, rail journeys, by passengers or by goods, result in lower figures for CO_2 and similar emissions than those produced by just about everything else, with the possible exception of long-distance coach services. So, if the road network is to be "developed" in any sense, we think that it should lean towards encouraging long-distance coaches, and more locally-focused buses, as acceptable replacements of private car-journeys as possible, wherever possible, nation-wide.

8.3 The government should also resist any temptations to allow higher-weight lorries on any roads in the UK, not just because of CO_2 emission implications, but also to prevent the current punishing wear and tear of road surfaces by so many heavy goods vehicles, with their unacceptably-high axle-loading.

9. *What are the implications of anticipated population-growth in the UK, particularly in designated "growth areas", for the development of the major road network?*

9.1 The population of the British Isles has risen from about 50 million in the 1950s to about 60 million now, in other words by 20%. Yet, on the evidence of the terms of reference themselves, vehicle-mileage has just about doubled in slightly over half that period—and road traffic overall has gone up by a staggering 84%. Far from taking any pride in this, we suggest that it clearly shows the innate inefficiency of the travel patterns of this country. By contrast, the much-vaunted achievement of the rail network in carrying more passengers in a recent year than the total for 1945 is put into greater relief by the fact that the rail network is about half the size it was then. If, however, these main transport modes had a more equitable share of the travel market, rail would be carrying at least 20% more than it did that year, not just a similar amount. We infer from this that to cope with population growth by "developing" the major road network is to increase the inefficiency of that network even further.

9.2 Arising from the projected population increases in the next 20 years (assuming that they come true), why have we not been asked a similar question about the implications for the development of the rail network? In contrast to the figures for road mileage now and 30 years ago, we point out that genuinely new rail track mileage since 1945 is virtually confined to the London area (Docklands Light Railway, Victoria Line, and the Jubilee line extensions), plus the London St Pancras High Speed line to the channel tunnel entrance. Even if the mileage of new tramways is added, the total extra will nowhere near outweigh that of previous rail closures. Yet we point out that, mile for mile, new rail lines—even for light rail—cost considerably less than the same length of new road, and provide a potential passenger-carrying capacity far greater than what is possible even with double-deck buses on a road.

9.3 So, if population is to grow at the levels projected (or feared), it would be far better, environmentally, to add rail links, preferably electrified from the outset, rather than to add ever more roads. Electrified modes of travel need to take precedence now even over increased bus services, for reasons of declining oil-supply. This, plus many other considerations, holds implications for land-use planning (cf. question 5.5), well before taking any decisions over where to put the extra population (and bearing in mind the flood-dangers in much of south-east England).

9.4 It is relevant to mention here that, if any road-building were called for at all, because of increased population or anything else, the methods necessary to achieve this are themselves inherently over-reliant on oil-based material, be they concerned with tarmac or concrete. The CO_2 emissions, likewise, imply an environmental cost.

10. *To what extent do emerging road and vehicle technology (intelligent transport systems) change the requirements for the major road network?*

10.1 Yes, we accept that the over-all subject of the Inquiry is the nation's major road network, not an invitation to submit a manifesto for a better rail and public transport service, but the inclusion of the term "intelligent transport systems" forces us to remark, rather wryly, that we already have such systems, largely on rails and largely in urban areas. The Victoria line, for instance, runs automatically, even if a crew-member is always on board each train.

10.2 Vehicle technology, however, is not always as advantageous as it may look, if a very recent report on fitting automatic speed-limiters to cars is any guide: vehicles could be regulated to slow down to 30 mph or less in suitable areas, but there would be an increase in emissions if they were. However, most private cars are now so heavily protected against accidental damage to them that, apparently, drivers in them increasingly act as if nothing can ever harm those within, thereby increasing the damage done to others (especially pedestrians) if accidents occur. It would seem that developing any other road guidance system that lulled motorists even further into a sense of their inherent indestructibility is a sure-fire recipe for increased possibilities of serious road accidents—at a time when the British figures for road casualties compare extremely favourably with those of other comparable countries, but nonetheless cause, directly or indirectly, several hundreds of thousands of pounds per accident (*cf* the HoC report *Ending the Scandal of Complacency*, HC 460). We could not in any circumstances support plans to increase the risk, however slight, of more accidents on our roads.

January 2009

Notes

[i] NECTAR is an open, voluntary, umbrella body, established to provide a forum in which the many organisations with an interest in sustainable transport in all its forms can develop a co-ordinated view on contemporary transport issues. NECTAR provides opportunity for the exchange of news, studies and information.

[ii] Covering the same geographical area, NECTAR provides a single, co-ordinated voice for dialogue with the Government Office for the North-East, the North East Assembly, One North East, the Association of North-East Councils, and similar bodies concerned with transport and related policies at a regional, national, and European level.

[iii] NECTAR executive committee members currently include Campaign for Better Transport, CPRE, CTC, (Durham) Coastliners (rail user group), Friends of the Earth, Living Streets, Railfuture, and Tyne Valley Rail User Group.

Memorandum from Dr David Metz, University College London (MRN 14)

TRAVEL FOR ACCESS AND CHOICE

Summary

— Contrary to what is generally supposed, personal daily travel has stabilised in recent years at on average about an hour a day, a thousand journeys and about 7,000 miles a year. Such an amount of travel seems sufficient to meet our needs for the kinds of access and choice that are based on mobility. No general addition to the capacity of the major road network is therefore necessary.

— Attempts to reduce car use by encouraging slower modes—walking, cycling, buses—will have limited impact because reduction in the speed of travel tends to reduce access and choice. Decarbonisation of the transport sector will therefore need to rely largely on technological, rather than behavioural, change.

— The main problem with congestion is the uncertainty of journey time. This is best tackled through the provision of predictive information about journey times based in forecast traffic conditions, thus enabling travellers to make better decisions about timing, route and destination of trips.

Personal Travel

1. The Department for Transport's National Travel Survey (NTS) has been monitoring personal daily travel behaviour since the early 1970s. Over this period some striking regularities are seen. Averaged across the population, travel time has held steady at some 380 hours a year, or about an hour a day, while the number of journeys has remained at about a thousand a year. On the other hand, the average distance travelled has increased from 4,500 to 7,100 miles a year[37] (Figures 1 and 2). The NTS also monitors the destinations of trips, where the rank order of frequency has remained unchanged for at least twenty years. Most popular are shopping trips, followed by visiting friends, commuting, education, personal business, and escorting. Expenditure on travel has also held steady over the past two decades, averaging 16% of household expenditure, according to the Expenditure and Food Survey.

[37] Not including international aviation.

Figure 1

TRAVEL TIME (HOURS PER PERSON PER YEAR). SOURCE NTS 2006 TABLE 2.1

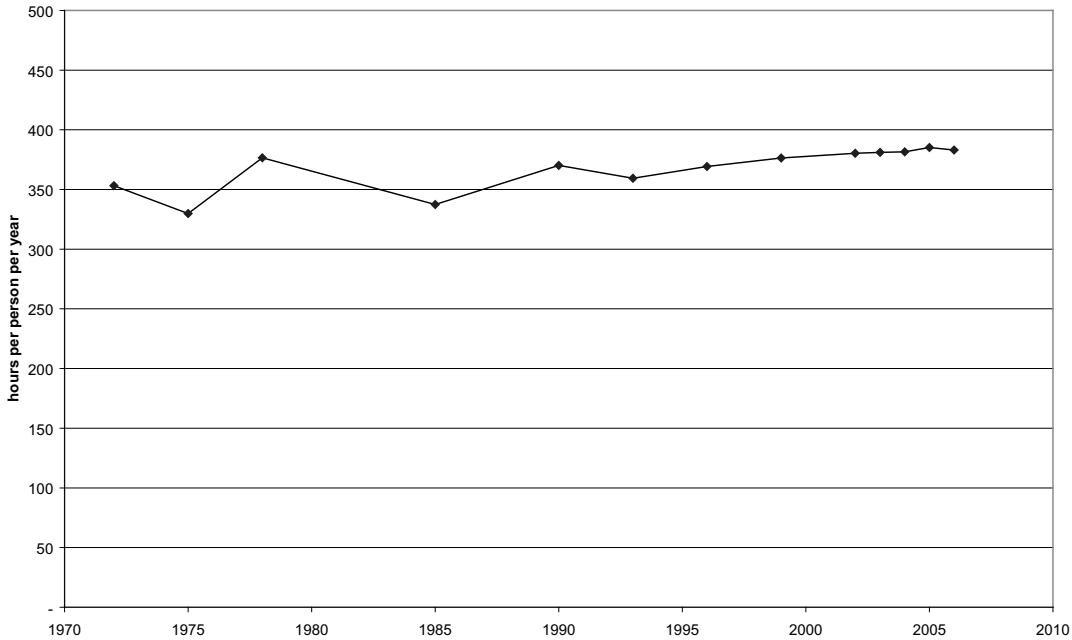
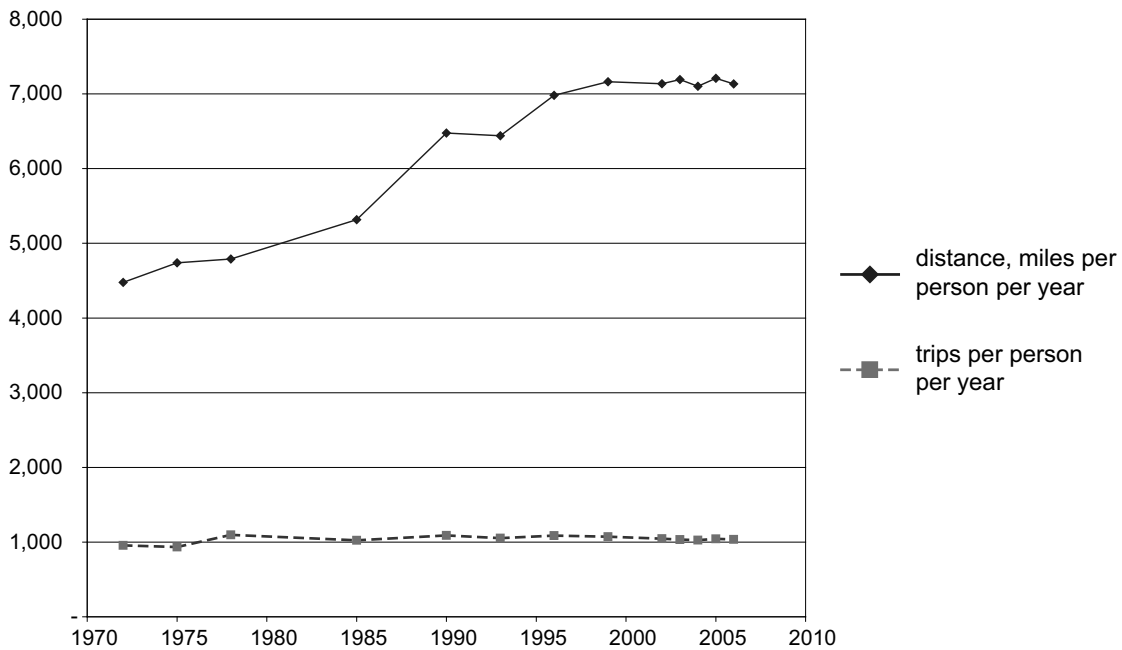


Figure 2

DISTANCE (MILES PER PERSON PER YEAR) AND JOURNEYS (PER PERSON PER YEAR). SOURCE NTS 2006 TABLE 2.1



2. Thus the pattern of personal travel of the population as a whole has remained essentially unchanged over many years. We make the same number of journeys to the same kinds of destinations, taking the same amount of time and the same proportion of household income, on average. This pattern has not been affected by an increase in car ownership from 11 million to 27 million vehicles on the roads. What the growth of car ownership has made possible is the increase in distance travelled, which is the result of faster door-to-door journeys.

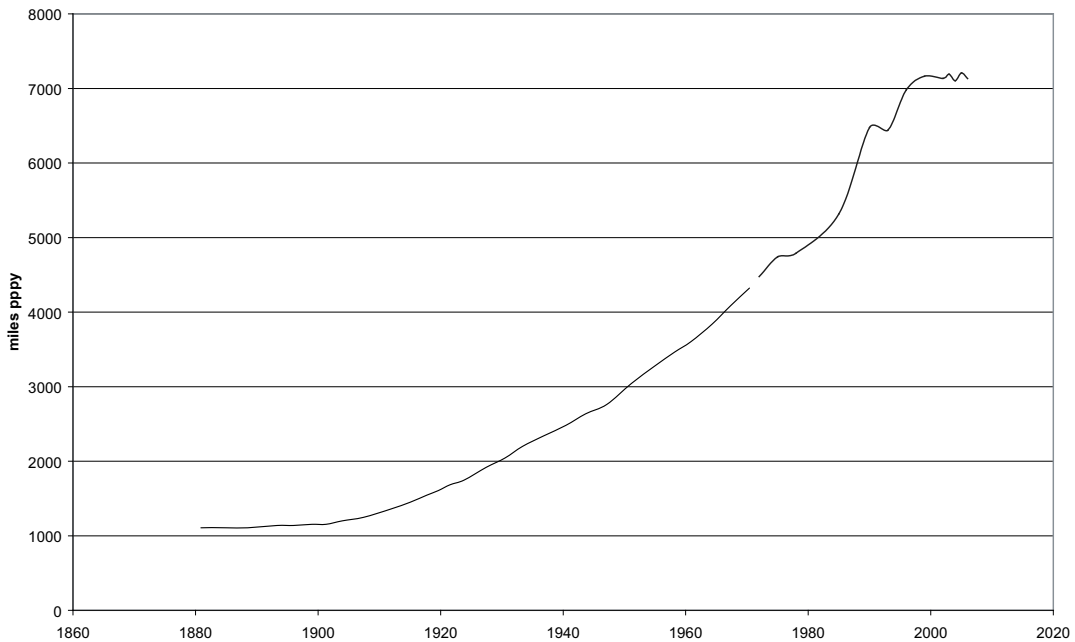
ACCESS AND CHOICE

3. The reason why people travel further to the same kinds of destinations is that this allows more choice. 150 years ago, most travel was on foot and people lived close to where they worked. Possibilities for choice of employment, dwelling, shops, schools etc were limited. With the successive development of transport modes, and rising incomes that made these affordable, access and choice have increased. By travelling faster, people have more choice of jobs accessible from where they live in the time they allow themselves for daily travel, more choice of homes accessible from where their work is, more choice of shopping, educational and leisure facilities and so forth.

4. The development of personal transport modes has been a key enabler of social and economic progress since the mid-nineteenth century, as shown in Figure 3 which diagrammatically extrapolates the NTS distance data from Figure 2 back to the time when walking was the exclusive mode of daily travel for most of the population (walking for an hour a day on average amounts to about 1,100 miles a year). What is noteworthy is that the growth in distance travelled has ceased in the past decade. An explanation is required.

Figure 3

LONG TERM GROWTH IN MOBILITY



5. One possibility is that this cessation of growth is temporary, due to some short term phenomenon, and that the upward trend will resume as transport technologies are further developed and incomes grow. However, there seems to be no particular short term reason for the plateau in distance travelled, given that the past decade was a period of steady economic growth. Another possibility is that the underlying trend in travel demand is still rising, but that growing traffic congestion has meant that this cannot be manifested in practice. There seems, however, to have been no marked change in congestion in recent years that would account for the cessation of growth.

6. A third possibility is that the demand for travel has ceased to grow because nowadays we travel enough to meet our daily needs. This is what would be expected if the main purpose of daily travel is to achieve access to and choice of destinations since:

- access and choice increase with the square of the speed of travel (the destinations you can reach in the time you have for travel are limited to the area of a circle whose radius is proportional to the speed of travel); and
- the value of additional choice is characterised by the economic principle of diminishing marginal utility (the value of each additional choice of a given kind of destination is less than the previous one).

7. I therefore suggest that we have reached a stable state, for the population as a whole, as regards personal daily travel, in that our needs for access and choice based on mobility are met by travelling on average for an hour a day, making about a thousand journeys and traversing rather over 7,000 miles in a year.

8. There is of course a good deal of variation within this average, as happens for instance over the life course from childhood, through midlife to later life. Moreover, some people are constrained by lack of mobility, for example on account of low income or disabilities. And the NTS data considered here does not included international aviation (which is why this memorandum refers to "daily travel")—that is another story.

Car Traffic

9. Despite the plateau reached in daily personal travel distance, personal car use has continued to grow over the past decade. While a small part of this is due to population growth (see below), the major cause is growth in vehicle ownership. However, with 27 million private cars in Britain for 34 million driving licence holders, it may be supposed that most people who need to make substantial use of a car already own one, and that the net growth in car ownership comprises vehicles used to a limited extent, for instance second and third cars in the household. Consistent with this supposition is the observation that the annual mileage of the incremental addition to the national car fleet is only about half the average for the fleet as a whole. These incremental vehicles would be used to substitute for other modes of travel, such as buses, perhaps largely for reasons of convenience rather than access.

10. So while car traffic continues to grow slowly, it would be reasonable to suppose that there is not much "impetus" behind this growth, given the lack of impact on personal annual distance travelled.

Freight and Vans

11. The conceptual approach outlined above to explain personal travel is also relevant for freight transport by road and use of vans to meet service needs. In all cases, access is limited by time and enhanced by speed. For freight, the delivery time expected by customers is central. This varies from 24 hours from order to delivery for fresh produce, to months for capital goods. Improved delivery times can be a source of competitive advantage, and this has been facilitated by an improved major road system. However, the main impact of improvements to the motorway and trunk road network over the years has been to allow consolidation of the supply chain into fewer, geographically more central depots, thus saving on estate and inventory costs. Freight vehicles working, for instance, out of warehouses in the West Midlands or South Yorkshire can deliver to 75% of the UK population in a half-day truck drive.

12. A similar situation arises in respect of the "white vans" that convey the technicians that maintain the service economy. There will be an acceptable response time for a call out, and for the servicing firm an acceptable balance between time spent travelling and time on customers' premises. As with freight, the number of depots needed to service a given geographical area will depend on the average travel speeds attainable, with higher speeds allowing economies to be made in the provision of depots.

13. It is unsurprising that business presses for improvements to the road network when congestion slows traffic and reduces the reliability of scheduled deliveries. The problem of course is that freight vehicles and vans share the road network with private cars, so improvements to meet the needs of business can be thwarted by the response of private motorists, as discussed below.

Road Capacity

14. Travel time holds constant on average. It follows that any intervention that has the effect of increasing speed will, in the long run, increase distance travelled. So, for instance, widening a trunk road increases the speed of travel and thus enhances access, but at the cost of additional carbon emissions and other detriments associated with traffic. Any congestion relief is transient since in the long run the extra traffic arising from longer journeys offsets the additional carriageway. This justifies the maxim that you cannot build your way out of congestion. Thus widening parts of the M25 to dual 4 lanes may be expected to increases access to the areas served (and increase land values) while not providing congestion relief other than in the short run. Hard shoulder running, as an alternative to road widening, has attractions in that this extra usable carriageway is accompanied by an enforced speed limit which could be used to limit the generation of extra traffic.

15. Adding further capacity to the major road network would not in general represent good value for money, given that this would not reduce congestion. However, there may be specific circumstances, often arising from population relocation and growth, where additional road capacity would be justified to enhance access, for instance to meet the travel needs of new urbanisations such as in the Thames Gateway region.

16. More generally, the Government Actuary projects the UK population to increase from 61 million to 71 million in 2031, which raises questions about the location and needs of this extra 10 million. If most will reside in existing urban areas, where scope for increasing road capacity would be very limited, the case for additional investment in public transport would be strong. Higher densities in cities, together with more extensive public transport, could result in relatively less car ownership and use, as in London where car ownership is 0.77 per household compared with 1.14 nationally. There would be a need for adequate

transport capacity between urban centres, including on the major road network, to meet demand for both freight and personal interurban travel. Given the requirement in future to price in the cost of carbon, there would be a case for investment in electrified rail capacity. However, it is hard to plan future transport investment in isolation from the wider planning required to meet the full range of needs of a growing population.

Carbon Emissions

17. If the UK is to reduce carbon emissions by as much as 80% by 2050, the transport sector will need to reduce substantially its dependency on oil. There is debate about how much effort should be focused on low-carbon technologies, and how much on behavioural change. Proponents of behavioural change advocate more use of public transport, walking, cycling, and shared use of cars. One difficulty with such approaches is that they tend to involve slower door-to-door travel than by car. This would reduce access and choice, which would tend to limit uptake. Hence the main means of decarbonising transport would need to be through low carbon technologies.

Congestion

18. As discussed above, adding road capacity but taking no other steps has the effect of increasing speed, which enhances access but does not reduce congestion. Adding capacity while constraining speed, as with hard-shoulder running, should help ease congestion. A further approach to managing congestion is road pricing, whereby demand on the network is reduced through charging. Those willing to pay are able to travel at higher speeds and will over time take advantage of this to travel farther to gain more access and choice (this is part of the reason why the impact on congestion of charging in Central London has lessened year on year since charges were introduced). Conversely, those motorists unwilling to pay have their access and choice reduced. They are understandably likely to resist road pricing schemes, as in the Manchester referendum. Road pricing therefore seems unlikely to be a useful approach to tackling congestion on the major road network, given lack of popularity.

19. To see how best to manage congestion, it is necessary to understand why congestion is a problem. When asked in surveys, motorists' main complaint is about the uncertainty of journey times (as opposed to slow speeds). There are, however, considerable opportunities for providing good predictive information about journey times and optimal routing in the light of prevailing and predicted traffic conditions. Having such information readily to hand at home, workplace and in-car would allow informed decision making about journey departure times, as well as about destinations where there are options (as for shopping). This would benefit the individual traveller through reducing uncertainty of journey time and the generality of road users through a proportion of them choosing to avoid travelling at times of peak usage. What might be termed "Predictive Navigation" would involve the rationing of scare road space on the basis of users' personal values of time, as happens at present but with sufficiently reliable forecasts of travel times; as opposed to road pricing which involves rationing on the basis of willingness and ability to pay.

Conclusion

20. Contrary to what is generally supposed, personal daily travel has stabilised in recent years at on average about an hour a day, a thousand journeys and about 7,000 miles a year. Such an amount of travel seems sufficient to meet our needs for the kinds of access and choice that are based on mobility. This conclusion is helpful in terms of sustainability. No general addition to the capacity of the major road network is therefore necessary.

21. Attempts to reduce car use by encouraging slower modes—walking, cycling, buses—will have limited impact because reduction in the speed of travel tends to reduce access and choice. Decarbonisation of the transport sector will therefore need to rely largely on technological, rather than behavioural, change.

22. The main problem with congestion is the uncertainty of journey time. This is best tackled through the provision of predictive information about journey times based in forecast traffic conditions, thus enabling travellers to make better decisions about timing, route and destination of trips.[38]

January 2009

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[38] This memorandum draws on material from the following publications:
Metz, D. *The Limits to Travel*, Earthscan, London, 2008.
Metz, D. *The myth of travel times saving*, Transport Reviews, 28(30), 321–336, 2008.
Metz, D. *National road pricing: a critique and an alternative*, Proceedings of the Institution of Civil Engineers: Transport, 161(3), 167–174, 2008.
Metz, D., *Sustainable travel behaviour*, paper presented at University Transport Studies Group Conference, London, January 2009.

Memorandum from liftshare (MRN 15)

0.1 Summary

— The major road network is generally adequate for the needs of the UK economy.
— The current use of the major road network is currently very inefficient.
— Vehicle occupancy rates are very low and have been falling.
— There are network capacity gains of +100% to be made by increasing vehicle occupancy.
— No new major projects should commence until all alternatives have been properly investigated.
— It is important to manage demand though behavioural marketing and technical approaches.
— For all major new building projects there needs to be a very clear and properly funded marketing plan that involves all local stakeholders and minimises the number of SOV (single occupancy Vehicle) trips.

Responses to the Individual Questions

1. *Is the current major road network adequate for the needs of the UK economy and for individuals?*

1.1 Yes for the most part. With shifting populations and new developments there does need to be some strategic improvement and removing of bottlenecks. However it would be wrong to say that the current network is inadequate when it is currently poorly used.

1.2 There are a number of ways to ensure that the current road network is adequate for the foreseeable future:

1.2.1 Reduce demand to travel:

E.g. Improve telecommunications

Fibre optic cable can bring the world of business to our homes and businesses and greatly reduce the need to travel. Investment in this new infrastructure would bring many efficiency benefits and make the UK more competitive.

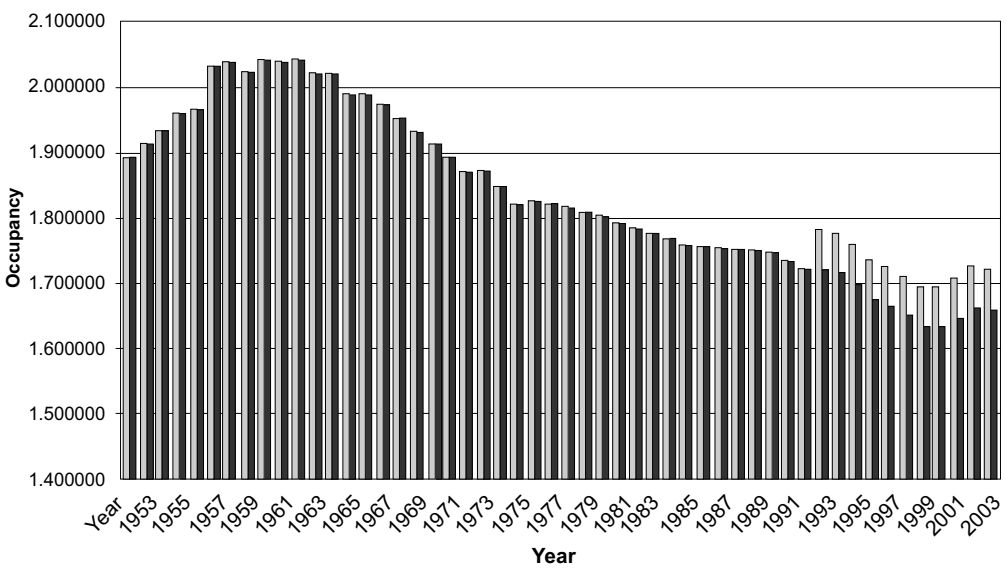
1.2.2 Improve the efficiency of the vehicles by making better use of them:

Increase vehicle occupancy

The average UK car on the commute has 1.2 occupants and 1.7 occupants on average across all trips. The average car has 4+ seats in it. The spare capacity in cars provides the greatest single opportunity to improve the efficiency of our roads, to reduce congestion, to improve access and mobility.

In 1960 average occupancy was >2 people /car. It is now 1.7. Increasing occupancy back to 2 people per car is possible with some simple support mechanisms eg HOV lanes and marketing car sharing (eg www.liftshare.com). Increasing average car occupancy to 2 people per car would save 9 million tonnes of CO_2.

UK AVERAGE CAR OCCUPANCY



There is also significant space capacity in the haulage industry and in the 1.4 million vans operating in the UK. Incentivising better use of this capacity would significantly increase the efficiency of the road network.

2. *Is the maintenance of the major road network adequate to ensure optimal efficiency?*

2.1 To reach and maintain optimal efficiency of the roads there needs to be an increase in the average occupancy of the vehicles using them. There needs to be a properly funded research project into the development of HOV lanes. This should include consideration for taking some lanes already in use and making them HOV lanes at certain times of the day. There is currently a huge gap in the UK in understanding about the role of HOV lanes. The research to date has been very limited some recent poor decisions have slowed the introduction of these lanes.

3. *To what extent should responsibility for major roads be given to local highway authorities and how much control should the Highways Agency retain?*

3.1 All projects need to involve all the key stakeholders. Local partners are especially important from the point of view of ensuring local needs are being taken into account and that effective communication is made to the local population.

3.2 In two recent examples that I have been part of I have been shocked when I saw how the Highways Agency agenda to "upgrade" the road meant that the needs of the local population were ignored.

3.3 One example was the A11 bypass around Attleborough. The HA comment during the pre build communication that "the HA is here to build this road to connect Cambridge to Attleborough and the local population should be grateful that they have one decent connection to this key road"—when it effectively reduced the access to the A11 by removing two access points, split a community off from the town and did nothing to improve local congestion.

3.4 The other example was the M1 "HOV lane". The M1 widening was accepted by the public and the "greens" as it was planned to lock in the benefits of car sharing. However once the build was nearing completion the plan for an HOV lane was scrapped. The communication between all stakeholders for this key project was appalling. There was virtually no communication with the local authorities and the marketing plan for the lane (when it was still going ahead) was lacking any suitable investment or expertise.

4. *What should the relationship be between measures to increase road capacity and measures to manage demand for road space (for example road pricing)?*

4.1 Capacity should not focus on the number of vehicles able to us the road it should focus on the number of people able to use the road in those vehicles.

4.2 Capacity should be measure on the number of seats passing a given point within a given time frame.

4.3 Efficiency should be the number of people passing a given point within a given time frame.

4.4 Waste (spare capacity) should be the number of empty seats available for use.

4.5 Even roads operating at maximum vehicle throughput are likely to be operating at $< 50\%$ capacity due to all the empty seats in those vehicles.

4.6 Managing demand for road space should take priority over increasing the size of the road network. But increasing capacity by increasing the occupancy in vehicles (through eg HOV lanes) should be a priority.

4.7 A key issue is the current focus on technology and infrastructure rather than focussing on using current infrastructure more efficiently.

4.8 Managing demand is not simply a case of using a new technology but effecting behaviour change through effective marketing and communication. There is currently an unacceptably small amount of funding for marketing the alternatives to SOV car use.

5. *To what extent can alternative modes of transport, travel planning and land-use planning provide alternatives to private car use and road freight?*

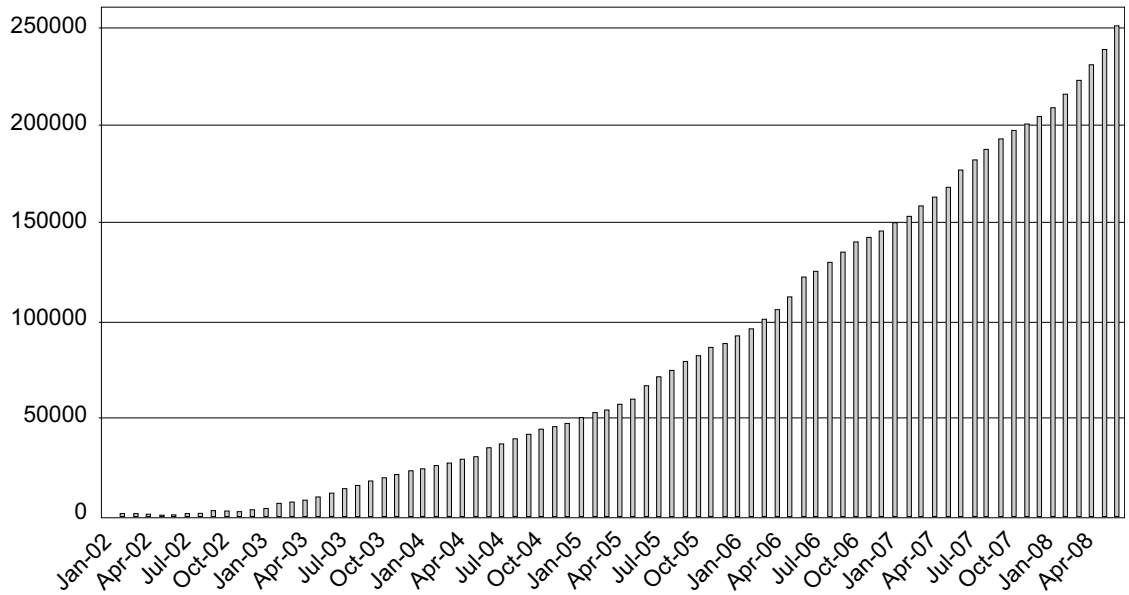
5.1 The focus needs to be on reducing the need to travel and if travel is necessary to providing and promoting the best use of transport for a particular journey.

5.2 The question highlights part of the problem. It assumes that car use is generally bad. In the UK we try to have policies that put the private car in one ring and the alternatives in another. This is wrong. A car with one person in it may be the best way for a person to make a particular journey. A car with four people in it is more efficient than travelling by train or bus. Reducing use of the private car should not be the target. Reducing SOV car use is a reasonable target. Reducing "car use" is not.

The question could be "To what extent can alternative modes of transport, travel planning and land-use planning provide alternatives inefficient travel behaviours".

5.3 With very limited funding the UK's main car sharing operator liftshare.com has become the largest operator in the world with 300,000 members (Jan 2009) and saving 40,000 car trips/day.

***lift*share Registration Growth 2002–08**



5.4 Travel planning plays a vital role in informing individuals and business of the options available to them so they can make an informed choice on whether to travel and which mode is best for them. Given the right investment the benefits can be very significant. All of the research projects prove this to be the case.

(I believe that a director of ActTravelwise is sending a separate response to cover this point in more detail.)

6. *How much integration is there between the road network and other modes of transport?*

6.1 Not enough. The success and growth of park and rides shows that there is demand for decent intermodal connections. There are also significant limitations on increasing integration due to issues such as lack of parking at rail stations.

7. *What types of scheme should be prioritised and are current funding mechanisms reflecting these priorities?*

7.1 In each instance the funding should be allocated on the basis of which scheme or combination of schemes will have the greatest impact on better utilising the capacity.

7.2 The research needs to include all available options including:

7.2.1 Is there an option that will reduce the need to travel?

7.2.2 Is there already capacity in the vehicles?

7.2.3 Is there a way to lock in the benefits of sustainable travel—bus lanes, HOV lanes, HOT lanes?

7.2.4 Could a marketing campaign aimed at behavioural change have more of an impact than other alternatives?

7.2.5 The current issue of not providing revenue funding needs to be addressed. Marketing requires revenue. Without marketing you get no behavioural change.

Notes:

8. *Notes about the author: Ali Clabburn, MEng. Managing Director, liftshare.com. Director ActTravelwise*

8.1 Ali has spent the last 10 years dedicated to helping communities set up effective car share schemes. His mission is to "encourage and enable more efficient use of the car". In 1998 Ali set up the www.liftshare.com whilst still at university and now he and his team of 20 run the UK's national network of over 1,000 liftshare schemes. liftshare now has over 299,000 members, saving over 65 million car miles and 20,000 tonnes of CO_2. It is now the largest scheme of this kind in the world.

8.2 Ali was the UK Transport Planner of the year 2006, the winner of the Enterprising Young Brits Award 2005, presented by the Chancellor Gordon Brown, the winner of the IoLT Young Manager of the Year Award 2002, presented by HRH The Princess Royal. In 2004 HRH the Prince of Wales presented Ali the Business in the Community National Example of Excellence Award for liftshare's work in helping the environment.

8.3 Now in its 10th year liftshare have recently received a Queen's Award for Innovation, the Prime Minister's Catalyst Award for Social Enterprise and were selected as a UK entry to represent the UK in the 2008 European Business Awards for the Environment.

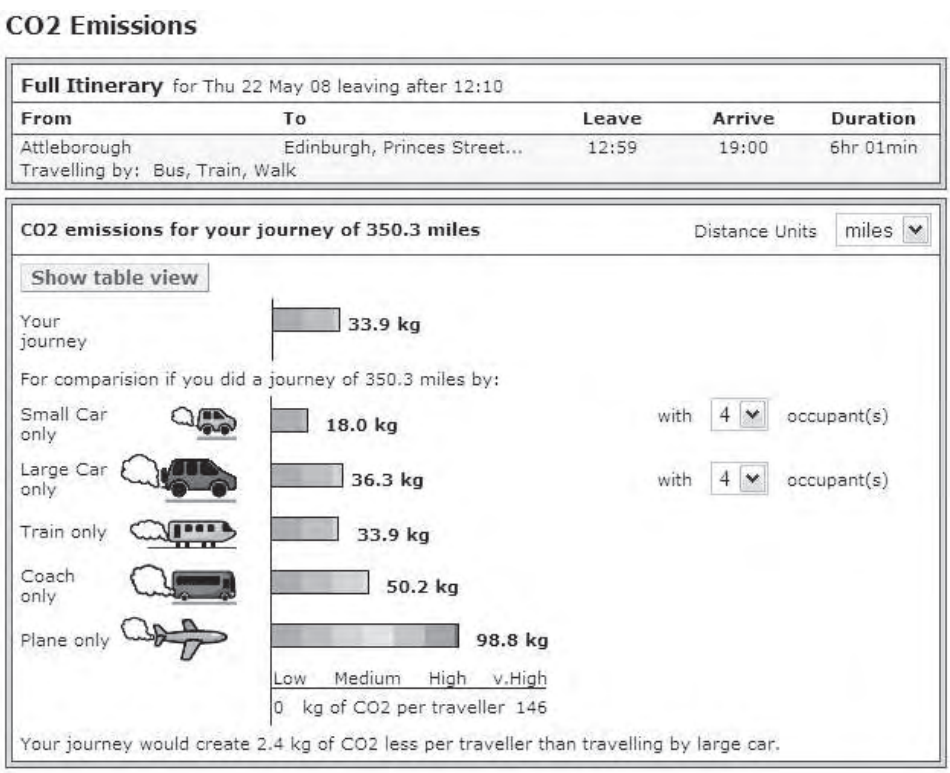
January 2009

Supplementary memorandum from Liftshare (MRN 15A)

I was very pleased to have been given the opportunity to give evidence to the Committee on 8 July. I was asked to provide additional evidence about car sharing, how it has reduced congestion and CO_2, and the potential to do more.

The principal facts:

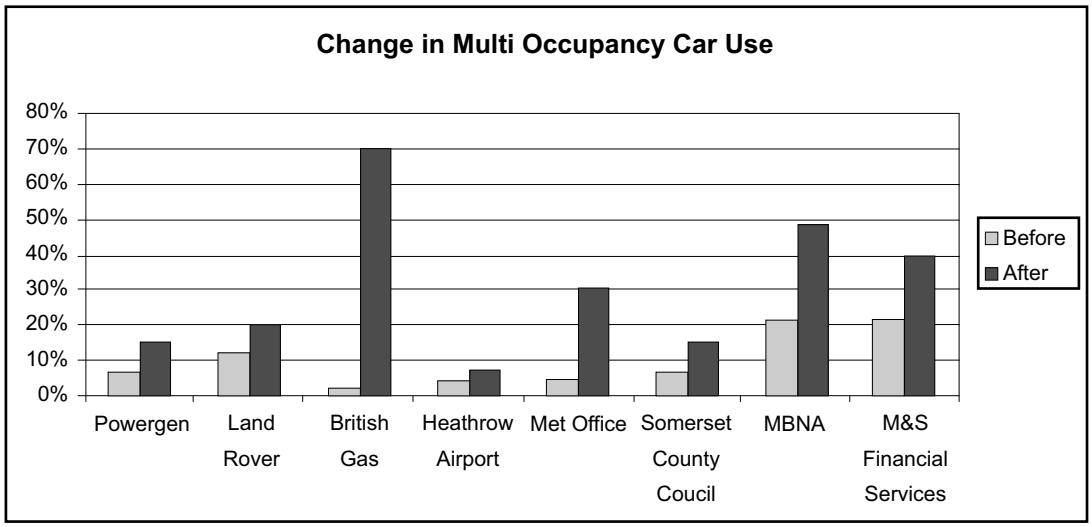
- Average car occupancy in the UK is now 1.58 people per car. (It was 2/car in 1960)
- Average car occupancy on the commute and business trips is now 1.2/car.
- Each 1% drop in car occupancy adds 2.5 billion car miles.
- Increasing average car occupancy back to 2/car would save 17 billion tonnes of CO_2.
- 73% of the population have been a car passenger in the last 12 months.
- A car with 2+ people in it can be a very efficient way to travel



Picture taken from Transport Direct comparing car travel to alternatives

There are two key areas of activity in the car sharing market. There are online systems for individuals to access to match them up for any journey they make. *lift*share is the largest of these with around 345,000 members. There are also systems set up for organisations or groups of organisations (business parks etc). There are around 1,500 such systems set up of which around 80% are part of the liftshare network.

Some research was carried out by the DfT in 2005 into the systems set up for companies. This research concluded that car sharing schemes made a large impact on local congestion and traffic issues.



The research supporting this best practice guide demonstrates that car sharing schemes have produced significant increases in multi occupancy car use (a 21% increase on average), with no corresponding detrimental impact on other sustainable modes—a real reason to deliver effective car sharing solutions for an organisation.

One of the most notable findings is the impact on parking spaces per employee. Across all of the case study sites, the average number of spaces per employee was reduced from 0.79 to 0.42.

Cutting from "Making car sharing and car clubs work" DfT 2005.

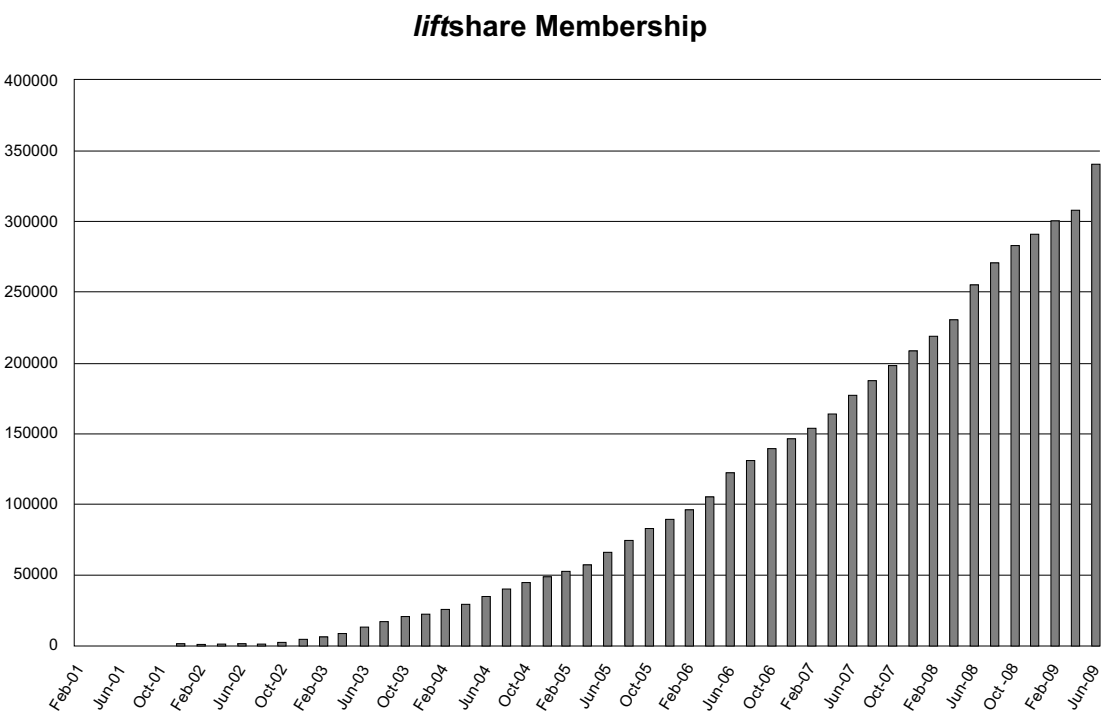
There has been very little independent research into the public use of car sharing. *Lift*share have commissioned a number of internal reports in recent years and have urged the DfT to carry out more in-depth independent analysis but this has not happened.

In 2000 there was a report called "An economic and operational evaluation of urban car-sharing"

N.T. Fellows a, D.E. Pitfield, which concluded:

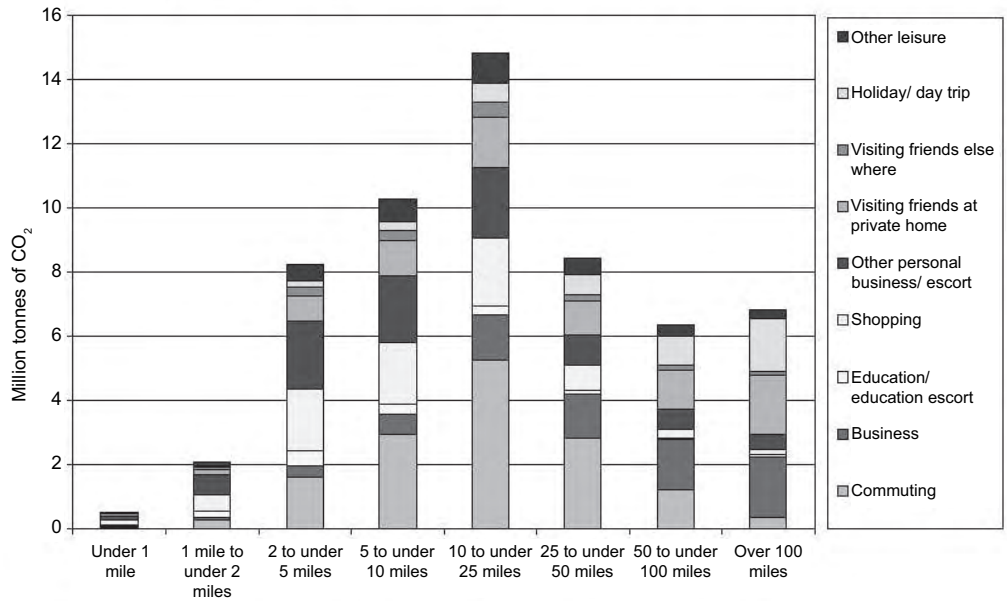
> *"Utilising cost benefit analysis techniques, in exactly the same way as the UK Government evaluates new roads and public transport schemes (ie COBA), car-sharing can be shown to produce very high net benefits to society."*

Liftshare is a social enterprise set up in 1998 to 'enable and encourage more efficient use of the car' and in recent years has grown exponentially. Membership registrations now stands at 340,000 and is growing by around 300/day. It currently saves around 40,000 car trips/day.



There is a very urgent need to reduce emissions from the transport sector. Cars are the largest mode in this sector and commuters travelling 10–25 miles make the largest contribution. Alternatives to the car for such distances are oftne not viable and so car sharing has a key role to play.

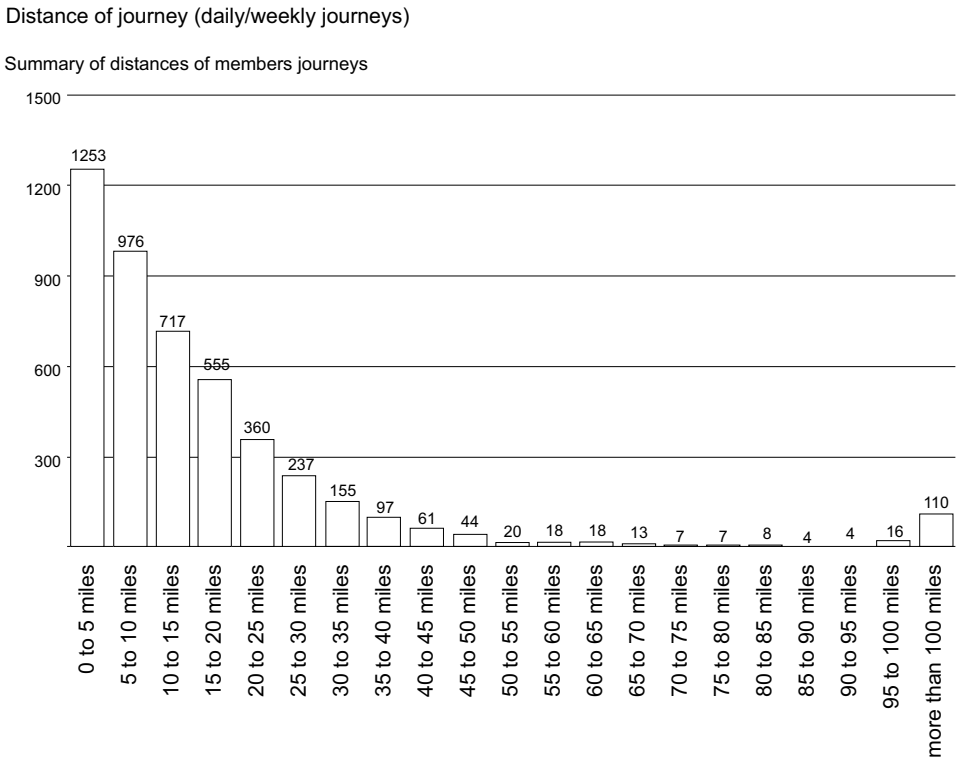
Figure 3.14: Estimated CO_2 emissions from household cars by journey purpose and journey lenght, GB, 2002/ 2006 average



Source: DfT analysis

Picture from DfT.

The graph below shows the distances of new commuting journeys registered with liftshare in June 2009. 56% of the 4,680 new journeys registered were between 5 and 25 miles. This gives clear evidence that supporting more car sharing would greatly reduce CO_2 from the commute traffic.



Distance of new commuting journeys registered in June on liftshare

Monitoring car occupancy levels, promoting car sharing and putting measures in place to encourage its uptake would have a profound impact on reducing congestion, pollution and increasing accessibility for all.

To date there has been very little done to support car sharing in the UK. I urge the Transport Committee to ensure that every attempt is made to increase average car occupancy levels on our road network before more expensive, lower benefit, alternatives are implemented.

July 2009

Memorandum from Terry Ratcliffe (MRN 16)

The Current Road Network

Travellers always choose the mode which is quickest and cheapest.

Adequacy

The current major Road network is not adequate for the needs of the economy and for individuals and it will never be.

We know that as soon as new road space is created, it soon fills up with traffic. Whilst some of the new demand is essential for our continued prosperity a substantial proportion of this new traffic is unsustainable.

A short description of some of the major traffic elements which are causing unsustainable and excessive traffic growth are as follows:

- More car commuters and longer and longer commuting distances.
- Centralisation of businesses and dwindling local employment.
- The development of freedom choice for consumers. Many of us may no doubt remember the illustration of this made by an eminent philosopher who said that:

  "He could stand by The A1 and observe large numbers of lorries those travelling South which were bringing shortbread biscuits from Edinburgh to London, whilst other lorries travelling North were taking shortbread biscuits from London to Edinburgh." Similar examples are legion.

We all familiar with the problems of increased car ownership which have been exacerbated by the falling costs of motoring.

Many have bemoaned the steady decay of public transport, but nothing has been done to tackle the problem apart from the bold move to introduce a congestion charge in London. Surely this latter success must give our decision makers some incentive for action. It is clear that motorised traffic should be better managed and that priorities need to be established.

Maintenance

The actual physical maintenance of the major roads could be improved but the present level of service is satisfactory.

Responsibility Passed to Local Authorities

No, it would not be appropriate to devolve responsibilities to local authorities.

The management of the major network is complex issue and in order to ensure consistent implementation of a national policy it should be retained by a single body.

The DfT/HA should retain the overall responsibility but that organisation must undergo a fundamental adjustment to its current culture. The organisation appears to be run with Teutonic efficiency which is pleasing. It is however of concern that their brief continues to consist of continuing to construct more and more roads and bridges in the hope that one day all demands will be met. This flawed philosophy is compounded by an out of date system of cost benefit analysis for prioritising highway schemes. This system namely COBA perpetuates the "predict and provide" doctrine in that all vehicles irrespective of purpose of trip have equal values placed upon them.

For example COBA values journeys made by long distance commuters and questionable long distance freight movements as high as any other trip purpose.

On the other hand however, COBA places no value on a trip in which does not include a powered vehicle and thus the construction of over bridges necessary to unite communities severed by impenetrable traffic volumes on trunk roads results in the conclusion that such action would be poor value for money.

The notion that it is quite acceptable for a pedestrian to be expected to divert unreasonable distances is totally wrong. It is certainly not in keeping with the idea of a caring society which encourages walking and cycling.

With regard to the promotion of highway schemes, at the moment it is considered acceptable for the DfT / HA organise their own public Inquiries for highway schemes. This involves the appointment of the Inspector which clearly can lead to a conflict of interest. The system should be changed so that highway inquiries can be conducted by a truly independent body.

Meeting Demand

New Facilities

Additional road capacity should be provided when it is certain that it is needed for trips vital to the well being of the country.

Road space should be provided for environmental reasons. Schemes to relieve pressure on established communities such as by pass routes should be given priority even though they score less highly than others when ranked by the COBA system.

It is essential at the same time to invest in the public transport system, both road and rail.

Restraint

There is little doubt that it is now necessary to put in place measures to achieve traffic restraint but giving priority to selected trip purpose. This would if applied intelligently would add to the nation's wealth, it would reverse the growth of motorised traffic and reduce highway expenditure.

The various options for achieving this have been known for many years.

The imposition of traffic restraint in its initial stages is likely to be hugely unpopular and as such would not be at the top of the agenda in any political manifesto. It is believed that nothing will be achieved because the public are only likely to give their consent when the situation has reached crisis level. It would be desirable for decision makers to find ways and means of overcoming this obstacle thus making an early start on the better management of transportation in the UK.

Integration

The integration between the road network and other modes is at present seriously limited and a higher priority should be given its development.

It is accepted that this call for evidence is related to the major road network but in order to give a balanced contribution it is necessary to stray on other closely related issues.

The restraint measures aimed at the private car particularly for long distance commuting can be balanced by better public transport. This can be achieved by improving the rail system and by high speed buses on the major network.

The modal shift desired can be assisted to a large degree by the imposition of trip end restraint measures.

The congestion charge, which is appropriate for large and densely populated areas, is an obvious tool.

However charging for town centre parking in all its forms is a totally logical way of controlling the motor car. There are substantial difficulties in achieving this in totality but that is not to say the government should not make a start because if left to local councils then nothing will be achieved.

The Highways Agency should be empowered to promote public transport schemes including the provision of public transport interchanges on trunk roads. These "bus stops" would be served by local bus feeder routes, car parks and safe dedicated direct routes for NMU traffic together with associated parking.
Some years ago it was concluded that attempting to shift the movement of goods from road to rail would be a "barren exercise".

New technology suggests that there would be a great deal of merit in revisiting this initiative for certain types of freight which it is believed could now conveniently be transferred from road to rail.

NMUs

There is much scope for the integration of cycling with public and private transport.

This should take the form of providing secure cycle parking and better provision for transporting cycles on buses and trains.

A great deal has been made by the government of the value of walking and cycling as important components of a comprehensive transportation system. In fact it is estimated that in urban areas some 60% of trips are less than three miles and many of these could be shifted to walking or cycling. The work done to date to develop NMU traffic leaves much to be desired.

The basic rule is that people will only transfer to NMU mode when it is cheaper and quicker to do so. The recent growth of cycle traffic in central London exemplifies this maxim.

If the restraint measures outlined above are implemented then there will be a large increase in these transport modes. The half baked facilities already in place for cyclists are woefully inadequate, I am sure the CTC will amplify this statement if requested. The general conclusion by cyclists nowadays is that it is safer for them to stay on the main road.

The design arrangements for leaving the main carriageway and rejoining are invariably most hazardous.

It is essential to invest heavily in providing better cycling facilities using as a model that which has been achieved in Europe particularly the Netherlands.

The encouragement of cycling and walking should not be confined to the urban areas.

Trunk roads represent significant lines of severance and the propensity for NMUs to cross declines as traffic increases. It is essential that over bridges are placed at strategic points to ensure the continuation of a reasonable and commodious minor road network. This form of investment is at present erroneously considered by the DfT/HA to be poor value for money.

New Developments

Climate Change Bill—Others are better qualified to comment.

Population Growth

There is an opportunity to change the current approach to design and incorporate measures to achieve a substantial modal shift.

Emerging Technology

The long awaited development of achieving change in transportation patterns by working at home by computer has not materialised and has done little to ameliorate traffic congestion and it is not expected that it will do so in the future.

The new technology of intelligent transport systems will allow more efficient management of the existing conditions. It should be fully developed.

It will not however solve the underlying problems of which emanate from the unfettered use of the motor vehicle.

January 2009

Memorandum from the Road Haulage Association (RHA) (MRN 17)

Key Points

1. Road capacity seen by hauliers as inadequate, more urgently needed
2. Hard shoulder running suitability not yet adequately tested
3. Highways Agency should consult more with haulage sector
4. RHA proposes ways to end scandal of M6 Toll under-use
5. Road pricing—case not made in terms of "social contract"
6. Climate Change Bill—more UK manufacturing would raise UK road haulage CO_2 emissions but reduce CO_2 emissions overall
7. Tolling—may well have a place for new roads and road up-grades
8. M1 Junction 19—unacceptable delays to upgrade procurement
9. Major road maintenance—must lie with Highways Agency
10. Road haulage—essential, cost-effective, flexible user of MRN

1. A free-flowing road system is infinitely preferable and more sustainable to a congested one; and given that road transport is here to stay and indeed forecast to grow, the emphasis must surely be on how this can be achieved.

2. Road transport operators view the key responsibility of government as being to ensure the provision of reliable and efficient infrastructure. The industry is frustrated that congestion has been getting worse rather than better over the past 10 years. In 2007, substantial haulage firms told the RHA that congestion had reduced their trucks' efficiency on the road by around 20% since year-2000. It appears that the government has abandoned its early commitment to reduce congestion during this decade; and that there is a shortage of political will to confront the core need for road upgrades and new road capacity.

3. The DfT's emphasis on an extensive roll-out of hard shoulder running is at best premature. The M42 trial has been successful for traffic leaving at the next junction only; the effectiveness of such a system for through running is unproven. We do not believe that it is an adequate substitute for extra road capacity.

4. DfT's new consultation paper on creating a sustainable transport system and the accompanying paper on the logistics perspective represent a bold attempt to get to tackle a transport system that is increasingly integrated. It is about moving goods and people from A to B in the most acceptable way. Some corridors are highlighted that together go to make up the main transport arteries and questions are posed on how we can make them more effective and efficient. Little is included about new road build or major strategic improvements. We now need meaningful targets for monitoring and reducing levels of congestion and for follow-through action.

5. Scope for more intermodality exists but it is limited as far as freight is concerned; such is the geographical size of the UK that road will remain the clear choice, offering speed, reliability, flexibility and economy.

Road Pricing—Proponents Lack Understanding of the Impact

6. Government puts forward road pricing as the key to overcoming congestion. It may well have a role but the concept is greatly over-sold. It is important to recognise that the impact of road pricing measures is poorly understood, not least by government; and that road pricing may well represent poor value for money. Frequent, unequivocal rejection by the public through the democratic process, most recently in Manchester, should be seen in this light. To set the debate in the context of the "Social Contract" discussed by Britain's 17th century philosophers, voters will voluntarily accept limitations placed upon them if they can see that there is a broader benefit. But practical benefits from road pricing have not been clearly identified in terms of congestion and people's use of the road—not least because they are not adequately understood by government. If a real benefit is made evident, the public response may well change.

Where Tolling has a Place

7. Tolling has its place—especially if traditional new road finance models are no longer realistic options. Tolls can be the catalyst to get new infrastructure projects under way. There are existing parts of our road system that need investment. One candidate is the A14 from the M6/M1 interchange right through to the Haven ports. This needs upgrading to motorway standards. Delays on the route are legendary and are not sustainable as freight traffic increases, irrespective of the worthy expenditure on upgrading the railway.

8. There is a strong argument that such a project should be funded directly by government. However, the need for action is more important than the debate over funding options. If the road were to be upgraded and then tolled, there would be a clear linkage between investment and payback. Road hauliers would see the availability of a free-flowing road as compensation for a user payment.

9. This concept could also be applied elsewhere. The M42/A42 Birmingham—Nottingham Link requires to be upgraded. The M6 from Birmingham to Manchester might also be a suitable candidate. So, too, would much of the A1 and the A34. Thus we achieve new investment via road upgrading (not necessarily new roads), employing a toll repayment scheme which in itself is a form of road pricing.

M6/M6 Toll—Suggestions to end a Continuing Scandal

10. We would like to take this opportunity to highlight the missed opportunity that is represented by the M6 Toll.

11. Now into its sixth year of operation, this privately operated alternative to the existing Midlands link M6 may (or may not) be working for the owner/operator but it has substantially failed the economy, the environment and road users. As part of the UK's strategic road network its contribution—its use—falls woefully short of what is needed and what is possible.

12. No blame for this can be attached to the operator or its parent company Macquarrie; but rather the concept of providing a tolled alternative adjacent to an existing motorway was in our view suspect from day one.

13. Current earnings by the M6 Toll suggest an annual income of £61 million. Traffic appears to be reducing, with HGV operators in particular unwilling to pay the recently increased tariff. Whether M6 Toll income will be enough to service and repay the construction cost of £900 million by 2053, after operating and maintenance costs have been deducted, is an interesting question. Meanwhile in 2009 a further payment is due to the Highways Agency of £100 million, ostensibly for land acquisition, making a total payback of £1 billion.

14. Meanwhile, the Highways Agency has earmarked the existing M6 for investment through a continuing roll out of its Active Traffic Management programme initiated on the nearby M42. The idea is to increase peak time capacity and therefore reduce congestion delays; but eight lanes of traffic on the M6 elevated structure may prove structurally challenging, given the very high level of maintenance currently undertaken when six lanes are in use.

15. The word scandal is not used lightly, but this is one case where nothing else will suffice. A national asset that was constructed in the face of substantial environmental opposition because rising traffic forecasts decreed it a necessity is actually taking less traffic than envisaged—and by a considerable margin. Meanwhile the road it was supposed to relieve is to have spent upon it large sums of money to stop it seizing up! This is not the way to run an integrated sustainable transport system where assets are used properly.

16. We have two suggestions to make. To find out exactly what the potential traffic flow for the M6 Toll might be, we advocate that a two month experiment takes place when tolls are lifted for the user, with recompense to the operator being made by the DfT via the Highways Agency. At current costs this would amount to a sum of £10 million. (This could be funded through the land acquisition payback of £100 million referred to earlier.)

17. Our second proposal is for the Highways Agency to negotiate to purchase one million HGV paths for the M6 Toll. That would represent 10,000 return journeys each working week, but the sum could be more if the market dictates and the freeing up of the M6 further encouraged. This would take a considerable amount of goods traffic off the existing M6 (as identified above) and would cost around £10 million in a full year—subject of course to any bulk discount rates!

18. It is nonsense to us that large sums are to be spent by the Highways Agency on increasing the capacity of the existing M6 when payment of a comparatively tiny sum could make the alternative more accessible to hard pressed hauliers. It would not need many HGVs to migrate to the M6 Toll for the existing M6 to operate more freely. All that is needed is the vision to make it happen.

19. The M6 Toll is either part of the strategic network, or it sits on the fringe; a wonderful but woefully underused asset. There cannot be anything wrong in the Highways Agency, in pursuit of its sustainability objectives, purchasing solutions from private contractors. This is one whose time has come.

M1 Junction 19—Unwelcome Project Delay

20. Greater urgency is required in terms of road improvements and road building, especially improvements to pinch points. We are concerned at delays in procurement of important schemes. To give an example of a serious pinch point: Improvements to M1 Junction 19 (linking with the M6 and A14), which the Highways Agency states is a source of worsening congestion and KSI accidents, were mooted a decade ago. Analysis of the problems started in 2000 and a planning, design, management and construction contract was awarded (to Skanska/Jacobs) in March 2005. The whole process went back to the drawing board 15 months later and the start of works is not now expected before summer 2011. These long delays to a known problem cause great frustration to the haulage sectors and to road users generally.

Highways Agency and Maintenance

21. The condition of the network maintained by the Highways Agency is basically sound, particularly in comparison with roads maintained by local authorities.

22. We are encouraged by the DfT's proposal to reclassify some sections of road from regional to national. The rule should be that as much as possible be taken from the control of local authorities. In the main, their standard of maintenance is inadequate and deteriorating. Whether they are given inadequate grant, or spend the money elsewhere, is of only passing interest to road users; their main concerns are of reduced road safety, increasing discomfort and increased vehicle maintenance bills. Truck operators are paying dearly in repair bills for the poor condition of local authority roads. Political accountability should rest squarely with the DfT—with the Highways Agency used as the delivery mechanism, not the policy arm.

23. We have concern that the lowest-cost option to the Highways Agency of a project may be given too high a priority at the expense of the broader economy. An example is the proposed maintenance work on the A303 at Willoughby Hedge, Wiltshire, involving closure of this major route over 14 weeks. The Agency has conceded that the work would take place at day-time only, in order to save money on its own Budget.

24. Work was to start on 9 February 2009 and we welcome the Agency's decision this month (January 2009), following strong representations from the RHA, to halt and review the project. We had objected on the grounds that there was insufficient consultation and that insufficient weight had been given to the savings to the economy and to road users that could have been achieved by reducing the period of closure through working at night as well as during the day.

25. One other point arises from this example. It has become clear that the local authority in the area, Wiltshire County Council knew of the scheme long before the industry, including the RHA, was informed in December 2008. Stakeholders should be notified and consulted by the Agency earlier in the process.

26. Truckstop provision should be regarded as an essential part of the major road network. We welcome the DfT's decision to take responsibility for developing a policy on truckstops, which previously was devolved to the Highways Agency. We have been advocating such a change for two years. We now need to see policy development and then action to improve the quantity and security of truck parking along the major road network.

Climate Change Bill: Widening the Debate on Tackling Congestion

27. The debate on how to tackle road congestion and make better use of existing capacity should be widened to include issues such as planning and patterns of work. Government has focused too much, and focused the debate too much, on road pricing. There are points that the RHA argued in its extended policy paper on road pricing, published in spring 2007.

28. Aspects of the Highways Agency's day-to-day operation of motorway digital information displays must be improved. Current processes result in information being displayed that is too frequently out of date. Warnings of long delays can still be shown when the road is running freely; and mandatory speed limits of, say, 40 mph can remain in force on a road long after the reason for the restriction has been removed. This undermines the confidence of road users.

29. ITS (Intelligent Transport Systems) has a role to play but cannot replace the requirement for investment in more roads and road improvement.

30. The DfT's decision in spring 2008 to rule out a step-change in road haulage efficiency through articulated vehicles that give greater payload and therefore reduce carbon use was premature; the issue is likely to return over time because there are few disadvantages and the gains are too great to ignore.

31. Demand for road haulage in the UK will increase significantly and, ironically, increase our UK carbon footprint, in the event that our manufacturing base recovers and grows, as it is being urged to do by government. Growth in manufacturing would not only be a boost to the UK economy but would most likely to be beneficial to global CO2 emissions.

Road Haulage Responds and Evolves to Serve Business and the Public

37. Transport firms rise to the challenge of increasing efficiency, improving services and reducing costs to industry. They are making increasing use of the major road network at night; the Highways Agency notes that on parts of the network articulated lorry traffic is almost as great at night as during much of the daytime.

38. To take one example, the emergence of a world-class hub-and-spoke distribution sector for goods on pallets is another example of the haulage industry's emerging use of the road network. More than 800 independent transport companies co-operate through competing networks to provide reliable next-day, nationwide delivery of palletised goods. A manufacturer in, say, Cornwall can send single pallet-loads of goods to customers throughout the country at an economic price with quite as much confidence as he would post out first class letters—perhaps more so. No other mode can offer this.

January 2009

Memorandum from Campaign for Better Transport (MRN 18)

Summary

1. The UK's road network is well designed for the needs of the UK's motorists, but does not provide for the needs of pedestrians, cyclists and public transport users.

2. Increasing capacity in line with demand induces traffic faster than it can be accommodated.

3. Alternatives modes of transport, demand management and land-use planning can positively reform our relationship with the UK's networks of major roads.

4. Our existing appraisal framework gives priority to schemes which encourage car dependency at the expense of schemes which tackle the root causes of congestion.

5. The targets laid out in the Climate Change Act cannot be met purely through technological means.

6. Land use planning, public transport, travel planning, behavioural change and technology can all contribute to CO_2 reduction and minimising the impact of future development.

Is the current major road network adequate for the needs of the UK economy and for individuals?

1.1 The major road network has sufficient capacity to accommodate the motoring needs of the UK economy and individuals, provided that demand is managed to achieve optimum use of road space.

1.2 However no transport network can accommodate unrestrained desires for unlimited travel, because travel demand is partly driven by supply. Research has repeatedly found that increasing capacity is a major driver of traffic growth. This growth is additional to the traffic level increase predicted by Department for Transport or Highways Agency modellers during the scheme's analysis.

1.3 Furthermore this traffic growth is being accelerated by current land use planning practice, which designs environments around the assumption that everyone will have regular access to a car and chose to use it as their primary mode of travel.

1.4 The major road network is wholly inadequate for buses, cyclists, pedestrians. This is especially true of major roads in urban areas, where the overwhelming majority of congestion can be found.

"Predict and Provide"

1.5 The Department for Transport's traffic models assumes that traffic will continue to grow because it has always done so in the past. Guided by these models, the Department instigated a continuous programme of road building aimed at relieving the network of current and future congestion.

1.6 This process, known as "predict and provide", is fundamentally flawed: it confuses the causal relationship between capacity and traffic levels. Road capacity is and will always be finite; once this is full, traffic simply cannot continue to keep growing. Only by providing additional capacity can the traffic growth take place; and the provision of capacity induces additional traffic. This is experienced as congestion, which creates the impression that further capacity is required.

"You cannot build your way out of Congestion"

1.7 In 1989 the Secretary of State for Transport asked the Standing Advisory Committee on Trunk Road Assessment (SACTRA) to explore a number of issues related to trunk roads and traffic. Their 1994 report, "Trunk Roads and the Generation of Traffic", was the result of five years of research into the phenomenon of induced (or generated) traffic. SACTRA defined "induced traffic" as those journeys which arise from new road schemes in addition to that which would be expected from such development.

1.8 The Committee found that "traffic growth rates have been slowest where congestion is worst. The fastest growth rates have been where existing capacity is still spare, or new capacity is provided… this differential growth rate is consistent with, but does not prove, the proposition that additional capacity on specific roads influences traffic growth. However, when considering the network as a whole, it is difficult to come to any other view".[39]

1.9 Induced traffic is the result of a number of complex, interrelated elements. Some drivers switch from another mode of transport to the car, because reduced congestion and decreased journey times make driving more attractive than other modes. Other people change their journey habits, choosing to shop or work further from home than they might otherwise have done (or choosing to drive to a supermarket instead of walking or cycling to the local grocers). Drivers also choose to travel more frequently, making more trips than they might have done under congested conditions (perhaps swapping a leisure activity which did not require travel, such as gardening or reading a book, with a trip to the cinema).[40]

1.10 Additionally, the Committee found that drivers for whom increased capacity results in time savings tend to use the time for additional travel, with around half of all time saved subsequently re-invested in travelling. This was believed to be a short-term effect: "the longer-term effect is likely to be greater, with a higher proportion (perhaps all) of the time saved being used for further travel".[41]

The Targeted Programme of Improvements

1.11 Ministers have partly accepted that "you cannot build your way out of congestion".[42,43] Instead of a national programme of road building, the current Departmental focus is on a "Targeted Programme of Improvements" (TPI); a programme to remove perceived bottlenecks in the network. The TPI mostly seeks to increase capacity along the trunk road network, by widening existing a-roads, linking major roads together and bypassing villages along a-road corridors.

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[39] *Trunk Roads and the Generation of Traffic*, paragraph 4.22. SACTRA 1994.
[40] *Trunk Roads and the Generation of Traffic: the SACTRA report and associated Government guidance—What does it mean and does it matter?*, pp 3–5. Buchan, Keith. Metropolitan Research Unit, 1995.
[41] SACTRA 1994, paragraph 4.72.
[42] John Prescott MP, speech to the Labour Party Conference, 1999. http://news.bbc.co.uk/1/hi/uk_politics/460795.stm.
[43] "To keep a lid on congestion we'd need to boost our road building programme several times over… simply building new road capacity on its own is not a practical response to congestion." Ruth Kelly MP. Statement to the House of Commons, 4 March 2008. http://www.dft.gov.uk/press/speechesstatements/speeches/congestion.

1.12 However the TPI appears to be aimed more at the tackling the perception of congestion that at tackling congestion itself. According to the Department for Transport, 80% of congestion is in towns and cities, "where the answer cannot be building new roads".[44]

Trunk and Feeder Road Capacity

1.13 In fact the TPI, by targeting the major roads network, can be expected to further increase congestion in urban areas. The inter-urban network channels traffic into and out of cities; increasing traffic flow on inter-urban roads simply funnels more vehicles into urban areas. "The compatibility between the capacity on the trunks and the feeders is already a very significant problem… it would be exacerbated by a major investment programme on the inter-urban network with no other supporting measures."[45]

1.14 The negative impact of the supporting road network on trunk road capacity cannot be underestimated. The London Orbital Multi Modal Study (Orbit) concluded that even if the M25 were widened to 14 lanes journey times in 2015 would be longer than at the time of study, because of the increased congestion on the surrounding roads. The study concluded that demand management, such as road pricing or Active Traffic Management, was essential to prevent induced traffic causing congestion.[46]

1.15 The Orbit study also concluded that widening the M25 without managing demand would result in even more congestion than the network currently experienced. Post opening analysis showed that "between Leatherhead and the A3 junctions 9 and 10 where [the M25] was widened recently from three lanes to four, which represents a 33% increase in capacity, and the traffic flows in the first year after opening increased also by 33%, so all that extra capacity was effectively taken up in the first year after opening, and that pattern has been repeated through many of the sections of the M25 which have been widened".[47]

1.16 Those proposing large scale expansion of inter-urban trunk road capacity have yet to respond to these concerns or to explain how their proposals would avoid these problems.

Bypasses and Traffic Generation

1.17 The continuing efforts of local and national highway authorities to bypass villages and towns does not tackle medium-term traffic levels and congestion in those conurbations and increases overall traffic on a local and county level.

1.18 Post-opening evaluation of the Newbury Bypass by the Campaign to Protect Rural England found that traffic on the bypass had increased far faster than expected. "The Highways Agency had predicted that between 30,000 and 36,000 vehicles per day would use the bypass by 2010. Those figures had already been exceeded in 2004, six years early, when 43,800 vehicles used the bypass every day (and rose to 45,900 in 2005)."[48]

1.19 While traffic in Newbury decreased initially, by 2006 congestion had returned to pre-bypass levels, and traffic on the A34 corridor had increased 44% faster than traffic across Berkshire as a whole. Traffic on the bypass has grown twice as quickly as the county average.[49]

Road Building and Cost

1.20 Despite the recommendations of the National Audit Office and the Nichols Review, road building is still characterised by widespread cost overruns.

1.21 Road building remains an extremely expensive means of reducing congestion, compared with demand management and electronic solutions, such as hard-shoulder running and Active Traffic Management.[50]

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[44] Ruth Kelly MP, Department for Transport press release, 16 July 2008. http://nds.coi.gov.uk/content/detail.asp?NewsAreaID=2&ReleaseID=374015.

[45] Professor Peter Mackie, Institute for Transport Studies. Oral evidence to the Transport Select Committee, 26 January 2005. http://www.publications.parliament.uk/pa/cm200405/cmselect/cmtran/218/5012602.htm.

[46] *London Orbital Multi Modal Study*, Government Office for the South East. November 2002.

[47] David Hardcastle, evidence to the Transport Select Committee, cited in *Jam Tomorrow? The Multi-Modal Study Investment Plans*, Third Report. http://www.publications.parliament.uk/pa/cm200203/cmselect/cmtran/38/3802.htm.

[48] *Exposed—the hidden costs of the Newbury Bypass*. CPRE press release, September 2006. http://www.cpre.org.uk/news/view/321.

[49] *An analysis of the "Five-Years After" Post-Opening Project Evaluation for the A34 Newbury Bypass*. Taylor, Ian; Elliot, John; Sloman, Lynn; Matson, Lilli, 2006. http://www.cpre.org.uk/filegrab/beyond-transport-infrastructure-supplementary-report.pdf?ref=2579.

[50] *Are these the world's costliest roadworks—the M6 at £1,000 an inch*, John Vidal, the Guardian. 31 July 2007. http://www.guardian.co.uk/uk/2007/jul/31/transport.world.

What should the relationship be between measures to increase road capacity and measures to manage demand for road space (for example road pricing)?

4.1 Congestion is primarily an urban issue; appropriately the Department's programme should focus on reducing urban traffic levels. As new capacity is not an option in urban areas, this should prioritise traffic reduction to target the root cause of congestion.

4.2 Measures should include: reallocation of road space to improve bus journey times and make walking and cycling more attractive; increasing availability of public transport services; new public transport infrastructure, including light-rail and tram schemes; cheaper public transport fares and higher parking charges; sensible urban design with essential services within walking distance and a massive roll-out of "smarter choices" measures.

4.3 Active Traffic Management (ATM) represents a real alternative to motorway and trunk road widening, improving journey time reliability, reducing congestion and, if carried out at 50mph, reducing CO2 emissions.[51] The Government is considering whether to initiate a major ATM programme in place of widening; this would be advantageous for drivers, offering real and long-term improvements in journey time reliability, by managing demand for any increase in capacity; however it should implemented at 50mph to take advantage of the CO2 reduction benefits, not 60mph as currently planned.

4.4 The Government needs to engage and communicate better with the public over the impact of policies to reduce traffic or relieve congestion. The London congestion charge successfully reduced the number of vehicles entering the city during charging hours and enabled people to switch to public transport, walking and cycling.[52] To lock in the benefits Transport for London reallocated road space away from private motor vehicles; with less vehicles but less road space congestion stayed largely constant. Recent congestion data has been used by media commentators to dismiss the scheme as a failure, as though congestion levels were the ultimate measure of success.[53]

To what extent can alternative modes of transport, travel planning and land-use planning provide alternatives to private car use and road freight?

5.1 Sensible policies to reduce traffic can have a dramatic impact on the volume of traffic and levels of congestion. One of the fundamental factors in traffic growth is increased trip length: people travelling further and further.

5.2 Land-use planning dictates the distances we drive: if we designed our built environment around walking and cycling, with decentralised local services located near where people are, then there would be very little need to drive anywhere. Conversely if we assume that everyone will drive and provide the capacity for them to do so, with services centralised and located out-of-town with extensive free car parking then everyone becomes forced to drive, whether they want to our not.

5.3 Similarly, the potential for public transport use is largely determined by its availability and price. If people have no option but to drive, because there is no equivalent public transport option (or because it is too expensive), then they will drive and it is difficult to countenance penalising them for doing so.

5.4 Research by Transport for Quality of Life has indicated that there are three categories of trip, which roughly divide into a 40:40:20 split. The first category of trips are those which can easily be switched to another mode: single-car occupancy trips to work which could be taken by an existing rail or bus service, or could be easily car-shared with a colleague. The second category is harder to shift, but can be done with investment: providing new public transport infrastructure or making local shops and services more attractive than centralised out-of-town supermarkets. The final, smaller category represents those trips which are very hard to shift, and which it would often not be desirable to shift: driving an elderly relative to hospital, for example.

5.5 The growing evidence base from "smarter choices" programmes has taken some transport professionals by surprise, because it demonstrates the ease by which people can be persuaded to change their behaviour. The Department's analysis of the Sustainable Demonstration Towns found 11–13% reductions in car trips, and 13–22%. more public transport trips. This was achieved primarily through 'individual travel marketing', but also a combination of walking and cycling promotion, travel planning, car sharing schemes and improved public transport provision and marketing.[54]

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[51] *Advanced Motorway Signalling and Traffic Management Feasibility Study*, Department for Transport. http://www.dft.gov.uk/pgr/roads/network/policy/mtorsigntrafmanagement/advancemotorsign.

[52] *Central London Congestion Charging: Impact Monitoring sixth annual report*, Transport for London, July 2008. http://www.tfl.gov.uk/assets/downloads/sixth-annual-impacts-monitoring-report-2008-07.pdf.

[53] *Congestion charging: Toll tax rebellion*, The Times, 14 December 2008. http://www.timesonline.co.uk/tol/news/environment/article5337533.ece.

[54] Gillian Merron MP, letter to the Chief Executives of local authorities, 23 May 2007. http://www.dft.gov.uk/pgr/sustainable/demonstrationtowns/lettersustainabletraveltowns.pdf.

5.6 Britain's public transport fares are 20% above the European average, which considerably suppresses demand for public transport. Research by Steer Davies Gleave suggests that reducing fares to the European average would increase bus use by 13% and rail passengers by travel by 17% by 2015. Had such reductions been made in 2000, bus and rail travel combined might now be around 120 billion passenger-km, a level of public transport use not achieved since 1960.[55]

What types of scheme should be prioritised and are current funding mechanisms reflecting these priorities?

7.1 There needs to be greater investment in measures to reduce congestion and traffic by encouraging modal shift and long-term behavioural change. To achieve this, the current scheme appraisal system (New Approach to Transport Appraisal, or NATA) needs comprehensive reformation.

7.2 There are a number of inconsistencies in the NATA framework which encourage capacity increases. The first relates to the weight given to time savings, and the manner by which they are assessed. If a scheme is expected to reduce journey times, each minute saved is counted as a benefit. Time savings make up a disproportionate percentage of the benefits of road schemes, although no discrepancy is made between a few drivers saving several minutes and many motorists saving several seconds.[56]

7.3 This is especially important in light of the SACTRA findings that the majority of time savings get reinvested in transport. NATA also places greater value on car drivers' time than on bus passengers' or cyclists' time, disincentivising investment in schemes which affect modal shift.

7.4 NATA includes revenue from fuel duty as a benefit, although it is paid by motorists and the public considers it a cost. Fuel duty is valued at 55–60p/litre; schemes which transfer motorists to public transport factor in any reduction in fuel duty as a cost counted against the scheme. Additionally the CO_2 impact of motoring is costed at 5–6p/litre, so fuel duty revenues massively outweigh the damage caused by greenhouse gases.

7.5 It is much easier to find funding for capital projects than revenue schemes; "smarter choices" projects require revenue funding, and cannot be funded through capital programmes. Meanwhile millions of pounds is made available for capital projects (mostly road building programmes like the TPI) which further increase car dependency and make it all the harder for less expensive and better value for money "smarter choices" projects to be effective.

What are the implications of the Climate Change Bill for the development of the major road network?

8.1 Reducing transport's climate change contribution by 80% cannot be achieved by technology alone; there will need to be a substantial programme of modal shift, changes to land-use planning and investment in public transport alongside improvements to vehicle efficiency.

8.2 Road transport currently accounts for 25.7% of the UK's CO_2 emissions, and this is rising steadily, despite increases in per-passenger mile efficiency.[57]

8.3 Radical projections of 'carbon-neutral' motoring are deeply implausible. Research by the Metropolitan Transport Research Unit found that moving the fleet to electric vehicles would increase overall energy usage by 16–20%; however peak-time loading would increase by a factor of four. This is because of current travel patterns: people returning home from work and plugging in their cars at the same time.[58]

8.4 Electrification would require massive investment in energy production and increase the cost of energy. The cost of motoring would increase dramatically; it is simply incorrect to presume we could continue driving as much as we do today, even if electrification enabled us to meet our CO_2 targets.

What are the implications of anticipated population growth in the UK, particularly in designated growth areas, for the development of the major road network?

9.1 The impact of population growth and new housing on the major road network will depend entirely on land-use planning policies and design. Designing new housing developments around private car use encourages car dependency; presuming lower levels of car ownership and use and providing local reduces the impact on the road network.

9.2 Better enforcement of current land-use planning policies, such as PPG13, and a presumption in favour of public transport and local services for new developments, should be adopted as the preferred strategy to integrate new developments into the transport system. New developments should be located in areas already well served by public transport; the capital cost of providing new light-rail or bus links should be funded through section 106 contributions.

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[55] *Transport Costs and Carbon Emissions*, December 2008, Steer Davies Gleave. http://www.bettertransport.org.uk/system/files/Transport_costs_and_carbon_emissions.pdf.

[56] See, for example, *Decision Making for Sustainable Transport*, February 2008. Buchan, Keith.

[57] Transport Statistics Great Britain 2007, table 3.8b. http://www.dft.gov.uk/pgr/statistics/datatablespublications/energyenvironment/tsgbchapter3energynvi1863.pdf.

[58] For further discussion, please see pp60–64, *A Low Carbon Transport Policy for the UK*, November 2008. Buchan, Keith.

9.3 Last year Campaign for Better Transport sponsored a worldwide literature review, which concluded that by reducing the need to travel through intelligent design, new developments could massively reduce their impact upon the surrounding road network.[59]

Recommendations

The Government should:

1. Prioritise demand management on the existing network, and reducing traffic on the urban network.
2. Prioritise traffic reduction over congestion relief.
3. Evaluate the impact of road building over longer time periods, including local authority road schemes.
4. Revise transport modelling in line with the findings of longer-term Post-Opening Project Evaluation (POPE) findings.
5. Remove the inclusion of fuel duty as a benefit in NATA, alongside wholesale revision of the use of time savings.
6. Make the case against capacity increases and in favour of behavioural change and "smarter choices" to local and regional decision makers and the public.
7. Switch TPI funding to investment in public transport, walking and cycling.
8. Reduce public transport fares in line with the European average and guarantee not to raise fares above inflation.
9. Fund revenue projects designed to effect modal shift and behavioural change. Roll out widespread projects based on the Sustainable Demonstration Towns programme.
10. Introduce stringent guidelines for designing new developments, based on reducing the need to travel and enforce existing sustainable land-use guidance.

January 2008

Memorandum from the Institution of Engineering and Technology (MRN 19)

Executive Summary

- A transport strategy that is long-term, consistent and farsighted is needed from Government.
- The IET believes that there is no measure for "optimal efficiency", but free flow on roads needs to be ensured without building unnecessary stretches of road. Free flow should also be achieved during periods of maintenance when flow is reduced and town planners need to take into account future increases in traffic flow.
- The biggest issue is the lack of predictability of travel times and the reliability of the road network, which are even more important than journey-length. The IET believes that this is a factor that is often overlooked, since there is no measure for predictability.
- Staff in Highway Agencies need to act as intelligent customer and understand the nature of the contracts, issues that might arise and have a measure for successful completion of projects.
- The UK has world class Intelligent Transport Systems (ITS) industries, consultants and academics in the UK. Its potential for traffic management is however not harnessed.
- *Public acceptability* of measures such as congestion charging needs to be improved. This is not being addressed by the Government at all, but fundamental to the introduction of a number of traffic management measures.

1. *Is the current major road network adequate for the needs of the UK economy and for individuals?*

1. It is important to define the term "major road networks". Motorways form less than 1% of Britain's road length, yet carry almost 20% of vehicular road traffic and over 40% of goods traffic. When monitoring the roads used for freight transport however, it becomes apparent that the strategic network includes not only motorways and trunk roads, but a large number of regional and even local roads. The IET therefore believes that major road networks should include all roads with a significant national role, and should also take into account about 50,000 km of highway.[60]

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[59] *Master Planning Checklist for Sustainable Travel in New Developments*, 2008. Transport for Quality of Life. http://www.bettertransport.org.uk/system/files/Masterplanning_Checklist_2008.pdf.

[60] Keynote speech by John Wootton at the IET Road Pricing Event 2008, 50 years of Motorways and their importance to the UK, http://tv.theiet.org/technology/transport/1297.cfm

2. To optimise the efficiency of road networks, the Royal Academy has offered a distinction between Ways of Movement and Ways of Access[61]: A set of roads on which the objective is to provide reliable and predictable journey times free from congestion should be treated as "Ways for Access". The remaining roads, serving communities, connecting to the "Ways for Movement" and used by pedestrians, horses, cyclists, motor cycles, cars, buses, coaches, vans, lorries, etc.

3. The biggest transport issue is the lack of predictability of travel times and the reliability of the road network, which are even more important than journey-length[62]. The IET believes that this is a factor that is often overlooked, since there is no measure for predictability. And since there is no metric for predictability of road networks, any deterioration of the service of roads cannot be compared over the years. However, logistics companies are known to calculate in extra time between deliveries in order to account for unreliable networks. On days with little or no delays the drivers can return early, but they cannot deliver more goods. This is no benefit for the company. Having predictable journey times would make it possible for logistics companies to optimise their delivery routes and number of trips taken. The same is true for the public travelling to work or to meetings. Arriving early is no benefit to either the company not the employee, but is required to ensure that they arrive on time.

4. The growth in GDP and traffic are proven to follow the same trajectory. The Eddington Transport Study[63] estimated that eliminating existing congestion on the road network would be worth some £7–8 billion of GDP per annum and concluded that if road congestion was left unchecked, the rising cost of congestion will waste an extra £22 billion worth of time in England alone by 2025. By then 13% of traffic will be subject to stop-start travel conditions.

5. High fuel prices and the recession might slow down road congestion. There are signs that despite the fall in fuel prices, motorists are cutting out certain journeys as shown in the table below. It is difficult to quantify how many journeys are cut back, but this is likely to mean that for the first time in 50 years we might not see traffic growth this year. These effects could delay the predictions made in the Eddington Transport Study. This however should not be viewed as an argument for delaying action, but seen as an opportunity for making the road network more adequate for the needs of the UK.

July 2008 (fuel price peak)[64]	*November 2008 (fuel prices fallen)*[64]
Due to high cost of fuel	Due to high cost of fuel
20% cut back on general expenditure	14% cut back on general expenditure
25% travel less	32% travel less
32% cut back and travel less	20% cut back and travel less
ie 57% say they travel less	ie 52% travel less

2. *Is the maintenance of the major road network adequate to ensure optimal efficiency?*

6. The IET believes that there is no measure for "optimal efficiency", but free flow on roads needs to be ensured without building unnecessary stretches of road. Free flow should also be achieved during periods of maintenance when flow is reduced and town planners need to take into account future increases in traffic flow. It is therefore important that a transport strategy is long-term, consistent and foresighted. Success needs to be measured against predetermined mile stones, which makes it important to record current performance indicators.

7. In order to monitor the state of roads, ITS could be employed to detect early stages of disintegration of roads. External sensors such as accelerometers, laser or sonar can be used to determine the road condition, road roughness, bumps and potholes.[65] Those technologies together with smart algorithms can also be employed to detect other road hazards such as ice, flooding or debris.[66]

8. Shadow tolls are payments made by government to the private sector operator of a road based, at least in part, on the number of vehicles using the road. To ensure optimal flow however, the IET believes that shadow tolling needs to be reviewed. Measuring the quality of the flow on each shadow tolling highway lane rather than the number of vehicles should help to make the payment of roads operators more performance related and ensure the roads operator is delivering optimal efficiency. Improvements in the quality of service should then be rewarded when paying tenders for road maintenance. This way the tenders are encouraged to improve the service to road users. This has been done for the A1 Darrington to Dishforth project, and for the A249 Stockbury to Sheerness project.[67] The IET believes that such a system should be rolled out all across the UK.

[61] Royal Academy of Engineering (2005) Transport 2050: The route to sustainable wealth creation
[62] CBI (2005) Transport policy and the needs of the UK economy
[63] Sir Rod Eddington (2006) Eddington Transport Study
[64] AA Populus
[65] Ozbay K, Nassif H, Goel S (2007) Proceedings of the 2007 IEEE Intelligent Vehicles Symposium Istanbul, Turkey, June 13–15; Propagation characteristics of Dynamic Information Collected by In-Vehicle Sensors in a Vehicular Network
[66] Petersson N, Santesson M (2000) Experimental Slip Based Road Conditions Estimation, Report Number 5635, Lund Institute of Technology 2000
[67] Highways Agency, Active Management Payment Mechanism, http://www.highways.gov.uk/roads/2998.aspx

3. *To what extent should responsibility for major roads be given to local highway authorities and how much control should the Highways Agency retain?*

9. Often Local Highway Authorities may not have the right equipment, know-how and funding to properly maintain roads, which leads to a deterioration. This is currently overcome by tendered Managed Contracts to overcome this. However, it is important that staff of any Authority who is responsible for transport planning has got the right skills to do so. Staff has to be able to act as intelligent customer and understand the nature of the contracts, issues that might arise and have a measure for successful completion of projects.

10. Technological development and a national strategy for transport are essential for the future. A holistic approach to transport can only ever be achieved if there is a central governance organisation which coordinates transport projects and sets the overall vision for the future. A "National Roads Corporation" (as advocated by the Royal Academy of Engineering) could be an extension of the Highways Agency and should be responsible for operating, maintaining and developing the national road network. The National Road Corporation would be responsible for collecting true-cost charges on the roads, and transferring revenues as appropriate to local highway authorities. The National Road Corporation would also be permitted to finance other agencies for actions that reduce demand on its network. It would need to be ensured however that this does not lead to unnecessary bureaucracy.

11. A skilled work force is key to the success of any transport strategy. To ensure that, the DfT should forecast future skill needs and funding councils have to ensure that appropriate funding is available. For example, in the UK there are only two Universities that teach road maintenance as part of their Civil Engineering courses. This will make it difficult in the future to ensure an adequate number of graduates to staff a National Roads Corporation. Similarly, if Local Authorities are to have more responsibility, then the funding to train, develop and employ professional staff is critical. EPSRC is said to be withdrawing all MSc funding for transport courses by the end of 2009.

5. *To what extent can alternative modes of transport, travel planning and land-use planning provide alternatives to private car use and road freight?*

12. The National Travel Survey[68, 69] identifies the purpose of journeys. Results show that commuting and business trips are associated with 19% of passenger distance, but 37% of CO_2 emissions from all modes of passenger transport. This is because most trips are done by car with single occupancy. Teleworking, video-conferencing car sharing and home shopping all reduce car use.

13. Alternative modes of transport can help to some extent—but the extent is very limited. The reality is that close to 90% of personal travel is by private car, and the percentage is increasing.[70] The number of trips done by car far outstrip the decline in use of public transport and it would be not possible to shift all road transport onto alternative transport modes without significant investment into added capacity for public transport.

14. People make car journeys because they want or need to get somewhere, not necessarily because they like driving. Local access to services is important. Over the past few years, the number of trips has remained constant, but the journey length has increased. This is in part a natural outcome of choice of schools and health services being replaced by fewer, larger facilities provided in centralised locations as part of Government policies. People often own cars because there are no alternative travel modes available. Dormitory towns further increase this problem. One way to reduce travel demand would be to start building houses close to places of work and linking those up by public transport. Future land use and urban design policy must take into account sustainable transport schemes. In order to gain public confidence in such schemes, Government has to deliver on its promises.

15. Network Rail is expanding its rail network. However, this expansion only caters for predicted growth in rail travel and does not include additional capacity for a shift in transport modes. Rail needs to add more capacity through freight-only tracks and improve facilities for loading freight. Traffic separation (dedicated but slower freight lines) is very cost effective as proven on the continent.

6. *How much integration is there between the road network and other modes of transport?*

16. Currently there is not enough integration between the road network and other modes of transport. It has been shown that Park and Ride (car/bus/train) integration works very well where it is provided. However, at present they are few and far between and the number of parkway stations needs to be increased significantly. Successful Park and Ride facilities need to be free of charge, of high quality, secure and easy to reach. When planning future train station, Park and Ride facilities need to be included in the planning process. It is near impossible to add them at a later stage.

[68] DfT (2007) National Travel Survey http://www.dft.gov.uk/pgr/statistics/datatablespublications/personal/methodology/ntstechreports/pdfntstechrep06

[69] DfT (2008) National Travel Survey: 2007 Interview data http://www.dft.gov.uk/pgr/statistics/datatablespublications/personal/mainresults/nts2007/

[70] DfT Transport Statistics

7. *What types of scheme should be prioritised and are current funding mechanisms reflecting these priorities?*

17. The IET believes that priority should be given to advanced traffic management technologies, road pricing, average speed enforcement and hard-shoulder running. The DfT is beginning to fund these activities, but the issue which precedes funding is *public acceptability* of these measures, which is not being adequately addressed by the Government, but is fundamental to the introduction of some of these measures.

9. *What are the implications of anticipated population growth in the UK, particularly in designated growth areas, for the development of the major road network?*

18. Population growth means more cars and hence more congestion. This has been an unbroken growth curve for the last 60 years. The IET believes that the UK cannot build its way out of congestion, but better road management, intelligent transport systems and encouraging changes in behaviour need to play a significant role in the development of an effective future road network. Other measures should include:

- hard-shoulder running;
- road pricing;
- congestion charging;
- better urban design; and
- local services can reduce much of the need to travel.

10. *To what extent do emerging road and vehicle technology (intelligent transport systems) change the requirements for the major road network?*

19. Government has to take decisive action and make a long-term commitment to support new technologies. One such example is ITS. Currently, car manufacturers do not routinely fit ITS equipment in cars because they do not expect that the infrastructure for support and roadside equipment will be in place in the near future to make use of such onboard equipment.

20. The benefits of ITS can be seen in Brazil, where the fixture of GPS devices in cars are made mandatory by law. This allows communication from vehicles to roadside equipment on travel times, flow and congestion and can even be used to detect the state of the roads. There is a feeling that ITS in the UK has lost its way since mid 2000's, and that the DfT have not taken the lead on ITS development. We have world class ITS industries, consultants and academics in the UK. The Foresight work on Intelligent Infrastructure Systems[71] and more recently Land Use Futures[72] have highlighted the need to harness the potential of ITS in delivering part of the solution and provide key competitive advantages to the UK transport network and for UK companies who supply ITS solutions worldwide.

21. Hard-shoulder running should be increased. Historically hard shoulders were constructed because cars were less reliable. However, with improved technologies, this is deemed not essential any more and could increase the capacity of roads.

22. Tidal flow should be used to manage traffic in peak times. In the US, big bollards can be put up in different parts of the motorways to separate the two directions of traffic. Examples for this technology being successfully used are the Coronado bridge in San Diego and the Tappan Zee bridge in New York.

23. The developments do not need to be "hi-tech". In the US road planning is strategic and farsighted. Roads are designed to exceed the current needs. Large strips of land on both sides of new roads are bought at cheap prices to allow future expansion of the motorways. Often motorways are build with a large green strip in the middle between the lanes to allow future addition of lanes or bridges are designed wider than necessary fro possible future expansion. Obviously in the UK land use limits such planning, however it is important that future transport needs are considered when planning major investments in the network.

January 2009

Memorandum from the Automobile Association (AA) (MRN 20)

1. Introduction and Summary

1.1 Throughout its 103 year history the AA has been looking after the interests of drivers. It has sought to improve the condition of the roads they drive on, looked after their safety and campaigned to ensure they are treated fairly. The AA is the UK's largest motoring organisation. The AA engages with its members through numerous communication channels, ranging from the internet, a mailed magazine, direct contact by letter, telephone and through polling. A recent significant innovation has been the creation of a

[71] Foresight (2006) Intelligent Infrastructure Systems.
[72] Foresight (2008) Land Use Futures.

"members' panel" which comprises of 45,000 people who agree take to part in monthly surveys on a range of motoring issues, the survey is conducted in association with Populus. The AA has also developed a website based motorist discussion "zone".

1.2 AA members have differing views on many key motoring issues. Most say that roads are in a fairly poor state and have not kept pace with traffic growth. A majority of AA/Populus panel members support the construction of new and improved roads. Congestion and unreliable journeys are a significant concern for motorists and business. Motorists accept they must pay for their motoring but resent being seen as a "problem" and oppose escalating costs such as fuel, road tax, parking charges and potential congestion charges. Private motoring is an essential part of 21st century life and is something people continue to aspire to and even enjoy. Motoring is the main form of transport for 86% of passenger journeys. Many people are dependent on the car and the mobility of the car benefits society in many ways.

2. Member Opinion

2.1 In our research:

- 72% disagree with the statement that "the government and local councils recognise that people want to own and use cars and are doing what they can to facilitate that";
- panel members said new roads should be built or major road improvements carried out:
  - in towns and cities, 67% agree (27% strongly), 11% disagree, 22% neither;
  - on main roads in rural areas, 66% agree (27% strongly),14% disagree, 20% neither;
  - to by-pass communities, 78% agree (37% strongly) 8% disagree, 15% neither;
  - to make roads safer, 82% agree (42% strongly) 6% disagree, 13% neither;
- 71% of panel members agreed (36% strongly) that new motorways and "strategic roads"—which link cities, areas of population, ports and airports—should be built, 14% disagreed with this statement, 15% neither agreed or disagreed;
- drivers say they get poor value for money for what they pay in taxes and charges with two thirds saying road condition is worse than a decade ago;
- 82% say they still enjoy driving and the freedom and flexibility the car affords them and 79% could not imagine life without the car;
- motorists are divided on the principle of national pay as you go motoring with 45% opposed and 42% in support, 66% are opposed to local charging schemes;
- in earlier AA research members said they would prefer retention of fuel duty rather than a national road pricing scheme; and
- if road pricing was introduced 86% do not believe government would deliver any promised quid-pro-quo reforms to motoring taxation.

3. AA Comments on the Questions Raised in the Call for Submissions

The Current Road Network

3.1 *Is the current major road network adequate for the needs of the UK economy and for individuals?*

The major road network in Britain is comprehensive and most areas are well served by major roads or connections to it. This network functions quite well out of peak hours but there are capacity problems on parts of this network during peak hours. There are also issues with journey time reliability which varies considerably and which is influenced by the frequency of incidents and road works and how well they are dealt with. The AA has considerable concern about the quality of the A road network. Most of the UK's A roads have evolved from historic lines of route and whilst some have been improved many rural "A" roads follow old alignments and design standards that are not fit for today's intensive traffic. Accident statistics show this to be the case with rural "A" roads having an accident rate three times that of motorways.

3.2 *Is the maintenance of the major road network adequate to ensure optimal efficiency?*

Generally the motorways and many trunk roads are well maintained by the Highways Agency. The UK's main road network is a multi billion pound asset and yet its maintenance sometimes seems to be regarded a secondary concern—especially at local authority (A road) level. Adequate maintenance budgets are essential to help preserve the value of the asset and proper maintenance can save lives by keeping roads in good condition. The AA thinks it very worrying that the 2008 English National Road Maintenance Condition Survey identified more than one fifth (22%) of UK main roads as not meeting initial skid resistance standards, even more worrying is that in London this is 49%. Metropolitan and unitary authority areas fair little better with over a quarter of main roads failing to meet initial skid resistance standards. The AA's concerns are not just confined to road surfaces. Many roads are suffering significant wear and structural condition must be renewed in time to avoid catastrophic failure. Pot holes are common place on

some main roads and there are drainage and lighting problems. AA members say that most road signs are maintained quite well but seasonal cyclical maintenance operations often leave a lot to be desired with grass and foliage often obscuring sight lines during the growing season. Road maintenance is essential but often the maintenance itself can be an impediment to traffic flow—this is particularly the case with utility works which routinely disrupt traffic flow.

3.3 *To what extent should responsibility for major roads be given to local highway authorities and how much control should the Highways Agency retain?*

The AA believes that responsibility for main roads should be determined by the function of the road and ability of the authority to adequately maintain the highway and manage future capacity needs rather than political structures or policy need determining control. Motorways and Trunk roads tend to be the UK's best maintained roads whereas local authorities face many other funding pressures and as such their ability to properly fund road maintenance and improvement is always a challenge. Motorways and trunk roads fulfil a vital national role as do a number of local authority main roads—the AA thinks there may actually be some merit in reversing the policy of de-trunking to ensure adequate funding to preserve a well maintained and coherent main road network.

Meeting Demand

3.4 *What should the relationship be between measures to increase road capacity and measures to manage demand for road space (for example road pricing)?*

Our AA / Populus panel survey results show that motorists do understand the issues of capacity, demand and pricing. There is some support for pay as you go motoring (charging) but not under the current motoring tax arrangements, however, a large majority doubt that a new system of paying for motoring could be fairly delivered. Our panel also shows that there is some (50%) support for "making best use" of motorways through hard shoulder running under controlled conditions. However, 58% of our panel indicates it is not willing to accept the removal of road space for dedicated uses such as high occupancy pay lanes.

Locking in the benefits of capacity improvement will always be difficult to achieve. It would seem illogical to drivers to either charge for use or limit demand in new freer flow conditions. The AA is concerned about the adverse impact of some demand management strategies especially in relation to motorways. The UK's motorways have been a huge success in terms of contributing to the economy and removing the blight of through traffic from local communities. Demand management on or close to the motorway or trunk road network would risk ploughing traffic back into towns and villages which will harm the environment and the economy as well as increase accidents.

3.5 *To what extent can alternative modes of transport, travel planning and land-use planning provide alternatives to private car use and road freight?*

Many AA Populus panel members are multimodal travellers with 9% who cycle at least one journey a week and 39% use the bus or train once or twice a month. Park and Ride services are exceptionally popular with 51% of panel members having used a scheme and 36% would use a scheme if on existed for their journey. It is disappointing that so little appears to be done to integrate the car into the public transport system—especially when compared to the European mainland. There probably never will be an alternative to the private car because it has overwhelming flexibility but, as our panel shows, for some journeys other modes have significant advantages.

The planning system should help ensure that mistakes are not made in allowing development without regard for its impact on the transport system. However, today's 24/7 society and flexible employment market means that people need flexibility including a range of transport options to fulfil their lives. Some journeys can be reduced by using the information superhighway in terms of teleworking teleconferencing and home shopping.

3.6 *How much integration is there between the road network and other modes of transport?*

There is little talk these days of Britain's integrated transport system which was perhaps more an aspiration than national transport plan. The AA believes that much can still be done to exploit integration but not if transport strategies see the car as a problem rather than potential link in a multi modal transport chain. Efforts to demand manage the car through parking and access restrictions are often counter productive as they may force longer trips to be made by car because public transport cannot be connected with. The AA has long held the view that motorway service areas should facilitate longer term parking to encourage car sharing just as the Highways Agency should be seeking to address car share parking demand adjacent to its network. There should also be improved parking provision at railway stations.

3.7 *What types of scheme should be prioritised and are current funding mechanisms reflecting these priorities?*

The AA believes it is crucial to protect, preserve and not least improve the UK's motorway and trunk road network and investment should be geared towards relieving congestion, improving safety and ensuring the fabric of these roads is maintained. The AA believes that there is merit in pursuing road construction schemes such as by passes. These tend to produce phenomenal economic rates of return on investment. The high economic value in terms of benefits v cost is largely because many help unblock economic stagnation and also produce high value in reducing death and injury. The Eddington study found that a 5% reduction in business travel time on the roads would generate £2.5 billion benefit. The study also found that road schemes produced rates of return at a ratio of 10:1 and the number of road schemes with high levels of return far outweighed major public transport schemes such as heavy and light rail.

Current mechanisms do not provide nearly enough funding to advance badly needed schemes. Local authority A roads improvements have also suffered from lack of investment. Urban and suburban traffic congestion is rife, for example at any time during the morning peak 15% of urban drivers in Birmingham, Glasgow, Sheffield, Leeds and Manchester are stuck in queues*.

The AA believes that at a time of recession the UK should embark on a major programme of road "renewal" to create jobs and ensure the predicated congestion on UK roads in the future does not harm the UK's economic restoration.

New Developments

3.8 *What are the implications of the Climate Change Bill for the development of the major road network?*

AA analysis shows that just one minute a day of queuing for cars travelling along three major roads into a city can waste 900,000 litres of fuel per year—worth nearly £1.1 million at today's prices and add 645 tonnes of CO_2 emissions. Improved traffic flow can help reduce wasteful CO_2 emissions. Roads are by far Britain's most extensive and comprehensive transport system—nothing can replace them in terms of fulfilling households' and businesses needs for goods and services and also for providing access to education, work, pleasure and a myriad of other things. Private transport will undoubtedly continue in popularity but within a relatively short time frame CO_2 emissions from private cars will not be a problem. New low or zero emission engine technology will mean private transport can continue to be an aspiration for most people but clearly they will need to continue to need roads on which to drive.

3.9 *What are the implications of anticipated population growth in the UK, particularly in designated growth areas, for the development of the major road network?*

The AA believes that no matter what style of new developments are created people will still use cars. Better public transport and people living closer to work may reduce some journeys but this will have little impact on car ownership. Growth areas should be connected to the national strategic road network and assumptions should be made that households in these new developments will commute by car and be somewhat car reliant.

3.10 *To what extent do emerging road and vehicle technology (intelligent transport systems) change the requirements for the major road network?*

The AA thinks that emerging road and vehicle technologies will change some aspects of driving and the way that roads are used. The public remains very sceptical about demand management measures like road user charging. There are also concerns about car control being mandatorily taken away from them via intelligent speed adaptation. These objections may reduce as systems and trials gain ground. "Intelligent cruise control", which can stabilise motorway traffic flow, might help.

It is a matter of debate about just how far technology on roads and in-car will go and it is clear that the public will take some persuading that vehicles and roads should be fully automated. In capacity terms the desire to move around in personal private transport will dominate. In-car technology may help avoid congestion hot-spots, to re-route traffic or find places or parking, but will not remove the need to improve the road network.

* Source

AA Populus Surveys

The data referred to in this submission originates from the following surveys:

AA/Populus panel survey of 17,481 AA members conducted between 14 March and 9 April 2008

AA Populus panel survey of 18,547 AA members conducted between 23 May and 2 June 2008

AA/Populus panel survey of 15,306 AA members conducted between 4 and 16 July 2008

AA Populus panel survey of 12,146 AA members conducted between 8 and 14 August 2008

AA Populus panel survey of 8,110 AA members conducted between 23 December 2008 and 5 January 2009.

January 2009

Memorandum from the Civil Engineering Contractors Association (MRN 21)

SUMMARY

— In order to continue to provide its vital role to the UK economy, the Civil Engineering Contractors Association anticipates that the major roads network in Great Britain will require significant development and improvement to meet the demands of a growing population.

— Optimal delivery of this work will require the Government and its agencies to provide suppliers with a clear, consistent and continuous programme of works—allowing firms to invest in skills, equipment and innovation and sustainable solutions.

— Delivery of such major works would be best managed by a single organisation, allowing this body to benefit from experience that builds up over the delivery of a series of schemes, and providing a consistent point of contact for the industry.

1. The Civil Engineering Contractors Association (CECA) represents in excess of 350 civil engineering companies ranging in size from large and well-known national names to the medium and smaller sized company which may operate at a more regional level. CECA members account for 75–80% of the civil engineering workload undertaken in Great Britain, with significant member involvement in both the construction and maintenance of major and local roads throughout England, Scotland and Wales.

2. Wherever possible CECA encourages clients in the transport sector, including those responsible for the UK's strategic road network, to work with suppliers to provide clarity, consistency and continuity in terms of their approach to their relationships with suppliers responsible for the improvement and maintenance of networks.

3. Having taken this position, CECA welcomed the publication in 2000 of *Transport 2010*, the Government's 10 year transport strategy for Britain, which gave the industry a clear idea of the programme of works in which it could expect to be involved in delivery over the decade following the report's publication.

4. Sadly, 2004 saw the abandonment of *Transport 2010*, to be replaced by the *Future of Transport White Paper*, a rather less specific 30 year vision of the transport sector. Since then the industry has struggled to gain a comprehensive understanding of the Government's future transport delivery proposals. The Multi-Modal Studies, the Eddington Report and the move to regional prioritisation have all added to this uncertainty.

5. In July 2008 we saw publication of Roads—Delivering Choice and Reliability, the Department of Transport Command Paper on the future of the road network, which outlined plans for a £6 billion spend on major improvements to the strategic road network between 2008 and 2014. As an organisation we welcome this commitment, and express our hopes that the Government will commit to providing a clear programme of what and when this investment will take place, providing the clarity required to get the most efficient response from the supply chain. It is also vital that there is consistency in the Government's approach to this spending, committing it irrevocably so that it does not fall victim to political circumstance at some point in the future. We understand that, as with any programme of works, there must be some element of flexibility to deal with changes to requirements to the network in future. But such amendments should be minor and focussed, rather than major changes made to the entire programme.

6. The consequences of downturns in workload as a result of a failure to provide this consistent approach to delivery include; a loss of skills in the industry as suppliers turn their attentions to other markets; a reduction in efficiency as the benefits to suppliers of consistent workloads are lost; an increase in the consolidation of the industry that reduces competition for work that does come to the market and edges out smaller firms who cannot compete with major suppliers for dwindling workloads.

7. In response to the specific questions in the call for evidence for the inquiry, CECA has the following comments:

8. With regard to question 3 ("To what extent should responsibility for major roads be given to local highways authorities and how much control should the Highways Agency retain?") CECA recognises the fact that the DfT is the only organisation with responsibility for the whole of the major roads network. There is currently a difficulty with regard to major project decision making when this may involve representatives of the DfT, the Highways Agency, regional transport boards and local authorities. This lack of consistent decision-making could be remedied by giving one national agency, perhaps a development of the Highways Agency, responsibility for delivery of all major projects over a given value, say £10 million.

9. With regard to question 4 ("What should the relationship be between measures to increase road capacity and measures to manage demand for road space (for example road pricing)?"), CECA's would support road pricing as a means to establish sufficient funds to invest in programmes of work such as those covered in our response to question 7, rather than merely as an opportunity to raise revenue through increasing tax on motorists.

10. With regard to question 7 ("What types of scheme should be prioritised and are current funding mechanisms reflecting these priorities?") CECA recommends that investment be focussed on continuing works to relieve congestion, to support new development and to complete proposed dualling on the major roads network.

11. With regard to question 9 (What are the implications of anticipated population growth in the UK, particularly in designated growth areas, for the development of the major road network?), we believe that the major roads network will need to be expanded at a rate that is broadly in line with the percentage growth seen in the population, with significant work required to ensure that major roads serving Growth Points are upgraded so as not to act as a brake on the development of these areas.

12. With regard to question 10 (To what extent do emerging road and vehicle technology (intelligent transport systems) change the requirements for the major road network?), CECA welcomes any emerging road and vehicle technologies that offer pragmatic and cost effective solutions to the problems currently experienced by road users. But we recognise that technology will only ever provide part of the solution to these problems, as sometimes issues of limited capacity can and should only be resolved by the construction of new road space to ensure the country's major roads network continues to fulfil its role as a vital factor in the health of the national economy, and the social mobility of its population.

January 2009

Memorandum from the Mersey Gateway Project Team (MRN 22)

Executive Summary

1. This is a submission to the Transport Select Committee's inquiry into the major road network from the Mersey Gateway Project Team.

2. The Mersey Gateway Project will provide a new crossing over the River Mersey in Halton between the towns of Runcorn and Widnes. This is a project of strategic significance to the major road network given Halton's position in the North West. The existing crossing via the Silver Jubilee Bridge (SJB) is a non-trunk principle road which connects with high standard major roads that run through the area, including the M62 and the M56 motorways. The scheme highlights the narrow margins in functional terms between major roads under the control of local highway authorities and improvement schemes that benefit from trunk road status.

3. The need for a new crossing of the Mersey is relatively unopposed across public sector institutions and business. The proposed scheme fits well with the Eddington Report that identifies a particular problem with localised, acute congestion of roads, which in turn impact on the nation network. We agree with this analysis. Halton's geographic position means there are a number of specific problems which have regional and local implications for economic regeneration.

4. Our approach to the implementation of the Mersey Gateway Project highlights the importance of partnership working between the Highways Agency and local highway and planning authorities. Whilst the exact institutional structure for highways management is a matter for central government, proper co-ordination between the Highways Agency and Halton Borough Council has been vital for the Gateway.

5. In considering the inquiry into the major road network there may be merit in using Mersey Gateway as a case study to identify the areas of synergy and conflict when a local authority is taking the initiative to deliver strategic road improvements that impact on neighbouring authorities and on Highways Agency interests. It is perhaps unusual for the relationship to be this way round given that the Highways Agency is often the promoter taking into account local authority interests. These circumstances may however become more common in the future as investment in the transport system will increasingly take the form of a package of integrated measures, under the governance of transport authorities. This package approach to developing the transport system puts greater focus on local interests especially in the larger urban areas now emerging with City Region status. It is doubtful that the Highways Agency is well placed to consider these wider requirements where the case for major road improvements is increasingly integrated with local transport and land use policy.

Solutions to capacity constraints will focus on managing demand, making best use of the existing network and increasing capacity in the form of selective improvement schemes. The Highways Agency and local highway authorities are becoming more focused on network operations in circumstances where unfettered demand for road travel will exceed the highway capacity available. Managing demand will be a key factor in ensuring we have the transport system to support economic prosperity and personal travel choice that

society demands, albeit constrained by environmental protection which will be increasingly influenced by the climate change agenda. In developing Mersey Gateway, Halton Borough Council has assessed all these often conflicting factors in developing a package of measures which have the centre piece of investing around £600 million in a new road crossing of the Mersey.

6. The Mersey Gateway Project embraces a tolling and road user charging regime to provide the funding and a demand management capability, where charges will apply to both the existing SJB and the new Mersey Gateway crossing.

7. Acute congestion renders public transport unreliable, impacting on demand and the wider economy. Schemes such as the Mersey Gateway should, therefore, be accompanied by strategies to deliver sustainable transport. The Mersey Gateway Sustainable Transport System incorporates changes that will deliver improvements to bus services, cycling and walking facilities alongside the delivery of additional capacity.

8. As a result, the Mersey Gateway will lead to an overall reduction in carbon emissions as a result of falls in congestion, re-routing of traffic and increases in public transport reliability. Upon completion of the project, traffic on the SJB will fall by 83% and the old bridge will be become a "green corridor."

Introduction

9. Halton lies at a major infrastructure crossroads within the North West of England. A number of major roads run through the area, with the A557 road link between the M62 and M56 crossing via Halton's SJB. As such, the SJB is a major piece of infrastructure, facilitating traffic flows within the Liverpool City Region and the wider North West. Figure 1 outlines the location of Halton and the crossing in the North West's transport network, showing traffic flows across the borough.

10. The SJB was an iconic structure when built in 1961 and remains an important symbol for Halton and the North West. However, as a strategic transport link, it is no longer fit for purpose, currently operating well in excess of capacity. A new solution is needed both for Halton and the national road network.

11. The Mersey Gateway is a major new piece of infrastructure which will become just as much of an iconic symbol for the North West as the SJB was before. It will take the form of a 1000 metre long cable stay bridge consisting of four spans supported from three towers in the Mersey Estuary. Figure 2 provides a visualisation of the new crossing.

12. The overall Mersey Gateway Project includes the new bridge, other required infrastructure modifications to the major road network, alterations to public transport, cycle and pedestrian links, landscaping, and the implementation of tolling on both crossings.

13. We recognise that the Committee's current inquiry is into the major road network of motorways, trunk roads and principal roads. However, the Mersey Gateway demonstrates that it is no longer possible to plan improvements to major roads in urban areas in isolation of local transport, economic growth and land use policy.

14. We have responded below to key questions of relevance.

Figure 1

HALTON LOCATION AND TRAFFIC FLOWS

Figure 2

THE MERSEY GATEWAY

The Current Road Network

Is the current major road network adequate for the needs of the UK economy and for individuals?

15. Rod Eddington's report into the UK transport network commented that the overall UK transport network was good. However, as the Department for Transport reiterated in Delivering a Sustainable Transport System: Main Report in November 2008, the most important area of concern was key urban areas, international gateways and the strategic routes connecting the two. Within this, the principal problem was identified as being localised, but acute, congestion of roads, which in turn impact on the national network.

16. We agree with this analysis. Whilst the UK road network is functioning properly in some areas, in other places, it is not currently meeting levels of demand for road journeys, with a concomitant impact on private car journey reliability road freight reliability, public transport reliability, and the overall economic potential of our regions. This also has important implications at the local level for local residents and businesses.

17. One particular problem is gaps or bottlenecks that exist in the network, undermining economic growth and the scope for regeneration. Some of the issues in the North West are acute. The Northern Way's analysis of the region's road network in November last year highlighted a number of problems, stating that the network would buckle under the pressure of congestion if preventative measures were not taken in the coming years.

18. Halton's geographic position means there are a number of particular problems that are relevant to the committee's inquiry:

- The A557 road link, which crosses via Halton's SJB, links the M62 and the M56. The M62 links the majority of Merseyside to Manchester, whilst the M56 links North Wales and Cheshire to Manchester. Both of these links are crucial for the economy, and there is a regular traffic flow between them.
- To the west of Widnes, the A562 links Widnes and the SJB to South Liverpool. This provides a connection to nationally significant ports and Liverpool John Lennon Airport.

19. On a local level, the SJB is the only internal road link within the borough between the towns of Widnes and Runcorn. It not only serves as an important social link between the two communities, but also serves as a major strategic link for the wider economic catchment area, particularly Merseyside and North Cheshire. Indeed, a number of the strategic transport links outlined above rely on the Estuary crossing points located within Halton.

20. The original design capacity of the SJB, when opened in 1961, was 65,000 vehicles per day. This is regularly exceeded, with the bridge frequently carrying in excess of 91,000 vehicles per day on weekdays. There is no more room for growth. The inevitable congestion resulting from this capacity constraint impacts on the connectivity of the Liverpool City Region and other local communities. In our experience, this congestion acts as a constraint to economic regeneration within both Halton itself and the Liverpool City Region.

21. The current bridge is, therefore, not adequate for Halton, Merseyside or the wider North West region, and is therefore not currently capable of fulfilling its potential as part of the national road network. This has a number of impacts locally and regionally:

- Public transport and the road traffic service is unreliable.
- Halton Borough already suffers from high levels of deprivation—it has been designated within the worst 12% of boroughs in England for deprivation. Wards within the borough are generally above the regional and national average and high levels of poor health are experienced. Whilst this deprivation can be attributed to a number of current and historic socio-economic factors (and a number of regeneration schemes are currently being implemented), the impact of local infrastructure and public transport reliability on this deprivation cannot be neglected.
- Regeneration is constrained by the current lack of access—the inability of local highway and public transport networks to perform impacts on economic development and investment within Halton. It also prevents individuals within and outside of the region from accessing opportunities in the wider city region in an efficient manner.

22. This analysis highlights an area where the major road network is not serving the needs of the economy and individuals. Action is being taken to tackle this through the Mersey Gateway Project.

23. Do alternatives exist? A number have been considered, including demand management initiatives, road user charging, other forms of intelligent transport management such as dynamic lane management and selective access by vehicle tagging, and improvements to local rail services. Whilst all of these could have merits in other geographic areas, a thorough assessment of them in Halton has demonstrated that a new crossing is the only realistic option given the volumes of through traffic (see Figure 1 above).

To what extent should responsibility for major roads be given to local highway authorities and how much control should the Highways Agency retain?

24. The points made above highlight where the Highways Agency is not well placed to deal with the wider considerations that are essential if we are to get best value out of the scarce resources available for major scheme improvements. With Mersey Gateway the relationship with the Highways Agency has grown into a most effective one which has in part been assisted by the Highways Agency being increasingly receptive to local interests. This relationship is however potentially fragile as it relies on the approach taken by staff informed by corporate influence.

25. We mention above that the A557 road link between the M62 and M56 crosses the River Mersey via Halton's SJB. This is, of course, maintained by the local highway authority, whilst the M62 and M56 are both maintained by the Highways Agency. This has meant that we have had to work closely throughout the process with the Highways Agency to ensure that relevant motorway junctions are modelled appropriately and the impact of the new Gateway on them is taken into account. In the early stages we were required to consider financial compensation should the scheme have adverse impact on Highways Agency roads. This narrow view has since matured into a recognition of overall mutual benefit and we expect this collaboration to extend to operating the extended network using Mersey Gateway as an alternative route within the trunk road network operation.

26. Halton Borough Council and the Mersey Gateway Project Team have also enjoyed a constructive and positive relationship with the Department for Transport, which has helped hugely in assessment and promotion of the scheme. This relationship is influenced naturally by the political support given to the project which is a significant delivery risk given the long gestation period associated with major road schemes.

27. On an ongoing basis, it will be crucially important to ensure that the Highways Agency and Halton Borough Council work closely together to ensure that traffic flows are managed efficiently and effectively.

Meeting Demand

What should the relationship be between measures to increase road capacity and measures to manage demand for road space?

28. Solutions to capacity constraints will focus on managing demand, in line with the proposals outlined by the Department for Transport in Towards a Sustainable Transport System, increasing capacity, or a combination of both. The local authority is an important player in this.

29. Road charging and/or tolling has been used extensively in Europe, and on a limited scale in the UK, to manage demand for road space. However, its application as a standalone option is limited and it must be considered in tandem with wider improvements to the highway network. Halton Borough Council has undertaken extensive feasibility studies in the past which demonstrated that demand management techniques alone would not be a feasible option for the capacity issues in Halton.

30. Given recent and ongoing constraints on government expenditure, it is crucial at an early stage to consider how vital infrastructure improvements are to be funded.

31. A solution that we are likely to see utilised increasingly will involve asking for a contribution from users as the ultimate beneficiaries of a scheme to fund the cost of improvements. The manifestation of this can be seen in Mersey Gateway tolling proposals.

32. The Mersey Gateway is to be financed through a combination of toll revenue and public sector investment in the form of a direct grant from central government. Toll revenue is a key component of the financial arrangements, providing a large proportion of the revenue required to support delivery and maintenance of project.

33. Whilst the Department for Transport is contributing around 25% of the funding needed, the majority of the project will have to be funded through toll revenue, with PFI credits acting to support the private finance arrangement. The financing of the scheme is, therefore, wholly reliant on revenue recovered from the users of the Project. As the Committee considers the state of the major road network, it should consider how this model would work elsewhere on the network.

To what extent can alternative modes of transport, travel planning and land-use planning provide alternatives to private car use and road freight?

34. It is essential that alternative modes of transport, travel planning and land-use planning be considered as workable alternatives to private car use and road freight. Again, the emphasis should be placed on the importance of a joined-up approach which takes all of these factors into account. But if alternative modes of transport are to be considered by users, they need to be reliable and affordable.

35. We have described above some of the current issues with the SJB. One specific problem is that the acute congestion on the bridge renders public transport unreliable, impacting on demand and the economy. Just as new infrastructure makes an important contribution to the economy, reliable public transport can be a driver for economic regeneration.

36. When the new Mersey Gateway opens, the existing SJB will remain in place and open to traffic. However, its status will change, and it will become more of a local crossing with reduced capacity and improved provision for cyclists and pedestrians. This will make alternatives to private car use much more attractive to private car users.

37. At the same time, a sustainable travel plan is an essential part of the Mersey Gateway scheme, especially as 30% of Halton residents do not have access to a car or van. The Mersey Gateway Sustainable Transport System will incorporate changes that will deliver the required improvements to bus services, cycling and walking facilities:

— Provisions have been made for a proportion of toll revenue to be used to support toll discounts for residents and to fund a programme of sustainable transport.

— Improvements will be made to the bus network to make it more reliable.

New Developments

What are the implications of the Climate Change Act for the development of the major road network?

38. The Climate Change Act sets challenging emissions reduction targets, placing ceilings on the level of permitted UK emissions over five-yearly periods. The Climate Change Committee has identified a number of measures to achieve these goals in the transport sphere, including better journey planning and more use of sustainable modes of public transport.

39. Capacity increases are often considered to have a negative impact on climate change and overall carbon emissions, backed up by the belief that road use will expand to fill the space available. This need not be the case. Key is identifying the modal shift that can be delivered by improving journey time reliability, and the carbon savings that can result from cars not standing dormant in traffic for long periods of time. Toll revenue used to improve public transport also helps to make this a more attractive alternative.

40. Considerations such as these have been at the heart of the Mersey Gateway Project. Upon completion of the project, traffic on the SJB will fall by 83% and the old bridge will become a "green corridor" with improved public transport, cycling and walking facilities. This will contribute to an overall reduction in carbon dioxide emissions caused by the projected falls in congestion, re-routing of traffic and increases in public transport reliability.

January 2009

Memorandum from National Express UK (MRN 23)

Background

National Express UK is one of the United Kingdom's leading transport groups and is the operator of rail, bus, coach and light rail services. In the West Midlands it is the largest operator of bus services outside of London. However it is probably best known for the National Express scheduled coach network and the white coach.

National Express UK is part of National Express plc and also has a range of transport interests in Spain and North America. In Spain we are also the largest operators of scheduled express coach services, so are able to compare road conditions outside of the UK.

The coach network predominately operates on the major road network running over fifty million miles on such roads every year. Therefore National Express welcomes the opportunity to comment on this network, as it is a critical part of how it delivers its services to customers.

National Express regards the running of the coach network as being similar to rail, in that it is impossible to achieve in isolation and we have to work with partners. Where the main partner for rail operators is Network Rail, for National Express Coach it is the Highways Agency and local authority highway departments.

The National Express coach fleet is modern with an average age of between three and four years. A large and growing proportion of the fleet is now fully accessible. Whilst the popular belief tends to be that the coaches are full of the young and the old, this is not strictly the case. Our customers come from the whole age range and all sections of society and are seeking good value for money.

Coach is the most environmentally efficient mode of travel with an average CO_2 emission per passenger kilometre of only 30 grams. Based on average loads one coach can also remove one mile of car traffic from a motorway.

Therefore overall, coaches offer value for money in a modern and environmentally friendly way.

EXECUTIVE SUMMARY

- National Express believe that size of network is about right subject to traffic prioritisation.
- Roads network does struggle when an incident arises.
- Maintenance is much better managed than in past.
- National Express does not believe that control of more of the network should be passed to local authorities as there is a need for a co-ordinated approach of the strategic road network.
- National Express does not support widespread road building.
- National Express has no comment on road pricing but believes that there is a major role for capacity management based on prioritised vehicles.
- Travel planning has a role but it is about people making a positive decision to change mode.
- Priority is required for multi occupier vehicles to ensure that they offer faster journey times and attract people out of private cars.
- Land use planning and how it links with transport systems and infrastructure is essential part.
- Action needed to make it easier to integrate with other modes.
- Success criteria for a major road should be changed from number of vehicles that use a road to how many people or value of goods are moved.
- Investment priority should concentrate on prioritised modes.
- National Express fully supports Climate Change Bill targets.
- Technology is not the only answer for reducing emissions as overall emissions could increase if people travel more.
- Intelligent transport systems should be used to support prioritising road space.

Our answers are shown below and are numbered in line with the Committee's questions.

1. This is a hard question to answer adequately as opinions will vary. We would argue that most of the right road links are there to enable National Express to provide a range of coach services linking the main centres of population. However, we believe that measurement of adequacy should be on the basis of the numbers of people travelling and value of goods moved, rather than number of vehicles.

Clearly from a National Express perspective it is currently inadequate at busy times in many locations to enable attractive journey times due to the levels of congestion which occur.

Where the network really does struggle, and hampers predictable journey times, is when an incident occurs. The sheer volumes of traffic at key sections do mean that the slightest incident can cause major delays. A really serious incident will also cause congestion and delay over a wide area off the major road network, as people attempt to bypass the problem due to lack of major road alternatives.

2. National Express believe that the current maintenance programme is far better managed than in previous decades but does cause stress at busy times or where the space for imaginative measures is limited, such as on two lane A roads.

In general the roads are maintained to a good standard and good use has been made of improved materials to improve both noise levels and durability.

3. National Express believes that the detrunking programme of the last few years has struck about the right balance between the Highways Agency and local authorities. To go further would be wrong as there may be conflicts between local and national strategic needs. The major road network should be meeting the national strategic needs, rather than local requirements. It is far better to have one organisation able to have a wide view for the whole of England working with equivalent bodies in Scotland and Wales.

It is important that there is a consistent approach across the network, but with enough local knowledge to understand local conditions and the causes of traffic stress.

4. There will be a limited number of schemes required to ensure that the road network works well, but we would not support widespread road building. Even if the major road network could be expanded there are capacity issues in most cities and on the minor road networks, so it may just move any congestion issues around and place more stress on local roads.

In respect of measures to manage demand, we do not consider ourselves qualified to comment on fiscal solutions. However, we strongly believe that there is a case for demand management based on priorities for vehicles which make the best use of the road space and coach is clearly the most efficient use of space for moving people.

5. As a major public transport provider we obviously believe that public transport should be the first choice and that the coach is able to play a far greater role, than at present, in the longer distance market and offering travel choice.

Using public transport does often require more personal travel planning and organisation of time. There is some scope for structured travel planning, but this is often over stated as it is more about people making choices and making a conscious decision to change. It is up to public transport operators to provide the right choices. It is also about showing people that it is more than just a change of mode, but also using time more effectively for work etc. However as part of this it is essential that there are the right priorities for multi occupancy vehicles to enable faster journey times to attract people to more sustainable modes.

The media has a role to play here as all too often they portray British public transport in a negative light when the reality is that most of the journeys which could be used to take traffic off the major road network work very efficiently. For example coach travel has an incredibly high satisfaction rating amongst customers.

It is a common perception that freight should be moved to rail, but this would be hard to achieve without a change of lifestyle. We live in a "just in time society" and are heavily reliant on daily deliveries to our retail outlets which is not something rail could do at a more local level. Its strength comes in moving high volumes over long distances.

The role of land use planning is critically important. Much more thought is required in the planning process as to how a development will fit with the transport infrastructure and services. Far too many developments have made it impossible for people to access them easily by public transport, or for goods to be sent by rail. Mass development around motorway junctions also creates congestion hotspots.

6. Whilst most integration is not formalised, there is probably already a significant amount occurring. It may be people driving to a Parkway station such as Warwick or getting to the Coachway at Milton Keynes, or even car sharers meeting somewhere. In other instances it will be freight going to a rail terminal.

However we believe that much more could be done to encourage the use of the network as a feeder to other modes for the long haul. There are some examples signposting the availability of rail Parkways, but we believe this could be further extended and include coach solutions as well. This ties in with our answer to question 4.

Taking this one step forward we believe that some additional access points on motorways for priority traffic could be build at low cost. This is has been discussed in the past with the Highway Agency.

7. We presume from this question that this refers to how construction schemes should be prioritised rather than traffic. We believe that the first priority should be for schemes which enable modal change. This could include priority lanes, better links to public transport hubs, park and ride schemes adjoining major roads, priority vehicle access links etc.

Clearly if there is an existing major safety issue then this must be addressed urgently.

There will also be a limited number of locations where new developments will bring traffic issues and these will need addressing if they are not to cause delays to prioritised traffic.

It is our belief that to date the NATA appraisal method has been flawed as it does not recognise the efficient use of road space which priority measures would bring. Therefore we believe it is essential that the new NATA does recognise the number of people and the value of goods moved and not just how many vehicles can be accommodated.

8. At National Express we see the targets within the Climate Change Bill as being challenging. However we give our full support to these targets as we believe that this is the action which is required to meet future air quality standards. As a nation we should also be showing leadership to the rest of the world.

There is a danger that target dates seem far off and that, in the meantime, short term measures should be permitted which ease certain perceived existing traffic issues. However, we see this as very dangerous as it will only serve in the longer term to increase the problem to be addressed.

In our view it is essential that the longer term issues be given priority over short term ones and this does mean seriously restricting future road building and making better use of what we have now. It is our opinion that a start needs to be made now on changing attitudes, and recognising that personal travel cannot be unlimited, if we are to achieve our Climate Targets.

There is a danger that too much emphasis is being placed on technology to solve emissions rather than addressing the fundamental issue about the amount that we travel and how we travel. There is little doubt that vehicles will become more fuel and emission efficient, but those benefits will be offset if the total mileages covered increase each year. It is the total volume of emissions that matters rather than the rate at which a vehicle emits.

However, technology is an important element for the future as it is unknown how long our existing fossil fuel supplies will last and currently there are no real alternatives. Existing biofuels are not sustainable and fuel cells are not suitable for longer distance travel. Hybrid solutions are being trialled but, to date, are not reliable enough nor are they suitable for longer distance heavy vehicles such as coaches and lorries.

There is also currently no solution which could replace diesel engines in long distance freight and passenger transport. Any solution also has to ensure that it does not just move around the emission outputs, such as can happen with electric solutions. Therefore, there is a need for governments to give manufacturers no option but to find alternatives that become mass market solutions.

9. It is possible that there could some limited requirements to enhance road links for new communities. However, this does also reflect back to the answer to question 5 and how land use planning is better organised around both transport links and where people live in relation to work.

10. There is a place for the use of technology to assist traffic flows and management but, again, this should be seen as part of an overall solution rather an answer in itself. Active Traffic Management is part of this but, to date, has been used primarily as a way of getting more traffic on the roads rather than managing how the road space is used.

National Express believes that ITS should be used to enable more effective use of road space for prioritised vehicles such as coaches at times when traffic flows are heavy or delays are occurring.

January 2009

Memorandum from members of the Motorway Archive Trust (MRN 24)

Key Point Summary

- The evidence is submitted by members of The Motorway Archive Trust all of whom have held senior positions in planning, building, operating and maintaining Britain's road network over the past 50 years.
- History demonstrates the importance of having a long term vision for the future road network.
- Current transport policy is failing to meet its targets and will continue to do so. Other measures must be devised and adopted to solve the problems associated with increasing travel by car.
- The problems associated with vehicle emissions are well on the way to being solved, but it takes time to introduce the improvements.
- Advanced traffic management measures have an important role in managing demand and can provide a small increase in capacity, but they provide a limited solution to reducing traffic congestion.
- Britain's road network is its most important transport infrastructure and will remain so into the distant future.
- An agreed "Roads for Movement" network, based on the existing "major roads", providing reliable and predictable journey times free from congestion is essential to the nation's economic success.
- A 50 year vision for the development the "Roads for Movement" network is required.
- Arrangements for the funding, management, improvement and maintenance of the "Roads for Movement" network should be at arms length from government. Our recommendations in this respect are set out in section 7, Vision.

1. Background

1.1 This evidence is presented to the Transport Select Committee's inquiry by members of the Motorway Archive Trust. The Trust was formed in 1996 by a former Permanent Secretary to the Department of Transport, Sir Peter Baldwin, for the purpose of preserving the history of planning, building and maintaining Britain's Motorway network for future generations. The outcome was the involvement of over 500 people in collecting documents, photographs and artefacts, which are now deposited at national and local authority Record Offices and other archives around the United Kingdom. The Trust has produced ten encyclopaedic books in two series, one national and the other regional, a CD on the motorway bridges and has a website, www.ukmotorwayarchive.org, where details of the publications can be found.

1.2 Our evidence draws on the experience and expertise of the civil engineers, civil servants, planners and economists involved in planning and building the present motorway network. The experience covers planning the routes for international, national and regional trade; traffic analysis and forecasting; economic and environmental appraisal; finding solutions to the engineering problems encountered in building the network; managing and maintaining the network; the application of the early advanced traffic management measures; and experience in intelligent transport systems.

2. Lessons from History

2.1 The history of Britain's motorway network provides a number of relevant lessons for consideration in the Transport Select Committee's current review. The first motorway was proposed in 1906 when the Hon. John Monatgu MP, later the second Earl Montagu, placed before Parliament a Bill for the construction of a road from London (Croydon) to Brighton (Patcham) for the exclusive use of traffic made feasible by the internal combustion engine. The proposals reflected the characteristics of a railway but was withdrawn in the face of strong opposition by the then all powerful railway companies and virtually every affected party.

2.2 Between 1936 and 1938, by which time the ownership of motor vehicles was growing strongly, several plans for a motorway network were published by professional bodies. Among these the County Surveyor's Society's plan in 1937 included a number of observations which are still relevant today:

> "that completely new roads with adequate connections to existing centres of population may, in the opinion of the Society, prove more economical in construction and use than widening of existing main arteries to the same standard, and that segregation of motor traffic from all other forms of traffic would tend towards a substantial reduction in road accidents, further that the construction of motorways for motor vehicle traffic would be substantially cheaper than their construction for all forms of traffic"—Experience has shown that motorways are safer than all other types of road.
>
> "that the new motorways should be constructed as complete units and not in short lengths"—Restrictions on funding have meant that the motorways were constructed in short sections, not as complete units. In recent years this has introduced delay into the process of building the network.
>
> "that existing methods of administration should be improved in the direction of speedier execution of works and the elimination of irritating delays"—Changes in the method of administration have occurred several times over the past 50 years, but the need to get value for money is more important than ever.

2.3 In 1946 the Ministry of War Transport published a map, prepared during World War II in the context of post war reconstruction, that became the plan for the present motorway network. The importance of this map and the guiding vision it provided for the development of the motorway network cannot be overstated. The network has been essential for the growth of the UK economy.

2.4 In 1949 the approval by Parliament of the Special Roads Act with all party agreement provided the legal framework for the construction of roads for the exclusive use of certain types of motor traffic, thereby breaking the link with the ancient legal definitions of a highway. Yet, because of a lack of funding, it was a further nine years before Britain's first motorway, the Preston By-pass, now part of the M6, was opened to traffic. Fifty-two years after a motorway was proposed by Lord Montagu in 1906.

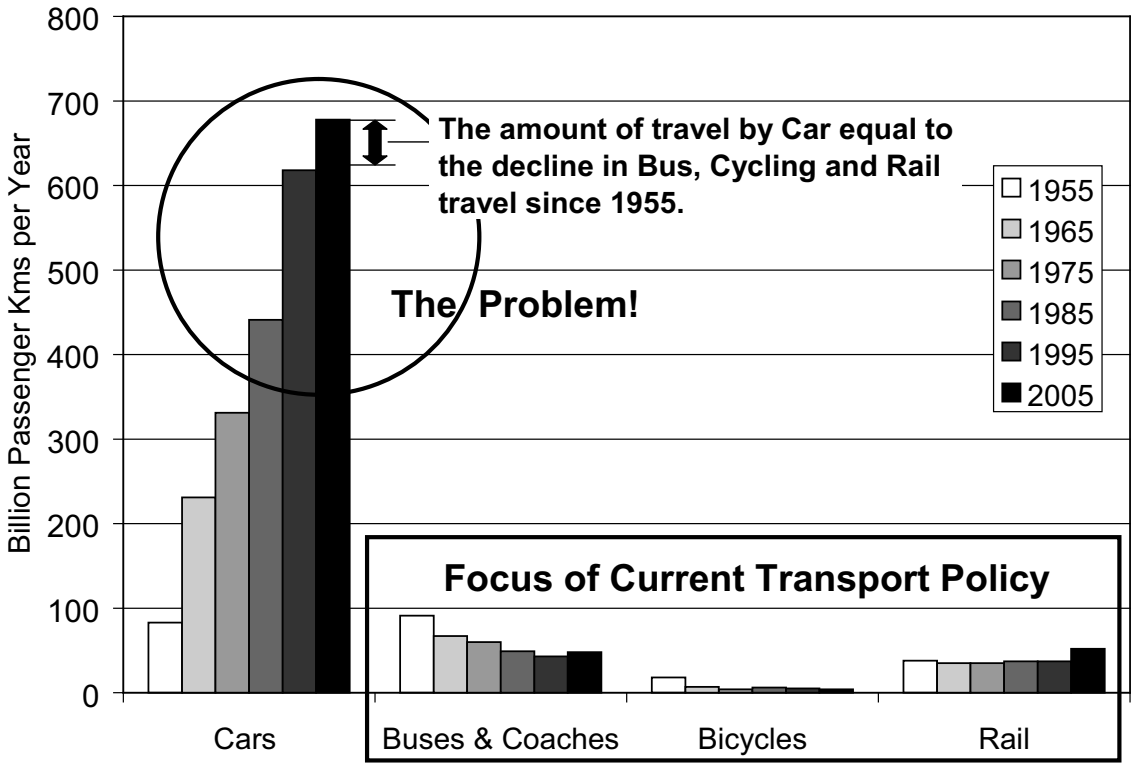
2.5 Members of the Motorway Archive Trust believe there are several important lessons to learn from the history. First there must be a long term vision for the future road network. Second the necessity for roads dedicated to the use of certain types of motorized vehicle will continue into the distant future; and third the time taken to implement changes and improvements to the network needs to be shortened.

3. The Current Road Network

3.1 We find it disturbing that international comparisons show Britain has an overloaded motorway network. Compared to our European neighbours the 3,555 kms of British motorways carry more traffic than most other European countries yet the 60 kilometres of motorway per million people is less than half the European average. Germany for example has 148 kilometres per million people and Greece is closest to Britain with 67 kilometres per million people. We believe this comparison indicates an inadequate and inefficient road network.

4. The Focus of Current Transport Policy

4.1 Major road building has come almost to a halt. The 1989 White Paper "Roads for Prosperity" proposed a new road building programme but within a few years the objectives of the programme and many of its component schemes had been abandoned. The publication of the 1998 White Paper "A New Deal for Transport: Better for Everyone" adopted a different approach to solving the problems of increasing road traffic.



4.2 The 1998 White Paper aimed to create greater choice for travel, particularly for motorists, by improving public transport services and encouraging cycling and walking. This greater choice was intended to reduce, significantly, travel by car.

4.3 The focus of the 1998 White Paper is highlighted in the illustration, which shows the change in passenger travel by cars, bus, bicycle and train over a period of 50 years. In 1955 there was slightly more travel by bus than by car and travel by train was about half of that by car. In 2005 travel by car was 14 times more than travel by bus or train and over 60% of the travel by car took place on the Major Road network (the 50,310 kms of motorways and "A" Roads).

4.4 While there is clearly merit in improving travel by bus and train and encouraging more cycling and walking the impact on travel by car is marginal. For example, if current transport policy returned travel by public transport and cycling to 1955 levels by transferring travel by car (43billion passenger kilometers) to these modes of travel, "The Problem" (see illustration) of increasing travel by car remains. The obvious conclusion is that the impact of current transport policies on travel by car will be marginal and are likely to take a long time to take effect.

4.5 It should also be noted that the 1998 White Paper, the consequent Ten Year Plan published in 2000 and the many Local Transport Plans provide targets for travel by public and private transport to 2010 and beyond. The evidence is that these targets are not being met; there is more travel by car than targeted and less travel by public transport: Current transport policy is failing to meet its targets. It will continue to do so unless other solutions to the problems associated with increasing travel by car are devised and adopted.

5. New Developments

5.1 In the broadest terms a transport system comprises infrastructure, vehicles, control systems and service providers. Significant and important developments are changing the vehicles we drive, the fuels we use and the methods of controlling both the vehicles and the use of the infrastructure.

5.2 The problems associated with most vehicle emissions are already solved and reductions in CO_2 are well on the way to being solved. See, for example, the TRL report "Reducing carbon dioxide emissions from passenger cars to 1990 levels—PA 3016/93" published in 1993 and the "King Review of low carbon cars" published in 2007. It takes roughly 15 years for the vehicle fleet to be replaced and the priority is to ensure the technologies and processes identified in these reports are introduced as quickly as possible. But the problem of congestion remains.

5.3 Driving aids are becoming common. Many of these aids, for example proximity detectors, lane keeping, intelligent cruise control, navigation systems, speed control, etc. are products developed by the European motor manufacturers in the late 1980s and have taken up to 20 years to reach the market. Some members of the Trust were involved in developing these systems. Such aids are helpful to older drivers and

with an ageing driver population greater vehicle automation can be expected. At some stage, within the foreseeable future, driverless vehicles will become available with anticipated benefits to road safety and providing a more personal form of public transport.

5.4 Members of the Trust were also involved in the early implementations of advanced traffic management systems, notably ramp metering and motorway speed control. These systems can improve safety and provide gains in capacity but the gains are limited and are not an adequate substitute for building new road capacity—as recognised by the recent use of motorway hard shoulder running.

5.5 Such engineering and technical developments have an important role in managing demand and can provide a small increase in road capacity, but they are only part of any solution to solving the costly problem of congestion.

6. Future Demand

6.1 Travel is largely a derived demand. It occurs when people wish to take part in an activity at a different place or deliver goods. The growth in travel by car is primarily the result of the growth in the population, the growth in the number of vehicles, the use people make of them and the relocation of the places were people live, work, shop and play.

6.2 The road network provides great flexibility and accessibility that cannot be matched by public transport services (rail or bus), which rely on a hub and spoke pattern of movement. As a result public transport systems serve town centres but cannot serve the much larger dispersed pattern of movement that has resulted from the dispersal of the population and employment. Many of the Local Transport Plans acknowledge these relationships and highlight the difficulty in changing patterns of land use (see for example the 2001 Tyne & Wear and Surrey Local Transport Plans).

6.3 The DfT's forecasts suggest that car and freight road traffic will continue to grow for the foreseeable future broadly in line with the Gross Domestic Product. We have seen no evidence to suggest that this will not occur. There is no easy solution to satisfying this increasing demand for movement of people and freight but ignoring the growth is not an option and having an uncongested road network offering predictable and reliable travel times is essential to the nation's future economic success and social cohesion.

7. Vision

7.1 Britain's road network is its most important transport infrastructure and will remain so into the distant future. With traffic continuing to grow and present policies unable to moderate the demand a new long term vision is required for the future road network. The vision will include a "guiding" map and say how it should be financed, managed, improved and maintained. A 50 year corporate plan comes to mind and proposals for such a plan might be sought from organisations interested in managing the network.

7.2 Influenced by the many man years experience in planning, building, operating and maintaining Britain's road network the members of The Motorway Archive Trust who have prepared this evidence make the following suggestions. There needs to be a simple and clear distinction between "Roads for Movement" and "Roads for Access". The "Roads for Movement" will be those roads on which the objective is to provide reliable and predictable journey times free from congestion. The "Roads for Access" are the remaining roads, serving communities, connecting to the "Roads for Movement" and used by all forms of traffic—pedestrians, horses, cyclists, motor cycles, cars, buses, coaches, vans, lorries, etc.

7.3 In the context of the Select Committee's inquiry the "Roads for Movement" is "The Major Road Network". We have emphasised the objective. There are several matters to consider in defining the network which will be used to guide the road programme for the next 50 years. When the network is agreed the map should be approved by Parliament.

7.4 The "Roads for Movement" network can take the map of existing roads as the starting point. It will be much larger than the trunk road network, currently managed by the Highways Agency, but unlikely to be larger than the 50,310 kms of motorways and "A" roads in Great Britain. The concept of "Roads for Movement" will present the Select Committee with the question of the respective responsibilities of the Secretary of State and local highway authorities in relation to the network, as distinct from other roads. We would deplore any division of executive responsibility for the planning, delivery and maintenance of the "Roads for Movement" network.

7.5 In the context of developing the "Roads for Movement" network the Select Committee may wish to investigate the networks mapped by some of the Regional Assemblies and Regional Development Agencies to accommodate freight movement (that developed in the South West region is a good example). These networks reflect the views and needs of industry in the regions. In particular the importance of having good, reliable and fast access to ports and airports. The networks include motorways, the primary routes (the roads with green backed signs and often shown in green on maps) and some other A roads.

7.6 We consider consistency and stability in funding the network to be of paramount importance and can see no reason of principle or ideology why the "Roads for Movement" cannot be managed like a utility company and funded from the use made of it. This will require existing taxes on transport to be reduced but will have the advantage of making the funds needed to run the network transparent to users. We recognise that there may need to be a transition period until road users pay for the use of all roads.

7.7 The Royal Academy of Engineering has expressed similar views in their report "Transport 2050. The route to sustainable wealth creation" published in 2005 (available on the Academy's website). The points from Academy's report we wish emphasise to the Select Committee are:

- There should be a National Road Network "to include all roads with a significant national role and to include some 50,000 kms of highway".
- "A National Road Corporation should take responsibility for operating, maintaining and developing the national road network".
- "The National Road Corporation should operate at arms length from government".
- Transport users should be expected to pay the true cost of their journeys.
- True-cost charging should cover the direct costs of travel and the indirect costs which arise from congestion, pollution and accidents.
- In parallel, existing taxes on transport use should be reduced to the minimum, and should apply at the point of use, rather than on vehicle ownership.
- "The National Road Corporation should be responsible for collecting true-cost charges on the roads, and transferring revenues as appropriate to local highway authorities".
- "The National Road Corporation should be permitted to finance other agencies for actions that reduce demand on its network".

7.8 The question remains as to how and where the network should be improved. There are various options that will need consideration. In some places it will be appropriate for existing roads in the "Roads for Movement" network to become "special roads" as defined by the 1949 Special Roads Act. The construction of grade separated intersections will reduce delays and extra capacity can be provided where widening of existing alignments is possible. But the construction of some new roads will be needed, especially by-passes to reduce congestion and improve the environment in existing towns and villages, and some new motorways will be necessary. Charging for the use of roads will help to identify places where roads need to be improved and provide the funding for the improvements.

7.9 We are not proposing any new lengths of motorway in this submission, but there are parts of Britain, for example the east coast which faces our major export markets in Europe, which are poorly served by the motorway network. Plans also exist for developing the motorway network in line with previous intentions and policies and The Motorway Archive Trust's publications note deficiencies in the existing network.

Members of The Motorway Archive Trust presenting evidence to the Transport Select Committee's inquiry into The Major Road Network

Sir Peter Baldwin, KCB	—	former Chairman of The Motorway Archive Trust and Permanent Secretary of the Department of Transport
Professor John Wootton CBE, FREng.	—	Chairman of The Motorway Archive Trust and former Chief Executive of the Transport Research Laboratory.
Harry L Yeadon FREng.	—	former County Surveyor and Bridgemaster of Lancashire.
Michael Callery OBE	—	former County Surveyor and Bridgemaster of Lancashire and Past President of the Institution of Highways and Transportation.
John M Carrington MBE, CEng.	—	Trustee of the Motorway Archive Trust and former Director of Rendel Palmer and Tritton, Consulting Engineers
Howard J Stevens CEng.	—	former Director Alfred McAlpine Construction
Di Evans CBE, CEng.	—	former Director the Eastern Road Construction Unit
William McCoubrey	—	Former Chief Executive of the Northern Ireland Roads Service and Past President of the Institution of Highways and Transportation.
B L Parker MBE, CEng.	—	former County Materials Engineer for Surrey County Council and the South East Road Construction Unit.
David Holmes CB	—	Chairman of the Royal Automobile Club Foundation

Russell Sunderland CB	—	former Deputy Secretary Department of Transport
Robert Baldwin	—	Consulting Archivist to the Port of London Authority and Research Associate of the New Dictionary of National Biography.

January 2009

Memorandum from the Technical Advisors Group (TAG) (MRN 25)

Thank you and the Transport Committee for the opportunity to give evidence on this subject. We have explained our role in the management of the whole Road network in our covering letter.

Overall Comments on DfT Policy and the Relationship to Major Roads

We believe that the present system for management of roads and traffic, particularly on the Strategic Road Network, is inadequate to control the demand at an acceptable level. Our understanding of the Eddington Report was that transport demand needed controlling first and foremost; such control is necessary before considering any cases for any significant expansion. It is also of note that the Eddington Report was based on a consideration of the Stern Review. Stern has since stated that he believed he had underestimated the importance of CO_2 production.

TAG has very strong reservations on the Government policy and the way the present DfT strategies are developing. The Delivering Choice and Reliability document has some major policy inconsistencies and appears to revert back to previous eras of predict and provide. Certain extracts within the document have helped to give TAG this worrying impression, for example:

> "While there is undoubtedly a case for adding some new road capacity—"
>
> "The purpose of this document is both to promote and inform the debate about how we might best deliver the road capacity—"

Nevertheless it is stated that:

> "—much of the network runs efficiently for all or most of the day",

but then goes on to assume:

> "as the traffic volume rises, so the stress on the network starts to show in congestion—queues, jams and unreliable journey times."

It is admitted that:

> "A case could be made for building an almost infinite amount of new road capacity."

TAG submits that there is overwhelming evidence that capacity increases in most areas on main or strategic roads of the UK will not reduce congestion more than very temporally especially in peak times and in urban or near urban areas. Furthermore capacity increases can often make traffic congestion considerably worse elsewhere and potentially also adds to the unreliability of the system.

It is noted that the CO_2 target for 2020 is 95 grms of CO_2 per kilometre; TAG would welcome the delivery of such a target. However we do not believe this is realistic politically or technically. The hope that technology will deliver results with the present inadequate attention being given to traffic reduction, alternative modes of transport or much stronger fiscal incentives appear to us misguided.

Significant changes have been made in the overall vehicle fleet but these have been mainly as the result of adoption of diesel engines for company cars since the tax changes. (Interestingly tax changes with respect to business vehicle mileage have also resulted in many more business trips being performed on rail over the last decade.) Other measures that Government has avoided are:

- rigorous enforcement of the speed limits (even keeping to the 70 mph legal limit could reduce CO_2 emissions considerably);
- increases in fuel tax; and
- delays VED increases for high CO_2 vehicles.

TAG has welcomed this Committee's recent inquiry into Road Safety, nevertheless the DfT policy document, while recognising that the UK does well, seems slightly complacent. We all need to be reminded that more life years are lost through road accidents than any other single cause.

While local authorities have welcomed some aspects of the 2004 Traffic Management Act (some of which have still not been implemented) the effort collecting and analysing data, rather than delivering measures on the ground, is something that perhaps all Highway Authorities need to tackle more effectively. TAG has also given evidence to this Committee on transport funding etc where we have pointed out this bureaucracy and cost overhead problem.

It seems unfortunate that by the late 1990's the U.K. had reached a bi-partisan approach on the need for effective management of traffic, and that road building was virtually over as a means to improve transport systems. Statements by past ministers such as Peter Bottomley and Stephen Norris in the 90's followed by the present Government's Integrated Transport Policy showed the way forward. This approach now seems to have been abandoned.

We would like to stress the very strong link between further road capacity enhancements and traffic generation in our overcrowded island particularly anywhere near any major city. No road building strategy in such areas will do anything more than provide a temporary alleviation to congestion, add to congestion elsewhere and make it politically and economically harder to introduce more effective traffic congestion reducing measures in the future.

TAG members under previous guises, (Association of London Boroughs Engineers and Surveyors) gave evidence to this Committee in 1988 of the very large potential for generated traffic in or near urban areas and the consequential adverse effect on the economy and the environment in such urban areas of road building. (We could not find this evidence but a link to a reprinted supporting paper is given in our covering letter). The DfT seems to be ignoring this earlier work and indeed SACTRA studies, both in policy and appraisal methods.

Major Roads Policies

Our understanding is that the function of the Major Road network is to carry goods and people between major towns and cities. We fully understand and accept that this is presently the proper function of the Department for Transport not neglecting their role in promoting the best use of strategic transport systems throughout Europe. The urban road function is to move people and goods within towns and cities; these two roles are inextricably linked—any traffic travelling on an inter-urban road usually ends up on an urban road to reach its final destination, before that traffic has any economic or other "use".

Local government has been quite effective at managing traffic in urban areas from the government statistics—many cities have had very low traffic growth, however every new "Trunk Road Improvement" has given an added problem for our members. With 89% of congestion in urban areas, this is where the priority should be for transport management and investment. Near our major cities the Trunk Road system is operating as an urban road and particularly allows much longer commuting especially for the richest members of our society. As funding and priority setting is on an entirely different basis between urban and rural areas, it makes sensible strategic planning of transport extremely difficult.

Responses to Specific Questions Raised by HOC Committee

With this background turning to the specific questions of the committee we have the following comments:

1. *Is the current major road network adequate for the needs of the UK economy and for individuals?*

Generally TAG believes the major road network in the country is adequate for the needs of the U.K. economy and for individual car and goods traffic. (There are however cases for many local roads to improve access to development areas etc to help the economy). In some locations the major road network is seriously out of balance with the rest of the network and indeed sections have been widened to such an extent that (new) pinch points have been created.

There are probably quite a few locations where there is a good case to reduce the capacity of the strategic road network to achieve a better balance in the transport system. There are some examples where such an approach has been taken to good effect eg the A2 approach to London and many more within urban areas which have given environmental benefits, as opposed to the disbenefits of increasing traffic.

We do not believe the road network is adequate for buses, cycles and pedestrians, and this includes the strategic network close to urban areas. There is often scope to remove traffic and capacity so that the network may operate more efficiently. There is also good evidence to show that traffic does disappear when the capacity is reduced.

There is also a case in rural areas for providing more space for high occupancy vehicles to encourage people to change travel modes, but this would not normally require an overall road capacity increase—rather a reassignment of the available capacity.

2. *Is the maintenance of the major road network adequate to ensure optimal efficiency?*

We believe there is more money available to ensure better maintenance of the major road network than other roads, nevertheless the standard of maintenance appears lower than some of our neighbours in Europe. It seems that since the maintenance is less accountable locally (since Local Authorities ceased to act as Agents for the Trunk Road system), standards have reduced and inspection regimes appear less robust. For the non-strategic road network local authorities have found it increasingly difficult to maintain roads to an adequate standard with the acute shortage of revenue funding.

As already highlighted, with 89% of congestion in urban areas and associated arguments against adding new capacity, priority should be made for investment in maintenance and improvement of the existing urban road network.

3. *To what extent should responsibility for major roads be given to local highway authorities and how much control should the Highways Agency retain?*

With 99% of the road network in control of local highways authorities (and 89% of congestion urban) we believe we are in a good position to manage the whole road network and ensure that its management meets the overall transport policy objectives of the area. We are not convinced that the Highways Agency should control any of the road network, although we recognise the need for an overall Government policy framework, and indeed necessary reporting and monitoring but only where necessary and where it adds to the service to society.

We would suggest that the Highways Agency is too autonomous and can proceed with a brief for road enlargement without considering wider policy objectives. In particular when different elements of a strategy have failed to be delivered there should be reappraisal of the road elements, eg widening the M25 without a traffic limitation strategy or the M1 widening without the promised bus and high occupancy vehicle lanes.

Meeting Demand

4. *What should the relationship be between measures to increase road capacity and measures to manage demand for road space (for example road pricing)?*

As it is not possible in most areas where congestion exists to provide sufficient road space to meet traffic demand, measures to manage demand should always come first before increasing road capacity. This was very much the bipartisan philosophy in the 1990's and the Government's well thought out 1998 Integrated Transport Strategy.

5. *To what extent can alternative modes of transport, travel planning and land-use planning provide alternatives to private car use and road freight?*

In urban areas it is essential that alternative modes and effective travel planning provide for any increase in travel and preferably take some of the existing car traffic off the network. Planning and land use is key to discourage long distance driving for work or shopping etc. proper integration between planning and transport is a prerequisite. It is notable that most well run urban authorities have integrated transport and planning in their own structures at officer and member level. Similarly it appears that Central Government has worked best for planning development and transport when the Departments of Environment and Transport have been combined.

Many urban areas are in a strong position to offer or encourage "packages" of different modes and measures as an alternative to the private car. Alternative modes of transport are fully capable of taking up all growth required and this is evidenced that in many urban areas traffic has hardly grown. Indeed in a number of urban areas traffic reductions have been achieved over a number of years, the best examples being London, Oxford, York, Nottingham, etc. We would stress that transport is providing a service not a means to an end in itself, so access rather than high-speed transport is the requirement.

Removing some private cars from all road networks leaves more space for essential vehicles such as buses, freight traffic etc. Nevertheless there appears considerable scope to reduce long distance road freight traffic, especially with a wider European approach. Similarly low value products are moved around within the country using a road system free at the point of use.

6. *How much integration is there between the road network and other modes of transport?*

Sadly there appears very little integration between various transport modes:

- Buses are frequently not routed adequately to meet trains.
- Pedestrian crossings are not planned around their main needs, but for the needs of vehicles.
- Parking provision, which affects every vehicle trip, is not adequately controlled for new developments or for out of town centres.
- To manage the interface between the strategic road network and the local road network, parking and park and ride schemes are funded separately from the trunk road system.

Furthermore there are some examples of where perhaps a private sector venture has encouraged the wrong sort of integration like Ebbsfleet Station designed so that people can travel from wide areas of the South East by car to pick up the international train system rather than getting on the train earlier.

7. *What types of scheme should be prioritised and are current funding mechanisms reflecting these priorities?*

Schemes supporting a transport hierarchy, where the greenest and most environmentally sound and socially available transport uses, should be favoured first, ie for pedestrians, cycles, buses, high occupancy vehicles, traffic limitation strategies and parking management strategies. The current funding mechanisms still give a very large part of expenditure to counterproductive expansion of the strategic road network either for the Trunk Road system itself or for Local Authority Strategic Roads in Rural or Urban Areas. As discussed on pages 1 and 2 and in Q4 and 5, there needs to be a serious emphasis on managing demand as well as the provision and encouragement of alternative modes of transport as an alternative to capacity increases.

We would also draw attention to the assessment methods and what we believe are major flaws in these as used by DfT in assessing their own or local authorities' schemes (copy of the evidence to DfT attached).

Delivering Choice and Reliability identified that reliability is a key issue. TAG fully accepts that reliability of all transport networks is fundamentally important to the economy, businesses and individuals. However it appears that the statistics being measured to assess performance is for the 10% worst journeys not the variability in journey time—with particular attention being given to the worst. Enlarging already large roads can only make for further unreliability in the system when things go wrong (very frequently on roads such as the M25).

New Developments

8. *What are the implications of the Climate Change Bill for the development of the major road network?*

On Climate Change Stern warned that care should be taken not to invest in carbon intensive developments, Trunk Road enlargements are carbon intensive. For the Climate Change Act, TAG welcome the targets but we fear that progress will be much slower, particularly on the technological front than is hoped and expected. Much more attention needs to be given to managing a reduction in car traffic rather than in CO_2 emissions per vehicle.

The reasons for recent progress have already been covered on page 1 above. The latest hybrid vehicles are approaching the standard required for the average fleet by 2020. It seems unrealistic that this will be achieved across the whole vehicle range especially when governments often shy away from taking difficult decisions. Furthermore the thermal efficiency of an internal combustion engine will always be limited—working against continuing improvements in fuel consumption. Fuel cells are still well away from being a realistic alternative and they also require much more of our basic energy to be produced from non-carbon sources to be really effective in reducing CO_2.

9. *What are the implications of anticipated population growth in the UK, particularly in designated growth areas, for the development of the major road network?*

It is understood that the Government policy for the growth areas was that these should be sustainable. This would suggest that that strategic road building was not required, and that the extra demand and indeed some of the existing demand should be met by changes in travel mode and delivery of services more locally requiring less transport. It seems unfortunate that again these population growth areas, eg London Thames side, have encouraged another road building boom first.

10. *To what extent do emerging road and vehicle technology (intelligent transport systems) change the requirements for the major road network?*

We believe that emerging road and vehicle technology, where it is used for instance for road pricing, could reduce further the "need" for improvements to the major road network. Schemes as outlined in the Delivering Choice and Reliability government paper are however less desirable. We make the following comments on specific measures:

- Managing queues so that traffic is not allowed to join the strategic road network, kept on the local road network and encouraged to leave the major road network when there are problems, will only exacerbate problems in urban areas—which by the government's admission are the worst. If traffic has to be held and queued, the best place to do this is on the strategic road network as far away from people as possible.
- The speed control system on the M25 has undoubtedly worked extremely well—it has reduced incidents and accidents, and improved the overall flow of traffic. Similarly the scheme in the West Midlands seems to have benefited from speed control and smoother flow; however the hard shoulder running has added $\frac{1}{3}$ to the capacity and there was $\frac{1}{3}$ peak hour traffic increase within 12 months of the scheme opening! This extra traffic has undoubtedly completed its journey off the strategic road network and caused considerable congestion, though unmeasured, elsewhere.

— The present vehicle gaps on the main road network are well below those recommended for safety standards. The safety standard suggests that the absolute maximum capacity for any road should be somewhat less than 1,800 vehicles per hour per lane, (2 second gap means 1,800 vehicles per hour) whereas the design standard for roads is still assuming 2,000 vehicles per hour).

— Vehicle technology may be able to automatically control vehicles so that a smaller gap may become acceptable but this is unlikely to solve the capacity problems within the next 15 years and of course it would not do anything towards the carbon reduction requirement. Modern non-vehicle technology has much more potential eg remote working etc. the real objective of a transport or "access" system needs to be remembered—remote working can meet many of the requirements for the economy. Similarly technology to help other modes and reduce car traffic can be very helpful.

We hope that this evidence will be useful to the Committee and we will be more than willing to appear to give oral evidence as, when and if required.

January 2009

Supplementary memorandum from The Local Authorities Technical Advisers Group (TAG) (MRN 25a)

REF QUESTION 202

In the question, and answer by others, the importance of reliability of the road network was mentioned. TAG would support that this factor is far more important than actual time or speeding up traffic generally. We would add that, as stated in our written evidence, reliability is very unlikely to be delivered by widening roads and indeed we believe that the recent and present programmes to widen Motorways will add to unreliability.

A finer network rather than a coarse network is needed to deliver reliability, probably together with speed reductions and enforcement as on the western section of the M25 and the M42.

REF QUESTION 203

In the question on technologies, while we fully recognise the political difficulties, we fully support the principles of traffic reduction through congestion charging, road pricing and workplace parking charges. We did give full written evidence to the recent HOC Transport Committee inquiry into these maters.

TAG supports a range, but not all, technological measures to improve travel flows, information and use. However some measures to get more traffic down our existing road network (to use it closer to the maximum capacity) can have an adverse effect on reliability. Furthermore such measures can add to the problems in urban areas from extra traffic coming off the strategic road network. As described in our written and oral evidence hard shoulder running and ramp metering are examples which we are not convinced have overall benefits (we do however support the speed control and speed reductions which are sometimes associated with hard shoulder running).

Incidentally the plan to increase the speed on the hard shoulder running to 60mph is worrying and we fear may have more to do with the way economic appraisals are carried out than achieving safety and reliability.

REF QUESTION 212

I must apologise to the Chairman and Committee that we were not as forthcoming with answers to her question on new ideas. TAG believes that most of the ideas do exist in some form already but could be supported and deployed very much more energetically and extensively by the Department for Transport.

We did draw attention to the Smarter Choices work. Summary documents from the DfT can be found on the link
http://www.dft.gov.uk/pgr/sustainable/smarterchoices/makingwork/ngsmarterchoicesworkpdfs5771.pdf
the full reports and analyses led by Professor Phil Goodwin run to about 600 pages.

Associated with the "bottom up" work by companies and other organisations delivering their Travel Plans, it is equally important for Highway Authorities for all roads (DfT/Highways Agency and Local Authorities) to deliver positive advantages on the road networks for the more sustainable modes of walking, cycling, public transport and car sharing. It is obviously equally important that money be made available to deliver such schemes, however such schemes are very much cheaper than adding width or length to the motorway network. It would also be highly desirable if tax systems worked to support more sustainable transport throughout; for example workplace parking can be given tax free to employees but not public transport fares.

July 2009

Memorandum from Transport for London (TfL) (MRN 26)

Introduction and Summary

0.1 Transport for London (TfL) welcomes the opportunity to contribute to the Committee's inquiry on the "Major Road Network" for two reasons:

- national road corridors have a significant impact on London's transport system: The DfT's "Delivering a Sustainable Transport System" (DaSTS) (2008) identifies fourteen strategic multi-modal corridors in England, ten of which have an impact on traffic within London; and
- the "Major Road Network" within London plays a fundamental role in the intra-urban movement of people and goods. Major roads within London provide the main distribution network for people and goods between large centres of population, giving them a function similar to intra-urban roads.

0.2 For the purposes of this response, the motorways, the 580km Transport for London Road Network (TLRN) and the 500km of borough roads designated as Strategic Roads are considered to form the "Major Road Network" (MRN) within Greater London.

0.3 The key points in our response are:

- There are inadequacies in both national corridors serving London and major roads within London in fulfilling London's needs. There is an imbalance between the inbound capacity of motorways and trunk roads approaching London and the capacity of London's MRN to accommodate such traffic demand.
- The condition of London's major roads and footways has improved. However, without sufficient funding from central Government they may deteriorate slightly in future.
- Collaborative working between TfL, the Highways Agency and the London Boroughs allows effective management of the MRN in London within current responsibilities.
- The need for increased road capacity should be considered with demand management measures to avoid additional traffic generation, both within and outside London. There should also be accompanying improvements to public transport, walking and cycling.
- In London, opportunities for increasing the physical capacity of the road network are limited. TfL has focussed on making efficient use of the current road space through both traffic and demand management.
- Land use planning and smarter travel can promote modal shift towards alternatives to the private car and help reduce freight movements by road.
- Within London, there has been a multimodal approach to transport planning since TfL's creation in 2000. Historically, integration between the road network and other modes of transport at a national level has been limited. TfL support the approach advocated by DfT in DaSTS of multi-modal planning of strategic corridors.
- TfL considers that schemes to improve journey time reliability are the highest priority, given that this is the key concern of business in London. TfL's strategic priorities for London's MRN are to smooth traffic flow (without negatively impacting on pedestrians) and ensure the network is safe and in a good state of repair.
- The Climate Change Act has significant implications for the MRN in London, as around 15% of all carbon dioxide (CO_2) emissions in the capital are from cars, freight and motorcycles. Options for reducing CO_2 include modal shift away from the car, alternative vehicle technologies (ie electric cars) and traffic management (ie smoothing traffic flow).
- Population growth, both nationally and in London (expecting an extra one million people by 2026) is likely to increase pressure on the major road network. Providing good public transport, walking and cycling in growth areas will be key to minimising any adverse impacts of growth on the road network.
- Emerging road and vehicle technologies can help the road network be used more efficiently. In urban areas like London control and dynamic management systems like SCOOT and iBus are likely to play an important role, along with vehicle technologies such as intelligent speed adaptation.

1. *Is the current major road network adequate for the needs of the UK economy and for individuals?*

1.1 London is the most productive part of the UK, generating 18% of GVA from only 12% of the population.[73] As such, access to, from and within London, by all modes, is crucial to the UK economy.

1.2 The adequacy of the current road network to the needs of London is complex. Increasing congestion within London is having an adverse effect on the economy and the quality of service offered for road users is deteriorating. TfL are working towards meeting the Mayor's challenge of improving conditions on the road network.

[73] Fitch Ratings (April 2007) Transport for London

1.3 The current MRN meets the needs of the London economy in places, but there are some significant inadequacies, both on national corridors serving the capital and within London itself. On the national road network, for example, the M25 is prone to congestion and low resilience, particularly at the Dartford Crossing. These inadequacies not only delay trips made on national corridors, but can have negative consequences in London as traffic is displaced onto less suitable local roads.

1.4 As in other urban areas, the MRN within London often has to provide a distributional function and well as a more local access function. This presents significant challenges for the management of the MRN as the demands of through traffic need to be reconciled with the competing demands for local trips and activities (ie frontage access, walking, cycling and parking). Although within London, many parts of the MRN do provide good strategic longer distance links (eg A40) others do suffer from conflicts with local functions (eg A23).

1.5 Overall traffic levels on the MRN in Outer London have changed relatively little over the last 10 years; in Inner London there has been a significant decline in traffic from around 1999. However, over the same period, traffic speeds have declined on main roads in both Outer and Inner London. TfL has examined these apparently contrary trends. Available evidence suggests that the effective capacity of London's road network, including its MRN, has been reduced by around 10% in Outer London and around 30% in Inner London. Although there has not been an increase in overall traffic demand, this reduced capacity has meant additional delays to road users.

1.6 The highest road network priority for London's businesses is improved journey time reliability on the existing network. London's roads suffer from extremely limited capacity in places and saturated demand levels for most of the day. This leads to extensive congestion, which is costly to businesses and disruptive to Londoners. As a consequence, network resilience is extremely low, and fairly minor incidents can have large and widespread impacts on journey time reliability. This affects public, private and commercial transport. Worsening reliability in London, caused by increases demand for the road network, including by essential utility works, is having a real impact on economic productivity.

1.7 In some places there would be benefit in adding new links to the MRN. In the Thames Gateway this, along with improved public transport links, would improve accessibility and reduce the severance effect of the Thames. TfL is currently reviewing the transport infrastructure requirements for this area, including the potential for a new crossing at Silvertown.

2. *Is the maintenance of the major road network adequate to ensure optimal efficiency?*

2.1 TfL and the London boroughs endorse the Government's approach of funding and supported the production of Highway Asset Management Plans (HAMPs) by local authorities.

2.2 The 580km TLRN includes 2,600 carriageway lane kms (127km of which are bus lanes), 1,000 footway kms, 1,800 structures and 13 road tunnels, as well as associated assets such as: cycle facilities, drainage and more than 45,000 illuminated signs and bollards. London's MRN also incorporates extensive underground utility infrastructure that needs to be maintained regularly, and is now in need of urgent renewal with consequential adverse impacts on network capacity and performance.

2.3 TfL published its TLRN HAMP in September 2007, which included a five year investment plan of capital and revenue expenditure to deliver optimal efficiency. To date, TfL's carriageways and footways have improved, from 14% and 10% in need of repair in 2003 to 6% and 5.5% in 2008, and over the same period the PRN condition has improved from 12% to 5.9%. At current funding levels the percentage of the TLRN network in need of repair is predicted to be around 8% in 2018, maintaining a fairly steady state.

2.4 However, and importantly in terms of asset condition and safety, DfT has not provided funding to meet the requirements of the UK Road Tunnel Safety Regulations 2007. This amounts to an investment requirement in the order of £60 million for TfL's road tunnels with many structures surviving with interim measures or undergoing monitoring regimes pending future repair or renewal when intervention costs are likely to be higher.

2.5 Asset Management Planning is essential to ensure optimal efficiency in maintaining safe, serviceable and sustainable highway and traffic infrastructure. If funding provided by government does not fully meet the implementation cost of HAMP's, the asset condition will deteriorate and command increased intervention costs in the future, as well as increased revenue costs and traffic disruption in the short term.

2.6 Striking the right balance between capital and revenue expenditure on highway, traffic and utility assets and coordinating works is central to achieving optimal efficiency and avoiding disruptive repeat interventions. However, this can only be achieved if the funding identified in HAMPS is made fully available by government and ring-fenced accordingly. Without such government commitment, local authorities are forced to apply a risk based approach to maintaining the network rather than optimal efficiency.

2.7 TfL intends to implement the London Permit Scheme to enable greater control in planning, coordination and execution of street works by utility companies to minimise disruption from essential street works.

3. *To what extent should responsibility for major roads be given to local highway authorities and how much control should the Highways Agency retain?*

3.1 Generally major roads on national strategic corridors should be managed by the national Highways Agency (HA) and local roads by Local Authorities.

3.2 However, outside London there are no regional transport authorities responsible for the management of regionally important roads. As a result, there are cases where road links cater for major strategic traffic movements, but are not classified appropriately. This means there is the potential for funding gaps, with roads of national significance not receiving the investment they require. Any review of the MRN should consider road classification.

3.3 Within London responsibility for major roads is split on a national, regional and local level between the HA, TfL and the London boroughs; with TfL having an overarching strategic traffic management role. Although there are some issues over how particular routes are defined, shared objectives for the road network and a close collaborative working relationship with adjoining authorities means responsibility for and control of the network are less significant.

3.4 TfL works with the HA to ensure that proposed works do not conflict and use traffic control centres to ensure that traffic operations are coordinated. TfL and the HA work together on tactical diversions, and co-operate to manage the respective networks as efficiently as possible.

3.5 TfL and the boroughs have adopted a joint approach to managing London's MRN and deliver their respective Network Management Duty. In line with the requirements of the Traffic Management Act (2004), TfL works jointly with London's Boroughs to improve the planning and co-ordination of activities on London's road network, to maximise network efficiency and cost effectiveness and minimise disruption to road users.

4. *What should the relationship be between measures to increase road capacity and measures to manage demand for road space (for example road pricing)?*

4.1 The needs for both should be examined together. Experience has shown that providing additional capacity will lead to new patterns of traffic, and the overall network effects need careful consideration. Resulting wider environmental and social costs of new road capacity may mean it is unacceptable (as in the case of the Thames Gateway Bridge). Managing demand, alongside capacity improvements would result in more acceptable solutions. However, TfL broadly accepts the findings of the Eddington Review (2006) that there are key bottlenecks and constraints on the national MRN, and that it is feasible and appropriate to increase capacity in some locations (ie the M11 to Stansted) without unacceptable environmental dis-benefits.

4.2 Opportunities for further hard shoulder running schemes, similar to the M42, could provide increases in capacity without additional road building. However, such schemes should be complemented by demand management measures to lock in the benefits and avoid additional traffic generation. Without demand management, this additional traffic would not only erode any benefits on the national network, but also generate higher volumes of road traffic on local roads which would then further reduce the reliability of bus operations and create greater conflict with more sustainable and vulnerable modes. Demand management measures themselves must be co-ordinated across the national MRN and other roads to avoid dis-benefits from displaced traffic.

4.3 In London, opportunities for increasing the physical capacity of the MRN are limited, in terms of feasibility and public acceptability, but there is scope to increase the effective capacity of the MRN and so reduce congestion and traffic on less suitable roads. Therefore, TfL has focussed on making efficient use of the current road space through both traffic and demand management.

4.4 TfL's approach has been to make more efficient and sustainable use of the existing MRN in London before considering new links or junction capacity. Any increase in road capacity should ideally be coupled with demand management measures to ensure that it is used efficiently, that an appropriate balance in provision is made for competing demands and that journey time reliability is improved rather than simply reallocating the traffic to the next bottleneck.

4.5 In urban areas, 80% or more of traffic delay occurs at junctions, and therefore the effective capacity of junctions largely determines the performance of the road system. As such, increases in capacity in London are likely to be based around optimising traffic signalling, junction capacity increases and removal of bottlenecks (eg improving traffic flow in and around the Blackwall Tunnel).

4.6 Improvements in public transport, walking and cycling are essential to complement demand management. Public transport, walking and cycling cater for modal shift arising from demand management and in urban areas public transport makes more efficient use of available road space than private vehicles for people movement.

4.7 In conclusion, an integrated approach to provision of capacity and demand management is needed across the national MRN and local road networks, and must be made jointly with improvements to public transport.

5. *To what extent can alternative modes of transport, travel planning and land-use planning provide alternatives to private car use and road freight?*

Land use planning

5.1 Co-ordinated land use and transport infrastructure planning can play a significant role in reducing traffic demand and traffic related problems over the longer term, by ensuring that the location and design of development enables people to access employment, opportunities and services without the need for a private car.

5.2 However, the MRN can attract development, and in some cases this in itself can lead to traffic problems. For example, out of town retail centres such as Bluewater generate a large number of trips, which puts pressure on the already congested MRN.

Modal shift

5.3 Modal shift to alternatives to the private car can play an important role in reducing pressure on the MRN, both nationally and in London.

5.4 Nationally, the potential for mode shift away from the private car is likely to involve rail. New high speed links could offer attractive alternatives, particularly for intercity travel. However, issues over limited rail capacity mean other options should also be considered, including demand management.

Smarter travel

5.5 Smarter travel measures are being actively promoted in London to encourage greener, cheaper and more efficient alternatives to the car. School and workplace travel plans, car clubs, pan-London awareness raising and focused integrated area programmes (eg Smarter Travel Sutton) have delivered tangible reductions in car use.

5.6 TfL has been working in partnership with NHS London to improve understanding and awareness of the impacts of health service reconfiguration on accessibility and travel, and to promote active travel.

Freight

5.7 TfL consider the movement of people and goods together to optimise traffic operations in urban centres. TfL work with the freight industry to encourage customers and operators to adopt practices which minimise the demand for road space at peak times (ie using appropriate delivery vehicles and making trips at off-peak times).

5.8 TfL is actively working to deliver more sustainable freight distribution by encouraging the development of Delivery & Servicing Plans (effectively Freight Travel Plans) and by working with operators who deliver into London through the Freight Operator Recognition Scheme (FORS), promoting the use of sustainable operations and environmentally friendly modes.

5.9 Although water and rail freight are efficient modes for transporting bulk loads, only a small proportion of freight currently lifted by road in London could be transferred onto alternative modes of transport.[74]

6. *How much integration is there between the road network and other modes of transport?*

6.1 Historically, integration between the road network and other modes of transport at a national level has been limited.

6.2 TfL support the approach taken by the DfT in DaSTS (2008) of multi-modal planning of strategic corridors. Of the fourteen strategic corridors identified, 10 affect London directly and a further two are of significant interest.

6.3 Since its creation in 2000, TfL has planned and developed London's transport multi-modally, and more recently has also begun adopting a corridor based approach to operational management and improvement.

6.4 Interchange between different modes is a key element of travel in London. Convenience of interchange and the quality of the urban realm, both around interchanges and across London has an important effect on levels of walking and cycling, and community severance. TfL is currently developing its "Interchange Best Practice Guidance". When planning interchanges, TfL considers all modes, and integrates them for the benefit of the travelling public.

[74] London Freight Plan (2008)

6.5 Although TfL has the powers to integrate the road network with public transport services, the many conflicting and competing demands for limited road capacity means there are difficulties associated with doing so.

6.6 The movement towards a national multi-modal corridor based approach to transport planning is a welcome step in the right direction.

7. *What types of scheme should be prioritised and are current funding mechanisms reflecting these priorities?*

7.1 TfL considers that schemes to improve journey time reliability are the highest priority, given that this is the key concern of business.

7.2 For the national MRN, priority schemes should be those which bring all strategic corridors up to a common journey time reliability standard. This could be achieved by additional capacity (ideally coupled with demand management) and or improved traffic management and signalling optimisation.

7.3 Lower priority types of schemes would be those which:

— Improve connectivity (TfL agrees broadly with Eddington's conclusion that the road network has sufficient connectivity).

— Add capacity without managing demand.

7.4 TfL's strategic priorities for London's MRN are to smooth traffic flow (without negatively impacting on pedestrians) and ensure the network is safe and in a good state of repair. Given the constraints on increasing capacity discussed earlier, schemes that maximise the efficient use of current road space, and improve reliability, should be prioritised in the first instance. Targeted junction improvements can help relieve congestion, but larger scale capacity increases are likely to lead to the generation of additional traffic and congestion unless effectively managed.

7.5 The NATA framework currently considers the importance of journey time savings but gives insufficient recognition of the value of improving journey time reliability. This gives too little priority to schemes addressing journey time reliability. TfL are engaged with DfT through the NATA Refresh process to resolve this and other appraisal concerns.

7.6 An appropriate balance between funding of national, regional and local road networks is needed, given that they interact and work together as a complete network.

7.7 Timely and sufficiently funded maintenance is of course essential and is discussed in answer to Q2.

7.8 TfL supports the DfT's new approach proposed in DaSTS, to introduce five year funding settlements, which allow more effective medium term planning.

8. *What are the implications of the Climate Change Bill for the development of the major road network?*

8.1 The Climate Change Act has very significant implications for the MRN. Road transport in the UK produces around 21% of the UK's overall CO_2 emissions,[75] much of which is likely to come from major roads. This will need to be reduced if national targets are to be achieved. Cars, freight and motorcycles account for almost 75% of all emissions of CO_2 from ground transport sources in London—around 15% of all CO_2 emissions in the capital (excluding aviation).[76]

8.2 There are a number of ways emissions can be reduced to meet the CO_2 reduction targets in the Climate Change Act and London's Climate Change Action Plan. These include reducing congestion, incentivising modal shift from the car to public transport, walking and cycling, (ie through the future London Cycle Hire Scheme and cycle highways), improved engine efficiency and new vehicle technologies (ie hybrid cars).

8.3 TfL encourages the use of electric vehicles to reduce CO_2 emissions and believes they have good potential to replace many shorter distance trips in London which are currently made by petrol and diesel fuelled cars. However, longer distance car travel is likely to remain fuelled by petrol and diesel, and therefore traffic on the national MRN is likely to continue to generate significant amounts of CO_2. As such, alternative measures will also need to be pursued, particularly by national Government.

8.4 Traffic management will also play a role. Reducing the time that vehicles spend stationary, in stop-start conditions or travelling slowly, through measures such as variable speed limits will reduce emissions of CO_2; along with ensuring compliance with or lowering speed limits.

8.5 Without associated demand management measures, the expansion of the MRN could generate additional traffic and increase CO_2 emissions. However, there are methods which can be used to avoid this effect. For example, the hard shoulder running on the M42, combined with slower speeds, has helped to relieve bottlenecks, improved traffic flow, and led to an overall reduction in CO_2 emissions.[77]

[75] Transport Statistics Great Britain, (2005), Table 3.7
[76] London Climate Change Action Plan (2007), Fig 52
[77] Advanced motorway signalling and traffic management feasibility study (DfT), March 2008

9. *What are the implications of anticipated population growth in the UK, particularly in designated growth areas, for the development of the major road network?*

9.1 Future population growth, both nationally and in London (where population growth forecasts an extra one million people by 2026) is likely to increase pressure on the MRN.

9.2 Designated growth areas, such as the London-Cambridge corridor, are generally already well connected to the MRN. However, for this growth to be more sustainable, the travel demand it will generate needs to be better catered for by public transport, particularly rail services. This is essential for areas where there is travel to and from London, to reduce pressure on the capital's road network.

9.3 Alongside committed investment in rail, other measures such as strategic coach links serving national corridors should be investigated to help relieve pressure on London's road network.

9.4 Aside from carefully targeted relief of bottlenecks, the MRN associated with growth areas should only be expanded once public transport improvement options have been exhausted, to avoid additional traffic generation. If there is significant expansion of the MRN in these areas, demand management should be used to ensure the benefits are locked in.

9.5 London's transport network is already operating at peak capacity. The growth in population and any consequent increases in congestion, from both growth within and outside London, will therefore need to be carefully managed, with a greater emphasis on provision for and encouragement of the use of more sustainable modes.

10. *To what extent do emerging road and vehicle technology (intelligent transport systems) change the requirements for the major road network?*

Roads

10.1 New technology is unlikely to fundamentally change the requirements of the MRN but can help improve network efficiency. TfL aims to use new technology which maximises the effectiveness of its existing assets, can help operate the network more safely and intelligently and allows travellers to make more informed travel choices. This includes technologies for junction and speed control.

10.2 Control and dynamic management systems like SCOOT and iBus, which have both been implemented successfully in London, are likely to play more of a role in urban areas than nationally.

10.3 The DfT should encourage development of ITS to improve traffic signal control. This would help to maximise existing capacity and improve throughput and efficiency. This could include advanced optimisation techniques (for pedestrians and emissions), intelligent pedestrian facilities (eg countdown), systems integration / interoperability through national standards, exploring alternative control methods (eg flashing ambers), dynamic systems that are policy responsive. However, differences between UK traffic signalling standards are those in Europe and America restricts access to international markets for equipment limits the supplier base and adds cost.

Vehicles

10.4 Emerging technologies should be pursued to help ensure compliance with the Highway Code. Intelligent speed adaptation linked to a national speed limit database would provide an opportunity to control vehicle speeds, and benefit both safety and traffic operations.

10.5 Technologies such as real-time satellite navigation could help individuals avoid delays. However, this technology is likely to be most useful on a network with sufficient additional capacity to cope with diverting traffic. Across London, the MRN is operating close to capacity for most of the day, and therefore any diverting traffic would need to be carefully managed to avoid further delays or increased usage of inappropriate (residential) streets.

10.6 FORS encourages best practice for the freight industry in terms of sophisticated journey planning and vehicle technologies (see Q5).

January 2009

Memorandum from the British Chambers of Commerce (MRN 27)

About the British Chambers of Commerce

1.1 The British Chambers of Commerce is the national body for a powerful and influential Network of Accredited Chambers of Commerce across the UK; a Network that directly serves not only its member businesses, but the wider business community.

1.2 Representing 100,000 businesses who together employ more than five million employees, the British Chambers of Commerce is The Ultimate Business Network. Every Chamber sits at the very heart of its local community working with businesses to grow and develop by sharing opportunities, knowledge and know-how.

1.3 No other organisation makes such a difference to business as the British Chambers of Commerce.

Summary of the British Chambers of Commerce Position

2.1 Growth and investment is vital to solving congestion on the UK's major road network. Without a high quality, more expansive road network businesses across Britain will continue to struggle to grow and develop. As usage of the network continues to increase and physical expansion continues to fall short of demand the strains on the network will continue to rise.

2.2 The BCC's transport survey shows congestion on the road network is costing British Businesses £23 billion per annum and that there is conditional support in the principle of charging for road use. Over four fifths of all long distance passenger travel is by road. No other mode of transport is as effective; the road network is essential to the UK.

2.3 The BCC believes there is merit in emerging demand management solutions. Our transport survey has shown that there is conditional support in the principle of charging for road use. However, at this early stage and with the era of cheap fuel over there is much resentment regarding the increasing costs associated with motoring and the government's willingness to target the business community to raise funds to improve transport improvements. Although traffic management schemes can offer capacity enhancement and will reduce congestion we don't believe that these are long term solutions.

2.4 Current government policy appears to come to an end at 2014. Any long term strategy must include alternatives to the road network and the government must look into the economics and environmental benefits of high speed rail to link North and South and to reduce overall transport carbon emissions.

British Chambers of Commerce Response—The Current Road Network

Is the current major road network adequate for the needs of the UK economy and for individuals?

3.1 Britain's inter-urban network is one of the most congested in Europe yet it is also, for the size of our economy and population density, one of the shortest. A high quality road network is critical to the success of the economy. The rising congestion on our major roads is now acting as a real constraint on economic growth. Considering its central importance to the economy, forming the backbone of the nation's long-distance transport infrastructure, congestion on the network is costing British business £23.2 billion per annum.[78]

3.2 Over four fifths of all long distance passenger travel is by road. No other mode of transport is able to compete with road over long distances apart from air transport for the longest distances. Almost two thirds of freight transport goes by road meaning that the inter-urban road network is the most important carrier of medium and long distance freight.

3.3 The trunk road network in the UK comprises just 3% of the total national road network but carries 30% of general traffic and 60% of lorry movement. Its length has been continually reduced as many roads have been transferred to local authority control. However, car ownership continues to rise further increasing the density of traffic and resulting in congestion and growing unreliability. These problems are worst in the central core, M1 and M6, stretching from London and the South East, through the Midlands to the Liverpool/Manchester/Leeds conurbations.

3.4 Investment in the physical expansion of the capacity of the inter-urban road network has been declining over the last decade. In England, since 2000 this has been roughly a third of the rate that prevailed during the 1990's. Increasing reliance is being placed on managing the existing network rather than adding new capacity. Where new physical capacity is being provided it is focused on widening the existing busiest Motorway sections, along with a programme of more local schemes to improve some of the weaker sections of All Purpose Trunk Roads (APTRs). There are scarcely any proposals for new inter-urban roads. Paradoxically planned road improvements are more ambitious in Wales and Scotland where the problems are generally less severe than in much of England. The British Chambers of Commerce is concerned that is no overall strategic plan going into the future.

[78] British Chambers of Commerce Transport Survey, *The Congestion Question*, (2008).

Is the maintenance of the major road network adequate to ensure optimal efficiency?

4.1 The major road network is generally well maintained and managed. However, as usage of the network continues to increase and physical expansion continues to fall short of demand the strains on the network will continue to rise.

4.2 We welcome recent innovations such as Traffic Officers which have significantly reduced the time spent investigating incidents and breakdowns and reopening roads.

4.3 According to our recent transport survey The Congestion Question (2008) the primary causes of congestion on the major road network are the sheer volume of traffic (78%), road accidents (61%), poor driving (54%), and the lack of alternatives to road transport (47%).

To what extent should responsibility for major roads be given to local highway authorities and how much control should the Highways Agency retain?

5.1 The British Chambers of Commerce believes that where a road is important nationally it should remain under the control of the Highways Agency. Local Authorities have several demands for their resources that will undoubtedly mean that the major roads under their control will command less of a priority than they might otherwise be under the Highways Agency.

5.2 It is therefore important that where major roads have reverted to local authorities there are agreements in place that require those authorities to maintain those roads to a minimal standard as set by the Highways Agency.

Meeting Demand

What should the relationship be between measures to increase road capacity and measures to manage demand for road space (for example road pricing)?

6.1 The British Chambers of Commerce believes that there is an urgent need to increase capacity on the road network. Several studies such as the Eddington study and the RAC Foundation study Roads and Reality have concluded that there is justification for expanding the major road network. Based on the findings of the Eddington study an annual programme of about 270 lane kilometres in (lkms) Britain would be justified on a cost/benefit basis, in the absence of significant changes to motoring taxes and charges. The RAC Foundation study found that at least 600 lkms would be justified in terms of a cost/benefit ratio of roughly 4:1. The benefits were estimated to be over £15 billion a year by 2041.

6.2 However, it is also understood that there needs to be an element of managing demand and an unlimited schedule of road building would not be practical on political or environmental grounds.

6.3 The completion of the Active Travel Management Scheme on the A42 has shown that innovative solutions to congestion can have some success. ATM offers the prospect of additional capacity without widening existing road or building new ones and is to be welcomed as such, especially as it can be introduced significantly faster and cheaper than new construction. However, it provides only limited additional capacity. Recent announcements that ATM is to be rolled out are to be welcomed but it is understood that it is only planned for 3% of the inter-urban network. This falls far short of longer term needs and offers little to the majority of the rest of the network where hard shoulders do not exist.

6.4 The possibility of High Occupancy Vehicle (HOV) lanes can, in the right circumstances, increase the numbers of people travelling along a road but may also reduce vehicular capacity to the detriment of commercial traffic. Whilst their judicious use should be considered carefully (eg in peak periods on approaches to large cities); for the inter-urban network as a whole they have little to offer. The performance of HOV lanes can be improved somewhat by charging for their use (High Occupancy Toll—HOT—lanes): but again the likely contribution of HOT lanes to improving conditions on the network as a whole is very limited.

6.5 The BCC believes there is merit in emerging demand management solutions. Our transport survey has shown that there is conditional support in the principle of charging for road use. The M6 toll road has been relatively successful in offering a reliable and effective solution to the congested M6 since its construction. Our annual transport survey has also indicated that if there was substantial upfront investment in public transport/alternative modes of transport along with a thorough re-evaluation to the way road users are currently taxed the business community would consider the principle of road pricing. However, at this early stage and with the era of cheap fuel over there is much resentment regarding the increasing costs associated with motoring and the government's willingness to target the business community to raise funds to improve transport improvements.

To what extent can alternative modes of transport, travel planning and land-use planning provide alternatives to private car use and road freight?

7.1 There has been a growing emphasis in government policy on "reducing the need to travel" or "smarter travel". The main aim being to promote acceptable changes in travel habits that will reduce car and lorry use. Although there is considerable merit in these initiatives the overall impact on the major road network will be small. The two most promising initiatives, travel plans and tele-working, both rely on employer initiatives and as such require consent from the business community. Taken together "smarter travel" and improved use of tele-communications could have the potential to reduce traffic on the inter-urban road network by about 5bn lkms/year (3%).

7.2 The British Chambers of Commerce believes it has a role in promoting travel plans and in 2008 carried out, in conjunction with the National Business Travel Network, several travel planning road shows.

7.3 Alternative transport on the major inter-urban long distance road network is only really feasible by rail. Current capacity on rail cannot cope with the increasing numbers of passengers wishing to use the railways. The BCC believes that the government must seriously consider new high speed passenger railways that will not only decrease journey times and therefore incentivise modal shift but more importantly will release significant capacity back onto conventional rail. This released capacity could be used for increased freight and commuter traffic thus releasing further capacity from the roads. New high speed lines would also offer significant environmental benefits.

How much integration is there between the road network and other modes of transport?

8.1 In terms of the inter-urban road or major road network the most viable alternative to road is rail. In the last decade the rail network has seen a surge in growth and this will have helped to an extent to moderate the growth in the use of road transport. Rail offers several benefits over road from a business context, especially since it is possible to work on a train. However, in terms of long distance passenger traffic rail still transports significantly less than road.

8.2 Freight on rail has also seen significant growth over the last decade (46%) and is expected by the industry to grow another 30% over the next decade. However with the continuing increase in both freight and passenger numbers there are ever growing issues with capacity and reliability. It is expected, in the absence of any physical expansion on the railways, these problems will deteriorate further.

8.3 In terms of integration the British Chambers of Commerce's transport survey The Congestion Question found that car parking at stations was a major problem to increased usage of the rail network. In terms of freight the lack of flexibility in terms of destinations and the need to ultimately use the road network were highlighted as key reasons for continuing to use road over rail. The planning process was also cited as an issue in terms of building new rail freight terminals.

What types of scheme should be prioritised and are current funding mechanisms reflecting these priorities?

9.1 The British Chambers of Commerce believes that new capacity must be considered on the inter-urban road network as a matter of priority. As explained in Q4 we believe there is a significant case for increasing capacity on our major roads.

9.2 Although ATM and HOV schemes can offer capacity enhancement and will reduce congestion we don't believe that these are long term solutions. Current government policy appears to come to an end at 2014. Although the Delivering a Sustainable Transport System document aims to build a long term strategy we are far away from achieving this. We are also concerned that with the TIF scheme having failed in Manchester the government has been left with a confused and uncertain strategy to deal with demand management measures. It is imperative that funding made available through TIF is ring fenced to deal with congestion and not moved back into general funds or returned to HM Treasury. TIF has faced difficulty because it demanded road pricing as a condition of the funding. Now that Manchester has rejected this proposal we would call on the government to relax these conditions so that vital infrastructure investment can go ahead.

9.3 It is important that in times of recession vital infrastructure projects, of which several local authorities have invested capital, should not be lost. We urge the government to ensure that funding that has been earmarked to tackle congestion is made available.

9.4 Any long term strategy must include alternatives to the road network and as has been made clear throughout this document we believe that the government must look into the economics and environmental benefits of high speed rail to link North and South and to reduce overall transport carbon emissions.

NEW DEVELOPMENTS

What are the implications of the Climate Change Bill for the development of the major road network?

10.1 The BCC believes that climate change is a real threat and it is important that the government considers transport's proportion of the nation's emissions. However at this stage government policy is not clear as to how emissions from road transport will be tackled.

What are the implications of anticipated population growth in the UK, particularly in designated growth areas, for the development of the major road network?

11.1 The population of the UK is estimated to rise, according to National Statistics, to 77 million people by 2060. This will undoubtedly have serious consequences for the nations transport infrastructure as more and more people will need to travel. Ownership of cars will increase and the stresses on the road network that exist today will only be stressed further. It is imperative therefore that the future is considered now so that vital capacity enhancements on all transport networks can be put into place so that they are capable of keeping up with demand.

11.2 In anticipating future growth patterns it is important that measures put in place to protect the major road network from being overloaded are not used to restrict growth. Article 14 measures, put in place by the Highways Authority, have often been used to veto new investment opportunities that could have provided regeneration and employment opportunities. Rather than restricting growth the road system should be adapted to accommodate growth.

To what extent do emerging road and vehicle technology (intelligent transport systems) change the requirements for the major road network?

12.1 As has been described earlier emerging technologies such as ATM and HOV lanes show promise in releasing capacity on the existing road network but they do not offer a long term solution to rising congestion and the prospect of an increasing population.

12.2 Although we welcome research and development into the technologies of the future, we believe the congestion problem we face is more immediate than their likely deployment. Therefore, we urge the government to consider solutions that can add capacity into the system now. Congestion is rising and without measures to combat it now the effectiveness and reliability of our major road network will continue to fall.

January 2009

Memorandum from the Luton Gateway Delivery Vehicle (MRN 28)

EXECUTIVE SUMMARY

Luton Gateway is pleased to respond to the Transport Select Committee's inquiry into major road networks, to bring to the Committee's attention the strategic network issues that have arisen in the Luton and South Bedfordshire area. This document aims to emphasise the necessity of joined-up government making timely decisions and rapid delivery where major road schemes are concerned, particularly so that improvements to major road networks can support the task of local and regional authorities to deliver wider government targets on economic and housing growth.

Luton Gateway has focused on the following issues to achieve this aim:

- The inadequacy of the M1's capacity in the Luton and South Bedfordshire area and how the DfT's decision to implement hard shoulder running might still delay investment in a wider sub regional network.
- How greater alignment of the Highways Agency's objectives with regional needs could alleviate obstacles to growth.
- How Luton Gateway's road infrastructure priorities are governed by the need to reduce existing congestion, and to cater for the area's future social, spatial and economic expansion.
- The need for a joined-up approach to delivery of infrastructure.

Introduction—About Luton Gateway

The Luton Gateway Delivery Vehicle (Luton Gateway) is the new name for the delivery partnership for Luton and South Bedfordshire. It is working towards the realisation of the area's housing and economic growth targets, as part of the Milton Keynes South Midlands (MKSM) nationally designated growth area. Luton Gateway is an interim partnership that will be constituted as a limited company during Spring 2009.

The Current Road Network

Q1. *Is the current major road network adequate for the needs of the UK economy and for individuals?*

1.1 Luton Gateway would not wish to generalise about the adequacy of the entire UK major road network. What is important is that adequacy is assessed from regional perspectives as well as a national viewpoint. Most parts of the major road network are used for long distance inter-regional travel and for shorter sub-regional journeys. For example, historically under a quarter of M1 users travel the full distance between the London and West Midlands conurbations—the bulk of journeys are shorter distances, and the continuing growth in population and economic activity at intermediate centres is increasing this type of use.

1.2 The M1 is a core element of the transport infrastructure for the Milton Keynes South Midlands (MKSM) growth region designated by government. The M1 runs through the heart of the Luton-Dunstable-Houghton Regis conurbation providing vital capacity to, from and within this area. The ability of Luton and southern Bedfordshire to achieve their share of objectives set by DCLG and BERR (for regional social development including affordable housing, and economic growth) is dependent on a number of externalities. The effective capacity of the M1 corridor and its junctions are important factors, and decisions on these are a matter for DfT and the Highways Agency.

1.3 It is common ground, between members of Luton Gateway and the Highways Agency, that the section of the M1 north of junction 10, and local junctions, are not adequate currently. Following the DfT's announcement on hard shoulder running, Luton Gateway needs timely delivery on the design and construction of capacity improvement measures between junction 10 and 13 of the M1, so that the transport sector can provide its input to joined-up government.

1.4 Plans to widen the M1 between junctions 10 and 13 were in abeyance while the DfT reviewed with the HA the option of hard shoulder running instead of conventional widening to dual-4 lanes. There are related junction improvements including the provision of a new junction 11A (north of Luton and Dunstable), which were also caught in this administrative delay. The National Network Strategic Review provided a new policy overlay for the moratorium, and the DfT's decision on hard shoulder running has clarified how M1 capacity improvements will be made between junctions 10 and 13. However, further clarity is needed on how this decision will impact on interrelated transport schemes, in affordability and delivery timescales.

1.5 Junction 11A is a critical project, creating the interface between the enhanced M1 and the planned sub-regional major road network. It provides the starting point of the A5-M1 link road, needed to create additional local capacity and environmental relief of the existing urban area. The A5-M1 link road is supported in the East of England Regional Transport Plan and is a top priority in the Regional Funding Allocation.

1.6 Overall, Luton Gateway considers that the M1 locally is not adequate for current and projected transport requirements, themselves a consequence of social, housing and economic policies led by other government departments. The additional road capacity required and the related approvals process are recognised and supported at regional level. But the policy bottleneck in the DfT, which was resolved on 15 January 2009 when hard shoulder running was decided upon, has caused uncertainty about when the new junction 11A and the A5-M1 link might be realised.

Q2. *Is the maintenance of the major road network adequate to ensure optimal efficiency?*

Q3. *To what extent should responsibility for major roads be given to local highway authorities and how much control should the Highways Agency retain?*

We answer Q2 and Q3 together.

2.1 & 3.1 Maintenance: We do not see any practical basis outside the largest conurbations for responsibility—and costs—of motorway maintenance to be allocated away from HA to local highway authorities. Maintenance impacts along a limited access road may not be secured at best value from a series of local suppliers. There may be more scope to share maintenance suppliers for conventional trunk roads.

3.2 Service quality: Transport corridors are both a cause and consequence of the spatial distribution of regional economies. So there is a case to review how the management of service quality of motorways and trunk roads should interact with the local and regional highway and planning authorities and the wider sub-regional and regional economies.

3.3 Over recent years the business objectives of the Highways Agency have moved from planning to meet most or all foreseen demands, to best value management of the network. It seeks to optimise the utilisation and cost effectiveness of the trunk road network and minimise congestion on the roads which are its responsibility.

3.4 The HA can object or discuss with local highway and planning authorities, to try to constrain new developments on local roads that might be sources of additional traffic on the HA network. However, the driver for this intervention is the foreseen HA network service quality, not the wider area regeneration and economic growth, which might be an absolute imperative locally in response to policy drivers from other government departments.

3.5 Luton Gateway has local examples where there is such administrative conflict because the HA has a different objective and funding timescale compared to the authorities responsible for planning and economic development, including other government departments. For example, the HA has recently remodelled M1 J10 to cater for the 4-lane M1 south of that junction, but it did not permit remodelling of J10A (the Luton Airport spur). There is now a traffic bottleneck in the morning from the M1 to J10A, and a regeneration bottleneck where even the smallest developments in Central or South Luton almost automatically receive what is effectively a holding objection from HA, sterilising most development possibilities because of increased traffic through J10A. The details are set out in a footnote.[79]

3.6 We believe strongly that the trunk road network should support, not hinder, the social, spatial and economic priorities of regional and local partners. It is these bodies who have the responsibility for delivering the future community outcomes. As a service agency, the HA's regional management and delivery should be aligned with the areas which its trunk roads traverse.

3.7 Future investment in trunk roads: This issue of responsibility highlights the opportunity for DfT to allocate more funding for trunk road capacity upgrades not directly to the Highways Agency, but as additional new funding into the Regional Funding Allocation pool. The RFA participants could then discuss the relative business case for investing £x million in a particular HA scheme as contrasted to other road schemes, or to public transport. This would help to ensure that HA regional participation and delivery was aligned more closely to regional objectives. Devolved trunk road responsibilities are now managed by the Scottish Executive and the Welsh Assembly Government, so there are already precedents in the UK.

Meeting Demand

Q4. *What should the relationship be between measures to increase road capacity and measures to manage demand for road space (for example road pricing)?*

Q5. *To what extent can alternative modes of transport, travel planning and land-use planning provide alternatives to private car use and road freight?*

We answer Q4 and Q5 together.

4.1 & 5.1 Road capacity and demand management: The balance between social, spatial and economic changes which present new requirements on road space, and some form of supplementary charges to help manage demand, needs to be determined by the regional and sub-regional bodies that are responsible under the government's rules for each area's development and well-being.

4.2 & 5.2 This also ensures accountability and public involvement in the decisions, as shown recently by the example of Greater Manchester voting against congestion charging, but Nottingham voting for a workplace parking levy. Differences in regional road management policies should be accepted, providing these conform to the government's planning policy statements and guidance.

5.3 Alternative modes of transport: Luton Gateway recognises the need to balance road network improvements with local travel plans and adequate public transport. It is an ambition of the Luton and South Bedfordshire Joint Committee for the area to be recognised as a "Green Growth Area". Accordingly, Luton Gateway seeks delivery on only those infrastructure improvements that are necessary to support the area's growth targets. The planned sub-regional major road network is a core element of the area's regeneration, and accepted within the Regional Funding Allocation.

5.4 As part of the current Local Transport Plan, the Luton Dunstable Busway has recently been approved. The £85 million bus link will run between Houghton Regis, Dunstable, Luton and Luton Airport, providing a much needed boost to the area's public transport system. The busway, which is due to open by

[79] The HA objected to upgrading of M1 J10A because proposals affected their published M1 orders, and as a result the roundabout improvements had to be removed from the East Luton Corridor project. Yet the Department for Transport (in its draft guidelines for *Delivering a Sustainable Transport Strategy*) has identified the East Luton Corridor from J10A up to the Airport for possible inclusion in the Strategic Highways Network (SHN). Despite a number of approaches, there is no additional funding in the Regional Funding Allocation to pay for the much needed £20 million scheme for J10A even with the proposals to make the junction and ELC part of the Strategic Highway Network, while HA has no funding to improve the junction until at least 2014.

2011, will provide capacity for some of the increased demand for transport that will arise from future employment and housing growth. Additionally, there is the possibility for the LDB to be extended to new growth areas as and when they are developed.

5.5 We would expect further options for transport demand management and supply to be reviewed in the forthcoming Local Transport Plan for 2011 to 2016 and as part of the Luton Gateway business plan.

Q6. How much integration is there between the road network and other modes of transport?

6.1 See our policy position on Q4 and Q5.

Q7. *What types of scheme should be prioritised and are current funding mechanisms reflecting these priorities?*

7.1 Priority is needed for schemes which meet national and regional social, spatial and economic objectives. It is likely that the most successful projects will be those which pay regard to the Eddington, Leitch and Stern reports, by addressing:

- congestion in major urban areas;
- international competitiveness;
- inter-urban flows between major centres;
- achieving greater skilling-up and accessibility to training and employment; and
- environmental improvements and sustainable growth.

7.2 Luton Gateway's highest priority schemes are those which cater for the area's future social, spatial and economic development and address congestion challenges: A5-M1 Link; M1 additional capacity between junctions 10 and 13; a new M1 junction, 11A; remodelling of M1 J10A; and in due course the Luton Northern Bypass.

7.3 Luton Gateway notes the current range of funding mechanisms which can assist regional policy goals. The main mechanisms are: Regional Funding Allocation and Transport Infrastructure Fund (DfT), Community Infrastructure Fund and Growth Area Fund (DCLG), and direct DfT investment via Highways Agency. There are two shortcomings—that current funding volume (especially timing of spend) is not adequate for the spatial and economic objectives, and that the new system of Planning Gain is not yet mobilised. Given the current financial pressures, it is desirable that there is a forward-funding mechanism which allows the Delivery Partners such as Luton Gateway to kick-start infrastructure developments and subsequently recover a share of costs through Planning Gain.

7.4 For example, Luton Gateway is pleased that EERA has agreed that the A5-M1 Link should be treated as a "committed" scheme in the current review of Regional Funding Allocations. However, despite EERA's commitment, the project and its budget was first delayed by the DfT review of motorway widening, and now the scheme may face further setbacks due to uncertainty about how a new junction 11A will be progressed.[80] The problems arising with junction 10A have also been referenced.

7.5 This highlights that for major road schemes and more widely across transport modes, there are three decisions which need to be managed collaboratively in a process of joined-up government: the ownership and determination of regional priorities; the availability of funds; and the timing of scheme authorisation. As of 15 January, there is now some understanding of when capacity enhancements to J10 to 13 of the M1 can be expected.[81] But, a definitive timetable for delivery is needed to ensure that the A5-M1 link and J11A can be afforded the necessary level of prioritisation. We have covered in our reply to Q3 the wider question of greater regional collaboration by HA, and whether more HA capacity investment should be subject to stronger influence by regional bodies.

New Developments

Q8. *What are the implications of the Climate Change Bill for the development of the major road network?*

Q10. *To what extent do emerging road and vehicle technology (intelligent transport systems) change the requirements for the major road network?*

8.1 and 10.1 For regional authorities, these topics can be taken on board in members' Local Transport Plans and in discussion of projects for Regional Funding Allocation and other funding sources.

8.2 The climate change agenda will focus on delivering sustainable transport schemes, as shown in the

[80] The DfT's decision to bring forward improvements to the A11 between Fiveways and Thetford is evidence that there have already been slippages in the prioritisation of M1 J11A.

[81] A clear basis for delivery will need to be agreed quickly, to ensure that the Luton Dunstable Busway, which has to bridge the M1 at the location identified for hard shoulder running, can achieve its completion date of 2011. At present it is unclear if HA will just want a dual 3-lane bridge, adequate for hard shoulder running, or if a full dual 4-lane bridge should be adopted to safeguard a long term option for widening. Without such clarity, further risks of delay arise for the public transport option upon which much of the area's growth is predicated.

East of England Region by the recent RFA2 Prioritisation scheme undertaken for the Regional Assembly. This will make it more difficult to get funding for highway improvements, even though those new roads are critical to unlocking growth.

8.3 ITS systems are likely to result in more cost effective solutions to provide additional capacity, for example with the option of hard shoulder running and active traffic management on motorways.

Q9. *What are the implications of anticipated population growth in the UK, particularly in designated growth areas, for the development of the major road network?*

9.1 Luton Gateway exists within the Milton Keynes South Midlands (MKSM) nationally dedicated growth area and has, therefore, substantial employment and housing growth targets to meet over the next two decades.

9.2 In the period 2001–21 the area is expected to expand by 26,300 households and a further 15,400 homes will be built by 2031. Additionally, the Luton / Dunstable / Houghton Regis conurbation is designated a Priority Area for Regeneration and the East of England Plan indicates that the Luton and South Bedfordshire area can anticipate a growth of over 35,000 new jobs by 2031.

9.3 Luton Gateway is excited about the area's targeted growth programme, but recognises that the delivery process will have significant implications for the road network. For growth to be accomplished in a timely manner, the major road networks in and around Luton and Dunstable must be upgraded and developed to accommodate increased demand. Government must consider a joined-up approach to delivery on its housing, economic and transport policies to achieve this.

January 2009

Memorandum from the Urban Design Group (MRN 29)

Introduction and Summary

As many respondents to the Committee will be addressing vehicle movement which is obviously an important issue, the Urban Design Group submission focuses on the place functions of major roads in built-up areas, and non-vehicular movement, which we believe are also important subjects for consideration, and of the need to strike a balance between the two that is in the overall interests of society.

- 22% of the major road network lies in urban areas.
- Major roads represent 8% of the urban road network.
- Major roads are places as well as movement corridors, and the economic and social needs that relate to movement, which have been identified by organisations such as CABE and the DfT should be factored into the management and improvement of the network.

The Current Road Network

1. *Is the current major road network adequate for the needs of the UK economy and for individuals?*

1.1 In this section we raise the issue that part of the major road network lies in urban and built up areas. These roads perform important economic and social functions as places, and these needs should be considered alongside the movement function.

1.2 The major road network includes "streets": roads in built up areas where there is both a movement and a place function as described in government guidance including "Manual for Streets" *Department for Transport 2007*. The major road network includes most of the high streets of the towns of Great Britain, and the majority of radial routes into towns and cities.

1.3 Up to the early 20th century these main streets were the preferred location for prestigious buildings and residences, and to this day are the location for many schools, hospitals, main and neighbourhood shopping areas, and other community facilities. The streets range from national centres such as Princes Street in Edinburgh, and Oxford Street and Trafalgar Square in London, right through to residential areas with high levels of multiple deprivation.

1.4 The Department for Transport define Urban roads as those within an urban area with a population of 10,000 or more. Using this definition, 22% of the length of the major road network is formed of urban roads or streets. In length alone it is a significant part of the national network.

1.5 Major roads comprise about 8% of the total urban road network (as illustrated in the table below. It might be inferred that approximately one in 10 people live on a major urban roads. In addition there is a significant population of people living on A roads in settlements of less than 10,000 persons.

Transport Statistics Great Britain 2008 records urban road length as follows:

	Road length km	*Road length as a percentage of the total urban road network*
Urban Roads		
Dual Carriageway urban roads		
Trunk	274	
Principle	2,649	
	2,923	2%
Single carriageway urban roads		
Trunk	172	
Principle	8,047	
Total	8,219	6%
Minor urban roads	137,279	92%
Total urban road length	148,421	100%

These figures rather laboriously demonstrate that major roads are also major urban places.

1.6 There is a widespread acceptance of the wide range of needs that streets serve to meet. CABE has defined the functions of streets as including place and movement, access, parking, drainage, utilities and street lighting. The Urban Design Alliance in its report Designing Streets for People identifies the wide range of demands placed on street, including the needs of frontagers, derived demands and the needs of through-movement. The Department for Transports Manual for Streets introduces a hierarchy of place versus movement as a means of conceptualising the competing interests.

Place based uses include:

— Residential
— Education
— Health and Hospitals
— Shopping
— Leisure (including tourism)

1.7 The impact of moving traffic in urban areas on these uses have been well documented elsewhere and include:

Noise	Ranging from impact on sleep, through to interference with conversation between people on streets. This is an area in part addressed by the EU Environmental Noise Regulations.
Air pollution	Including particulates, nitrogen oxides, volatile organic compounds etc
Safety	Including fear of injury and death, and actual casualties. A 2007 Brake survey found that fear for safety prevented around 2/3rds of motorists questioned from cycling. The decline in children walking or cycling to school has also been well documented: parental fear for the safety of their child in traffic is one of the factors that has brought about this decline.
Severance	The inability to cross roads and the interference with pedestrian movement within a town or city. The duty under the Traffic Management Act 2004 that relates to having regard to securing the expeditious movement of traffic on the authority's road network, may have in practice been considered principally in relation to the movement of vehicular traffic rather than pedestrians. In addition the focus may be on the movement of traffic along a main road, as opposed to movement across. Pedestrian congestion and delays is a low profile topic but one that deserves greater consideration.
Loss of community cohesion	Evidence that social ties correlate inversely with the volume of traffic was publicised by Living Streets in 2008.
Personal security	Fear over personal security is a particular concern for women and the elderly as pedestrians and users of public transport. There is evidence that the fear restricts people's freedom to use the public realm. The quality of the environment can play a part in giving people reassurance.
Public transport/ buses	Pressure on providing space for bus stops

Restricted deliveries	Businesses complaining of the problems on restrictions on loading and unloading that can interfere with the operation of business is a recurring issue.
Restriction on on-street parking	Traders sometimes express concerns over restrictions on on-street parking leading to a reduction in passing trade.
Waste management	Space is needed to accommodate commercial and domestic wheeled bins, and bags. This is a further demand on the limited space available, and can lead to obstruction of footways and damage to the attractiveness of streets.
Drainage	Mitigation of urban run-off is an increasing concern owing to projected changes in the climate.
Landscaping and Street Trees	Road widening schemes in urban areas generally consume the verges and may lead to the loss of avenues of street trees that can contribute to the quality of the local environment and the experience of travelling into a town.
Impact on property prices	There are anecdotal reports that residential property on busy main roads is worth 10% less than that of quieter streets. Research by CABE (Paved with Gold 2006) found a relationship between the quality of the street environment and property prices in a sample of main streets in London. Department for Transport Studies have found that the creation of Home Zones may have increased property prices by up to 20%.

1.9 There is a complex range of needs to be met, a task with which highway and local authorities have been struggling since the introduction of the motor vehicle. There is clear evidence that the place-based needs are not being met.

2. *Is the maintenance of the major road network adequate to ensure optimal efficiency?*

2.1 There are concerns that street environmental improvement schemes tend to deteriorate from the moment the work is complete owing to a lack of funding for maintenance. Maintenance should be perceived from an environmental quality perspective, as well as from the point of view of safety. Street cleansing, graffiti control and the management of untidy land and derelict buildings that adjoin major roads are also important issues that impact on the ability of the network to meet society's broader needs.

3. *To what extent should responsibility for major roads be given to local highway authorities and how much control should the Highways Agency retain?*

2.2 It is important that whoever is in control that they should ensure that both the movement and place functions of the major road network are adequately reflected, and the needs of the different users balanced in the overall interests of society.

Meeting Demand

4. *What should the relationship be between measures to increase road capacity and measures to manage demand for road space (for example road pricing)?*

No comment

5. *To what extent can alternative modes of transport, travel planning and land-use planning provide alternatives to private car use and road freight?*

5.1 The major road network represents critical infrastructure. Movement is essential to the economy. But vehicle based movement currently depends on oil supplies that have, on the one hand a global climate and local air quality impact, and on the other, are subject to wild price fluctuations. It is desirable that movement in urban areas should be resilient in the face of changes in oil price and supply. A permanent long term increase in the price of oil, or a reduction in its supply would make life very difficult for people with car dependent lifestyles.

5.2 There is always potential for many journeys to be made by foot or cycle, and increasing levels of exercise in the population is also in the interests of public health.

5.3 Most major urban roads were evolved to provide for non-motorised movement in and out of the urban centre. However the growth in speed and volume of traffic has led to a decline in the acceptability and attractiveness of these routes for non-motorised modes.

5.4 A review of speed policy on major roads in urban areas in light of the wider societal objectives would be desirable. The reducing in fatal and serious injuries by vehicles at impact speeds below 20 mph has been well documented. Keeping vehicle speeds below 20mph also reduces tyre noise. There are longer term opportunities to use ITS systems to maintain journey times and average speeds, by choreographing vehicular movement: reducing peak speeds and reducing queuing at junctions through encouraging a steadier, quieter, and more carbon-efficient flow of traffic.

5.5 Improving the conditions for pedestrians and cyclists on appropriate major roads, is key to enabling these modes to be attractive alternatives to the car use.

5.6 Education journeys have in the past been singled out by policy makers a target area for increasing walking and cycling. It is suggested that the population as a whole should be targeted by such policy and not merely this particularly vulnerable group of road users.

5.7 These points raised here relate more to the management of the network rather than planning: providing conditions which people can make free decisions as to how they locate their businesses, or their place of residence or where they shop, socialise or enjoy their leisure time, which can take full advantage of the potential to walk or cycle.

5.8 The possibility of creating a virtuous circle of localising economies and societies exists as evinced by initiatives such as Cittaslow or the Transitions Towns Movement.

6. *How much integration is there between the road network and other modes of transport?*

No comment.

7. *What types of scheme should be prioritised and are current funding mechanisms reflecting these priorities?*

No comment, other than it is important to factor place-based needs when making assessments on prioritisation.

New Developments

8. *What are the implications of the Climate Change Bill for the development of the major road network?*

No comment.

9. *What are the implications of anticipated population growth in the UK, particularly in designated growth areas, for the development of the major road network?*

9.1 Where a major road needs to provide a route for pedestrians and cyclists, then it should be managed in a way that provides what people perceive to be an attractive and safe option. Current management of highways is failing to achieve that objective.

9.2 It is regretted that there are developments built in recent years that are connected to community facilities including shops and public transport nodes principally by fast vehicle-dominated roads.

10. *To what extent do emerging road and vehicle technology (intelligent transport systems) change the requirements for the major road network?*

10.1 There is great potential to use ITS to manage vehicle use, route guidance, speed management, parking and so on, which we are sure will be covered by other expert groups.

References

Appleyard. "Liveable Streets". University of California. Berkeley. 1981.

Driven to Excess: Impacts of Motor Vehicle Traffic on Residential Quality of Life In Bristol, UK University of the West of England

Paving the Way, CABE, 2002

Paved with Gold—The Real Value of Street Design, CABE, 2007

Designing Streets for People, ICE, Urban Design Alliance 2002

About the Urban Design Group

The Urban Design Group was founded in 1978, to encourage the greater awareness and understanding of urban design, the multi-disciplinary process of providing the setting for life in cities, towns and villages. It has a membership of approximately 1,500 individuals and organisations.

January 2009

Memorandum from Stephen Plowden (MRN 30)

Introduction and Summary

1. Forecasting future traffic levels inevitably involves projecting an existing situation or trends. If the forecasts are to be used as the basis for planning, it is important that the base situation which is being projected should reflect a satisfactory set of arrangements. This is not the case at present. The only sensible course of action is, therefore, to reform the present arrangements and to postpone any attempt at long-term forecasting and any plans for a general increase in road capacity until the reforms have taken effect and a new base situation can be observed.

2. This memo briefly explains the reasons why both car and lorry traffic are now excessive. The reforms required both for cars and lorries are then set out. Shortage of time and space means that the arguments are not as well developed as I would like, but I would be happy to answer any questions the Committee may have.

Faulty Transport and Land-use Polices Lead to Excessive Traffic and Unwanted Consumption

3. The existing levels of traffic reflect inadequate and undesirable transport and land-use policies pursued over many years. The interests of people who choose or are obliged to travel by means other than car have been neglected. The volume and speed of traffic are higher than they would be if the rules governing transport activity took full account not only of these interests but also of road safety and environmental considerations, most obviously emissions of CO_2, but also emissions of other gases and of noise. Mistaken land-use policies have permitted and encouraged the trend for facilities of all kinds to become larger in size and fewer in number. In consequence, journeys have become longer than they used to be or need have been. This means that, among other things, it is no longer feasible for people to walk or cycle to local facilities as they used to, and journeys that would always have been made by car have become longer. The decline of local buses has forced people to make journeys by car which could have been made by bus. Some people have been obliged to acquire cars who would have preferred to avoid the trouble and expense—a strong negative correlation between the availability of public transport and levels of car ownership has been observed both in Britain and the United States.

4. The great increase in lorry traffic that has taken place in recent decades is mostly accounted for by longer hauls, only to a small degree by an increase in tonnage. In terms of tonnage, the average annual amount of road freight in the five years 2003 to 2007 was only some 7% more than it had been in the five years 1966 to 1970, whereas tonne-kilometres increased by 96% over that time. All major commodity groups have experienced an increase, in varying degrees, in their lengths of haul. The common underlying cause is the higher speeds brought about by the motorway programme. The difference in cost between long hauls and short hauls has fallen, so long hauls have been substituted for short.

5. One way in which this has happened is that firms with low production costs but relatively high transport costs have increased their geographical scope and market share at the expense of more local firms. An example is, or was, the London Brick Company. Another, probably more important, effect is that firms have reduced the number of their manufacturing or distribution points. For example, a timber importer who before the motorway era might have imported through several ports, in order to reduce inland transport costs, would probably find it more convenient today to use only one port, thus minimising warehousing and office costs. Individual firms may be better off, but from the point of view of other road users, the environment and indeed the taxpayer, faced with larger bills for road maintenance and road construction, these are highly adverse developments.

6. The gradual introduction of top-speed speed limiters on heavy goods vehicles in recent years, which has effectively limited their maximum speeds to 56mph, has virtually eliminated what used to be a serious problem of lorry speeding on motorways. It is no coincidence that the average length of haul by road, which rose almost year by year for more than four decades until 1999, when it peaked at 95 kilometres, fell to only 86 kilometres in 2007.

The Reforms Required: Cars

7. The most important single reform for cars would be to reduce and enforce the speed limits on roads of all classes. Until very recently, the DfT claimed that neither reducing the 70mph motorway speed limit nor even enforcing it properly would be worthwhile. The arguments were quite wrong, and it seems that the DfT has now quietly changed its mind. At the annual conference of the Low Carbon Vehicle Partnership in July 2008, a senior DfT official gave reducing the motorway speed limit to 60mph as an example of a "win-win" action, which would reduce CO_2 emissions and other costs simultaneously. But he claimed that the change would be politically impossible. (This from a Government which continually prates of leadership and its readiness to make tough, unpopular choices!) Even 60mph may not be the optimal speed for motorways. The rather crude calculations that Mayer Hillman and I made in our report Speed Control and

Transport Policy, published by PSI in 1996, suggested that 55mph might be better. This was the limit that obtained in the USA for 13 years from January 1974. Our calculations also suggested that the limit on extra-urban dual carriageways should be 55mph or lower, and on single carriageways 50mph or lower.

8. Lower speeds would bring about substantial reductions in casualty rates and rates of fuel consumption and CO_2 emissions. The following table shows the likely results for motorways (the calculations are explained in Chapter 7 of Simon Lister's and my study Cars Fit for Their Purpose which has just been published by Local Transport Today).

Likely levels of casualties and fuel consumption on motorways as a percentage of existing levels, assuming the strict enforcement of motorway speed limits and no change in traffic volumes

	Speed limit strictly enforced	
	70 mph	*55mph*
Fatal casualties	76%	36%
Serious casualties	83%	51%
Slight casualties	91%	71%
Fuel consumption of average car	88%	70%

9. Even more important in the present context is the fact that lower speeds would also reduce the amount of car traffic. This would come about both by journeys becoming shorter and by modal changes, from car to train, perhaps some from car to coach, and for a few very long car journeys possibly also car to plane. According to Simon Lister's and my calculations, the strict enforcement of the existing 70mph limit could reduce the car mileage driven on motorways by some 4% to 5%, while the strict enforcement of a 55mph limit could, over time, reduce it by up to 20%.

10. The principal method at present of enforcing speed limits on the extra-urban road network is by cameras, which have been shown to provide good value for money. But by far the best method would be to fit all road vehicles with variable speed limiters. All the attention recently has been given to externally activated variable speed limiters making use of GPS technology. These limiters, however, still require further development. They have the further disadvantage that some drivers would resent the fact that control is taken away from them. A much simpler alternative is to fit driver-operated variable speed limiters. The technology is well established, being almost identical with that of cruise control.

11. In 1969, in a report for the (American) National Highway Safety Board, the Battelle Institute estimated that the extra cost in mass production of fitting cars with this type of speed limiter would be $19, with a further $11 to make the limiter relatively tamper-proof. The cost of retrofitting existing vehicles was estimated to be between two and five times these amounts. It would be highly desirable for vehicles fitted with driver-operated variable speed limiters also to be fitted with some sort of external indicator to show other road users and the police at what point, or within what range, the limiter had been set. This could be done in various ways: for example, by colour-coded lights on the rear windscreen. That would add to the costs, but at least for new cars in mass production presumably only by a little.

12. In the 1980s, some 40 cars and 10 vans and lorries were retrofitted with driver-operated variable speed limiters in the German state of North-Rhine Westphalia. The trial was a complete success, both technically and in terms of the drivers' experience.

The research group which developed this limiter, which was called TempoMASTER, estimated that if one were included in the process of mass production, it would add less than £40 to the cost of each car. They also estimated that each limiter would cost about £250 if supplied for retrofitting to an existing vehicle, and that in addition it would take a trained mechanic about four hours to fit it. These cost estimates do not allow for any external indicators. (The immediate source of this information is Chapter 11 of Mayer Hillman's and my study Speed Control and Transport Policy, published by PSI in 1996.)

13. It should be obligatory for all new vehicles to be fitted with driver-operated variable speed limiters and external indicators. The cost would be borne by the manufacturer and passed on to the purchaser, just as happens with other features required by regulation, such as exhausts and silencers, seat belts, windscreen wipers. There should also be a Europe-wide programme of retrofitting vehicles already on the road with driver-operated variable speed limiters. Allowing both for inflation since the German trial and for the cost of the mechanics' time, let us assume that the cost would be £500 per vehicle. At the end of 2007, there were nearly 34 million licensed road vehicles in Britain. The cost of retrofitting them all would therefore be £17 billion. The cost of road crashes and casualties in Britain in 2007 was officially estimated at £19.1 billion. This is certainly a considerable under-estimate, both because of under-reporting and misclassification in the police records on which the estimates are based and because of the undervaluation of casualties (see Appendix L of Cars Fit for Their Purpose), but let it be accepted all the same. On the very conservative

assumption that retrofitting would save 10% of the cost of crashes and casualties, then the saving each year would amount to £1.91 billion, without taking account of the substantial savings that would be obtained in fuel consumption and emissions. (It would obviously not be possible for all the vehicles to be retrofitted in one year; a realistic programme should be worked out. Nevertheless, this calculation shows that the investment would be hugely worthwhile.) This programme would provide much needed employment to help mitigate the effects of the current recession.

14. The cost of retrofit should be heavily subsidised. Vehicles now on the road complied with all the regulations in force when they were bought, and most of the benefits would accrue to third parties, so it would not be fair to land the vehicles' owners with a large bill. If it were feasible and reasonably cheap to supply the retrofitted vehicles with external speed indicators, so much the better, but if not the programme should still go ahead.

15. The level of traffic on extra-urban roads would also be affected by the traffic restraint measures in force in towns, where there is much more that could and should be done. The potential means of traffic restraint in towns are so rich that road pricing for cars in towns is not required. A combination of slower speeds, parking controls, and the reallocation of road space away from cars, together with land-use planning to enable as many journey purposes as possible to be satisfied by short journeys, should suffice.

16. Many people have suggested that the default urban speed limit should be reduced from 30mph to 20mph. The Commission for Integrated Transport, in its study of best Continental practice, found that "underpinning best practice in all case study areas was the introduction of area-wide 20mph zones". Nevertheless, the Government has resisted the introduction of the 20mph urban default limit on the grounds that although it would be good for road safety, CO_2 emissions would increase. Continental experience suggests that this would not happen. When speeds are lowered, people drive more steadily, with less braking and accelerating, which compensates for the fact that they will often be driving in a lower gear. In addition, lower speeds would help to bring about a modal shift from cars to walking and cycling. The great potential of parking controls, including in particular control over off-street parking in private hands, has been neglected in Britain, largely because of an excessive preoccupation with road pricing.

17. Once lower speed limits were in force on roads of all classes, it would be very easy, if congestion on motorways still persisted, to introduce a simple system of road pricing for cars there. It would only be necessary to record the registration numbers of the cars as they entered and left the motorway network. This could be done now, but without strict control of the speeds on alternative roads, the danger is that some cars might switch to those roads, which are generally less safe and otherwise less suitable than motorways.

18. There is a move, so far stronger on the Continent than in Britain, for individual car ownership in towns to be replaced by car clubs. This can be encouraged by policy. One consequence is that the number of trips made by car, both within and out of towns, is reduced.

The Reforms Required: Lorries

19. It was mentioned in paragraph six that the strict control of lorry speeds on motorways, brought about by top-speed speed limiters, had virtually eliminated lorry speeding there. But on dual and single carriageways the lorry-specific speed limits might not exist. The DfT's 2006 speed surveys showed that at any one moment in free-flow conditions, 83% of artics were breaking their 50mph limit on dual carriageways, and on single carriageways 76% were breaking their 40mph limit. Strict enforcement of these limits would not only reduce casualty rates, and rates of fuel consumption and emissions, but should reduce lorry mileage too.

20. The other major reform required for lorries is the introduction of a simple system of road pricing. The charge per kilometre would be based only on the physical characteristics of the vehicle, without regard to time of day, levels of congestion or any other external circumstance. This would make administration of the system extremely simple; indeed, Sweden used to have such a system but was forced to give it up on joining the EU. This charge would act as a constant incentive to shippers and operators to consider such questions as: "could I find a closer supplier; can I delay this shipment in order to achieve a higher load factor; should I introduce more depots or put my distribution in the hands of a specialist haulier?" The introduction of road pricing for lorries should be accompanied by a reduction in their VED. They should pay only for their share of the cost of running the DVLA.

21. The main effect of these reforms would be to reduce lengths of haul by road. But there is also scope for a transfer of freight from road to rail or water. In 2007, hauls of over 200 kilometres accounted for 51.3% of tonne-kilometres by road and hauls of over 300 kilometres for 24.6%. Rail should be able to compete for these long hauls. The best opportunities for transfers to water arise in our trade with the Continent, which is now heavily concentrated through the straits of Dover, including the Channel tunnel. It would be desirable, both to reduce lorry traffic and for reasons of security and regional planning, if shippers were to choose ports closer to the inland origins or destinations of their goods. The reforms suggested above would encourage that.

Rail Capacity

22. Transfers to rail, whether of personal journeys or freight, are feasible only if rail has sufficient capacity. Some investment in rail may be necessary, but first of all, as with roads, the possibility of making better use of the existing facilities should be examined. There is an increasing tendency for office workers to work from home on one or two days a week. This seems to be popular both with employers and employees. Train operators could encourage it by selling season tickets which allowed travel on only four (or possibly only three) weekdays. It is likely that people would prefer to be at home on Mondays or Fridays rather than midweek. To counter this, and to promote an even spread of traffic over the days of the week, a four-day ticket which excluded a Tuesday, Wednesday or Thursday could be made cheaper than one which excluded a Monday or Friday.

23. The possibility of relieving rail by improving motorway coach services should be examined. Travel to and from London probably presents the greatest opportunities. Coach routes and the planning of London's rail services should be coordinated so as to facilitate interchange at outer London stations. The feasibility of allowing coaches to travel at higher speeds than cars on motorways should also be investigated. In the short term, this would be justified by the fact that casualty rates per person kilometre are much lower for coach passengers than for car occupants. In the longer term, giving coaches this advantage would encourage a more desirable modal split and could even help persuade some city dwellers to give up their cars.

January 2009

Memorandum from the Campaign to Protect Rural England (MRN 32)

Summary

- With the DfT accepting that road expansion can lead to traffic growth of 8-10% per year, it is time to make demand management the default response to congestion. Programmes to increase road capacity are not just expensive and environmentally damaging, they do not provide a long-term solution.
- Building more trunk road capacity is leading to motor traffic growing fastest on rural roads, which has serious quality of life impacts. Meanwhile Park & Ride sites are growing like a concrete necklace around a number of towns, as there is no more space for more cars within them.
- New reasons are still being found to justify old roads which are still at the front of the funding queue. It is time to value accessibility more than mobility: in other words the value of what you can reach rather than adding together individuals' time savings.
- Alternatives work best when they operate together, in particular land use and transport planning need to be joined up, while Smarter Choices should be rolled out to districts.
- Retrofitting sustainable transport into existing settlements should be as important as retrofitting energy efficiency measures. Key to this is giving sustainable travel modes comparative advantages over driving rather than simply providing more travel options.
- Continuing to increase road capacity would lock us into carbon dependency and risks making a major hole in our carbon budget well before 2050: the impact of road expansion as a whole should be considered rather than just the marginal increase of each scheme.
- New housing developments, including eco-towns, are woefully unambitious in terms of transport. They should demonstrate best practice so it can be retro-fitted into existing areas.

Recommendations

- The National Policy Statement on National Networks should not include any expansion of the trunk road network and any increase in capacity must be both very limited and prioritised for carbon and space efficient transport.
- The Highways Agency needs to review its Major Scheme Programme to take account of its aggregate effects while leadership needs to be shown, particularly in relation to RFAs in cancelling old road schemes that are well past their "build by date".
- Calculation of benefits of transport schemes should move from calculating hypothetical time savings to valuing real accessibility improvements.
- The advice in CLG/TCPA Eco-towns transport worksheet (2008) should apply to all new housing developments. Retrofitting sustainable measures (such as Home Zones) to existing residential streets should be seen as important as retrofitting energy efficiency measures and given priority funding.

— New planning policy on residential car parking maximum levels should be drafted to replace those that were in PPG3. There should be an urgent priority that such guidance should promote car clubs and car sharing. The new PPS4 must include current requirements for new developments in rural areas to be accessible by non-car modes.

— STDT schemes should be made the centre-piece of the third round of LTPs and new sustainable travel pilot schemes should be set up for rural districts, corridors and national parks.

1. *Is the current major road network adequate for the needs of the UK economy and for individuals?*

1.1 The Campaign to Protect Rural England (CPRE) believes this question would be an inappropriate starting point for the current inquiry. It would be better to phrase the question in terms of whether the current transport system supports sustainable development or, at the very least, "sustainable economic growth".[82]

1.2 Whether the major road network appears to be "adequate" or not depends both on the travel options available and on patterns of land use. Inefficient patterns of land use, such as sprawling housing estates and out-of-town shopping centres, will inevitably entail longer trip distances, high car use and congestion at peak times. Even in locations such as Los Angeles where there are 14 lane highways and up to a third of land is taken up by roads and related infrastructure, peak time congestion occurs.

1.3 The current inadequacy is usually not related to the network itself but rather the way in which capacity and demand for it is managed or left to find its own balance by congestion increasing.

1.4 If there are the alternatives of a convenient train service or a bus and cycle lane, a section of road or lane that is congested at peak hours should not be seen as an inadequacy but rather as a sign of activity. Certain streets in town centres are busy, for example shopping streets on Saturdays or streets leading from main stations during rush hour. In a densely populated island it will not be possible to build our way out of this.

1.5 It is vital to consider where we are going as a society: providing for more car and lorry journeys of ever increasing length means not just tarmacking over more of our countryside but fewer local shops and facilities as centralisation increases, with fewer people knowing their neighbours and associated social impacts.

4. *What should the relationship be between measures to increase road capacity and measures to manage demand for road space (for example road pricing)?*

4.1 Increasing road capacity should be an option of last resort[83] as it will normally induce more motor traffic, not just on the road for which capacity is being "relieved"[84] but also on the surrounding roads. The current programme of road schemes, by focussing on the most congested pinch points, will end up inducing the greatest increase in new motor traffic.

4.2 As a result, an ever greater proportion of trips are affected by congestion and resulting unreliability in journey time. Where there is no other option (such as where there is a major increase in population or businesses) but to increase capacity, the additional capacity needs to be prioritised for space and carbon efficient[85] forms of transport. For example, if a High Occupancy Vehicle lane is introduced, it might over time raise average vehicle occupancy on surrounding roads by 5–10%. With higher occupancy, the capacity[86] of a route—as measured in terms of people or freight moved rather than just metal boxes –will increase. This is likely to increase the effective capacity not just of the expanded road but also of the surrounding roads.

4.3 There seems to be considerable confusion within the DfT regarding increasing capacity. The Command Paper *Roads: Delivering Choice and Reliability* (2008) starts by saying at Paragraph 1.10 ". . . there is a limit to how many lanes we want on our motorways not only for the environmental impact it will have, but also for the impact on the driving experience." then at Para. 5.2 that "The pressure on our strategic road network is significant. For financial and environmental reasons we cannot address this through a traditional 'predict and provide' approach." Only later in at Para. 5.26 is it conceded that in fact "The benefits delivered by new capacity in terms of reliable journey times can be quickly eroded if traffic levels rise unfettered to the point where congestion becomes a problem…at the top end of traffic levels can increase by up to 8–10% every year . . ."

[82] Public Service Agreement (PSA) 7 defines sustainable economic growth as "economic growth that can be sustained and is within environmental limits, but also enhances the environment and social welfare and avoids greater extremes in future economic cycles"

[83] CPRE, Policy Position Statement—Roads and Bypasses, 2008

[84] In particular see London ORBIT (M25) Study, 2002, where time saved from expanding lanes on the M25 was shown to increase congestion on roads linking into it.

[85] As recommended at page 294 of the Draft Carbon Budget

[86] While the DfT has recently revised congestion indicators for local authorities, such that they measure delays per person travelling, the Highways Agency still calculates delays per motor vehicle and this is likely to lead to a lack of the necessary emphasis on increasing occupancy: compare paragraphs 3.9 and 4.1 of the 2008 Command Paper

4.4 At the end of 2008 the DfT published *Delivering a Sustainable Transport Strategy*. The introduction argues against "rationing demand by constraining capacity of our transport networks" in favour of "preserving freedom of choice, facing people with the true carbon cost of those choices . . . and helping people reduce their need to travel or switch to lower-carbon modes". It is not possible constantly to increase capacity and, given the uncertainties surrounding feedback mechanisms, it is more appropriate CPRE believes to consider a range of "carbon costs" than a particular value. Even if we are able to decarbonise road transport, demand management will clearly still be necessary.

4.5 Induced traffic has to go somewhere and its impacts will vary in rural and urban areas. In the latter, where congestion is worst and road building is too controversial and expensive, there is increasing pressure for large Park & Ride scheme. In many towns, such as Bath, there are major extensions to Park & Ride sites are planned, often entailing substantial incursion into the green belt. These can affect the viability of other public transport services and the services in smaller settlements.[87]

4.6 In rural areas, where roads are least congested, traffic is growing fastest. According to the 2008 DfT Statistics, traffic has grown on minor rural roads by 11.2% since 2001, compared with 9.3% for motorways and 6.7% overall. This is making these roads dangerous for non-motorised users as well as damaging rural tranquillity. A reduction in the national speed limit as well, as more enforcement, would reduce these problems and would counter negative trends in land use in rural areas such as centralisation of services.

5. *To what extent can alternative modes of transport, travel planning and land-use planning provide alternatives to private car use and road freight?*

5.1 Each of these options can provide alternatives but they work best when combined. In particular, using land-use planning to reduce average trip length can increase the proportion of journeys that can and indeed are made by cycling. It is essential that the emphasis is not on "creating more travel options" but rather giving sustainable modes comparative advantages—in terms of cost, journey time, reliability and comfort—over private cars and lorries in order to increase their share of journeys.

5.2 Consultation on the third round of Local Transport Plans (LTPs) proposes that there will no longer be a requirement for LTPs to be updated every five years. This creates more scope for land use and transport planning to be joined up, such as by integrating the preparation of LTPs with Local Development Frameworks.

5.3 The Sustainable Travel Demonstration Town (STDT) initiative has been very successful. CPRE is concerned that funding is due to end in March 2009 and there is no clear plan either to roll out its success to other towns or to pilot similar initiatives in other areas, such as rural areas, National Parks, cities or corridors. STDTs were based mainly on "soft" measures such as individualised travel marketing. Even with such marketing, some trips were still made by car as it was more advantageous than sustainable alternatives, where they existed. For the next generation of such schemes there needs to be more emphasis on hard measures, such as reallocation of road space to tip the balance in favour of sustainable modes as well as ensure that road space freed up by modal shift is not simply filled by new car journeys.

6. *How much integration is there between the road network and other modes of transport?*

6.1 Driving, buses, walking and cycling all use the road network, which itself is not a mode of transport. Even driving can represent a range of different options, from private cars, car sharing, car clubs, taxis and taxi buses. Better information, such as on car sharing and cycling information on journey planners, would be helpful. So too would be smart cards operating car clubs, as in pioneered in German cities such as Bremen where car clubs vehicles as well as bicycles are available at stations.

6.2 There is increasing pressure for larger car parking at main stations and at Park & Rides. In most instances it would be better to provide feeder bus services to these larger sites as well as (re)opening smaller stations and Park & Rides so that there are alternatives to driving for all rather than just part of journeys.

7. *What types of scheme should be prioritised and are current funding mechanisms reflecting these priorities?*

7.1 CPRE is concerned that priorities for funding remain distorted. The situation has not improved noticeably since our report *Beyond Transport Infrastructure* (2006) noted at pages 45–46 that: "At the same time, the inertia in the appraisal and decision-making processes for new roads appears incapable of stopping the momentum of a scheme once it has been in the roads programme for a number of years. Despite the introduction of NATA and reformed methods of considering induced traffic, routes do not appear to be looked at completely afresh in the appraisal process. Rather, new arguments are found to justify the same schemes . . . Evaluation seems to be very narrowly defined. The [Highways Agency's] POPE and POPE-E methodologies allow consideration of whether the AST is telling 'the truth', but not whether it tells 'the whole truth'."

[87] Parkhurst, The Economic and Modal-Split Impacts of Short Range Park and Ride Schemes, 1996

7.2 The HA is due to report on its review of POPE later this year, so the jury is still out on this issue. The difficulty of removing existing road schemes from programmes is illustrated well by the current Regional Funding Advice process. In some regions, such as the North West, the priorities for schemes have not changed for the first round, indeed the cost increases in the road schemes mean that no new schemes can be considered for funding before 2019.

7.3 A particular problem has been the Government's recent bringing forward of match funding for road schemes, conditional on regions short-circuiting their processes for prioritising schemes. For example, in December the Government offered for half the cost of widening the A46 with the East Midlands having to decide to pay the remaining £174 million or it would lose the additional funding. In the Inspector's Report granting planning permission for the A46 it was stated that at paragraph 6.462 that: "It would be wrong to assume that improvements to the A46 would be undertaken in isolation and at the expense of other multi-modal improvements. The improved efficiency which the scheme would bring would benefit future multi-modal initiatives through reduced travel times, less stress and lower CO_2 emissions."

7.4 However, besides increasing traffic and CO_2 emissions, including increasing the comparative advantage of driving over sustainable modes, the scheme has exhausted the region's transport budget for three years out of the forthcoming five year round. All but one of the many rail schemes proposed by local authorities cannot receive funding now until at least 2014.

7.5 CPRE believes that we need to start prioritising accessibility over mobility. In terms of prioritising schemes, this would mean moving from valuing the minor theoretical reductions in journey times, to valuing accessibility. This would mean taking into account likely land use such as the closure of local shops and other services.

8. *What are the implications of the Climate Change [Act] for the development of the major road network?*

8.1 CPRE believes that the implications of the Act preclude major road expansion. This is because new technology, or generation of low carbon electricity, would be unable to keep up with the new motor traffic induced by such expansion. This is likely to become more widely accepted once the DfT's guidance on carbon impacts of transport schemes is published later in 2009.

8.2 The headline target in the Act is for a reduction of "at least 80%" in Greenhouse Gas Emissions. Behind this headline is the acceptance that what matters is the total amount of carbon emitted over that period. The latest science shows that tipping points may be reached sooner than previously assumed. It would be prudent therefore to plan for the possibility of greater reductions being necessary. Failure to do so could risk using up most of the carbon budget in the first half of the budget period.[88]

8.3 The treatment of climate change by the Highways Agency has been particularly disturbing. Climate change is wrongly viewed as just one factor contributing to sustainability rather than a clear environmental limit.[89] Not only is there a failure to model accurately longer term changes in land use that result from new schemes, resulting in longer and more car trips, there is an alarming failure to take account of the carbon impact of the Programme of Major Schemes as a whole. The result can be compared to a dieter choosing to eat cream cakes on the basis of individual decisions that each one only accounts for fraction of the annual guideline calorie limit.

8.4 Although the Draft Carbon Budget stated at page 64 that demand-management measures would be more important in transport than any other sector, it failed to calculate the impacts of some measures on modal share or other benefits such as lower speed limits reducing road danger and increasing tranquillity. Critically, the impact on the economy and environment of road transport not playing its fair share in carbon reductions must not be ignored.

9. *What are the implications of anticipated population growth in the UK, particularly in designated growth areas, for the development of the major road network?*

9.1 The implications of demographic trends are dependent on the effectiveness of spatial planning and joined-up thinking on transport and land use. Well planned high density housing development can support and sustain local services and public transport as demonstrated in our report *The Proximity Principle—Why we are living too far apart,* 2008.

[88] Buchan, A Low Carbon Transport Policy for the UK, CfBT, 2008
[89] Para 6.455 in the Inspector's report into A46, 2008

9.2 CPRE is far from confident that the "eco-towns" programme will deliver the "toughest ever green standards"[90] or will drive "a radical rethink of the way towns are planned".[91] The draft Policy Position Statement on eco-towns calls for at least 50% of trips originating in eco-towns to be able to be made by non-car means. By comparison 63% of trips in the UK—both in and out of towns—are made by car and it is likely that well over 50% of trips could be made by non-car means. CPRE is not encouraged by the only A-graded (top scoring) eco-town is the proposal at Rackheath, north of Norwich, which Norfolk County Council claims requires the construction of the Norwich Northern Distributor Road. Analysis[92] of traffic forecasts shows that over 90% of trips to developments around the site will be made by car.

9.3 Research shows that new "development is often used to justify road building . . . and this is scored positively in terms of "integration" (between land use and transport)"?[93] Motor traffic generated by such new roads is generally considered as an "external factor" even if the road was built to serve the development.

9.4 Current planning policy[94] states that car parking levels can have even more influence on how people travel than the quality of public transport, besides being a major determinant of density. Earlier planning guidance in the form of PPG3 used to give guidance on car parking maxima for residential development, PPS3 has no such standards.

February 2009

Memorandum from Road Users' Alliance (RUA) (MRN 33)

RUA was formed to provide a concerted voice for those with an interest in ensuring a well designed, constructed and managed strategic road network for the UK. Its membership includes bodies such as the British Chambers of Commerce and the Federation of Small Businesses, that between them represent a significant majority of British businesses, as well as those involved with road construction and maintenance. Specific road user groups are represented within the membership by, for example, the British Horse Society, RAC Foundation, and British Motorcyclists Federation, with freight interests covered by members such as the Road Haulage Association and DHL Exel. In addition to its members, RUA consults regularly with other road user, business groups and opinion formers, taking broader views into consideration in forming its policy. It publishes an annual summary of transport data, Road File. RUA policies are essentially derived from data and advocate road investment as a dominant but integrated part of a total transport portfolio.

SUMMARY

- The current road network is inadequate for the needs of UK businesses and individuals, resulting in congestion that has a serious environmental and economic cost.
- The failure of "modal shift" policies should be better recognised and the road network's overwhelmingly predominant role in the country's transport system should be reflected in all transport planning and budgetary decisions.
- The vast majority of passenger travel (whether by car or public transport) and freight transport is by road.
- Hard shoulder running and traffic management measures may provide short term capacity augmentation but they do not address the need for an overall network capacity improvement which is overdue and needed to address longer term traffic growth predictions.
- Clear identification of the strategic road network is required.
- Clear definition of responsibility for the strategic road network is required.
- Road pricing offers a sensible solution to demand management and to funding provision of new capacity. If public opinion prevents its political acceptability, the element of fuel taxes dedicated to road improvement should be identified; a larger road budget to fund improvements should be inextricably linked to any increase in this element.
- An independent regulator should be appointed to oversee the implementation and management of road pricing or the allocation of dedicated road fuel taxes. That office should also determine the formulae to set investment priorities, road specifications and audit the delivery of the strategic road service.
- It is imperative to cut through the continuous stream of consultations and policy reversals and take urgent action if the UK's economy is not to be damaged further.

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[90] CLG, Press Release (24 July 2008)
[91] Command Paper, Paragraph 3.17
[92] Research by Keith Buchan on MTRU on behalf of CPRE and Norfolk & Norwich Transport Action Group submitted to CLG and DfT in 2009
[93] Page 45 Beyond Transport Infrastructure (supra)
[94] Para 49, Planning Policy Guidance 13, 2001

1. The Current Road Network

1.1 The inadequate capacity of the current network is creating congestion that is currently costing the UK economy in the region of £23 billion per annum[95] and that is set to rise by an additional £25 billion per annum.[96] The OECD reported in 2005 that the UK's "very low share of investment in public infrastructure and more especially in transport infrastructure" is hampering its productivity. Given the current economic crisis there is an even more urgent need to help UK businesses hone their competitive edge. An inefficient transport system that affects both the transport of goods and individuals' journeys during work and to and from the workplace is preventing the country's businesses from performing at their best. Of specific concern is the report from our member, the Thames Valley Economic Partnership, that the attraction of the Thames Valley for foreign direct investment by global companies is disappearing, largely due to the failings of the transport infrastructure. This is not unique to this region. If global headquarters operations or just-in-time manufacturing investment is denied to the UK because of unreliable journey times or high transport costs, the impact on future growth and employment is incalculable.

1.2 Individuals are equally inconvenienced by the shortcomings of the road network by delays to their personal journeys, including those with commercial implications. For instance, delayed work arrivals (82% of the population travel to work by road, 70% by car)[97] reduce productivity and ultimately add to the overall costs to the country's economy; missed medical appointments increase NHS costs, etc. Congested journeys also cost individuals more in fuel consumption. A flexible and mobile labour force is essential to enable the UK to respond to global challenges—this, along with the lack of well located housing and schooling, has resulted in longer commuting distances and longer distance visits to friends and families.

1.3 Planned preventative maintenance is essential to the efficient operation of the road network. While we are aware that local authority controlled roads are suffering severely from a lack of funding in this respect,[98] we consider the maintenance of motorways to be acceptable. The detrunking programme has resulted in many trunk roads, which form a part of the strategic road network, falling under the responsibility of local authorities. This adds a considerable burden to their already stretched budgets. Many important trunk roads are not adequately maintained, with a negative effect on safety and traffic flows.

1.4 There should be one main road authority for the major road network (which should include all appropriate trunk roads). There is a good argument for reversing the detrunking programme, allowing the Highways Agency to reclaim responsibility for the management and maintenance of trunk roads currently under local authority control. Decisions on major roads forming part of the country's strategic road network should be made at national level, with local or regional planning issues resolved within fast-track consultations. Strategic roads often transit more than one regional authority; they certainly carry traffic on trans national or international journeys. The national economic interest will often override local preferences, however, regional and local input should be considered in the detailed implementation of any scheme.

2. Meeting Demand

2.1 There is a profound difference in the requirements and potential for transport provision in cities and towns compared to that outside these areas. Definition of the strategic road network is paramount, as this should be based on not just meeting demand but ensuring continued/improved competitiveness of British business in the future, therefore incorporating sufficient capacity links for cross channel traffic and traffic to ports and airports. The development of interchanges to allow the switch from car to urban transport or truck to inter-urban rail connections should be part of the strategic road network provision.

2.2 Current congestion on motorways has resulted from an increase in traffic of 22.5% over 10 years, during which period motorway capacity was increased by only 5%.[99]

2.3 Traffic growth of 37% is predicted by 2041, stimulated by car ownership increase of 44%.[100] Notwithstanding the current economic climate, the effects of which should be short-lived, this provides a reasonable base from which to determine the additional capacity required. Modelling carried out for the RAC Foundation's report determined that provision of, on average, an additional 600km per year between 2010 and 2041 will provide the additional capacity required. It should be noted that most of the growth in traffic will come from the spreading of the benefit of car use to an increased proportion of the population (nearly a quarter of households in the UK still do not have access to a car).[101] Accordingly, policies to moderate car use or promote greater use of public transport will, however successful, have a limited impact on traffic levels.

[95] British Chambers of Commerce, December 2008.
[96] The Eddington Transport Study, December 2006.
[97] Road File 08/09, RUA, based on DfT 2007 statistics.
[98] ALARM Survey 2008, Asphalt Industry Alliance.
[99] Road File 08/09, RUA, based on DfT 07 statistics.
[100] Roads and Reality, RAC Foundation, 2007.
[101] Transport Trends, DfT, 2008.

2.4 While we accept that measures to manage demand for road space may be necessary until the required capacity is provided, we do not believe it is acceptable to punish current or potential road users for their use of the existing inadequate space by introducing road pricing without offering increased road capacity in return.

2.5 Road pricing should not be seen solely as a means to manage demand. The experience of congestion charging in London—where congestion five years after the introduction of charging returned to pre-charging level[102]—indicates that this would not in itself be effective. There have been huge increases in productivity for British industry over the last 50 years from utilising the improving road network to rationalise distribution and administration. This has been coupled with the benefit of labour mobility, easier access to the markets of London and the South East for regional enterprise and an ability to create short-break tourism and craft industries to sustain rural economies. Accordingly, road charging should not be seen simply as a means of reducing demand for road space but as a means of managing it by challenging the value placed on particular journeys at particular times and optimising the use of all available capacity.

2.6 Rail journeys can provide an alternative to some road transport. The potential impact is very limited. More than 70% of rail journeys start and finish in London,[103] a destination to which car travel was never a significant factor, even before congestion charging. Access by rail to other city centres represents another growth area. This classic commuter travel is supported by decades of residential house building ("metroland"), located to exploit it. Rail and air compete for (mainly business) travel between London and the regions; these journeys often require car transport and parking as well. The growth of intercity coach travel (such as the National Express Services and the Oxford "tube") indicate that rail's role in this area is threatened by its cost. The substantial public subsidy of rail construction and rail fares is now under severe pressure. The investment in high speed rail networks in the EU has resulted in modal switch from air to rail, but little impact on car journeys which rarely, if ever, have the same source or destination as the train. However, the car is, of course, often part of a journey taken by train.

2.7 In total, public transport provides a serious alternative only to private passenger travel within major cities. A review of a 10-year period reveals the underlying transport trends and the severe limitations of modal switch policies. Between 1996 and 2006, rail travel increased by 41% to 55 billion passenger kms and bus travel increased by 16% to 50 billion passenger kms.[104] These increases required most of the transport budget to be spent on rail and bus subsidies, rising to £2 billion per annum. Over the same period, car travel went up 10%, or by 64bn passenger kms[105]—which is more than all travel by either of the other modes.

2.8 Travel planning, eg car sharing, car clubs, can have a valuable effect on traffic reduction in major conurbations but is unlikely to make any impact on major road traffic flows. Varying the time of travel does have some potential, for example by encouraging flexitime working and reducing the school run. However, it is of limited practicality as peak traffic, whether private or commercial, is created by the need to travel at particular times which are subject to working hours and other transport mode schedules. As congestion charging in London has shown, there is no long term reduction in traffic through deterring vehicles driving during the working day. The combined effect of all the traffic moderating policies—video conferencing, car sharing, travel planning, etc—contributes to some reduction in car use but it would be optimistic to put the level of this reduction at even 10%.

2.9 Integration of different modes of transport is crucial to ensure that railways, airports and ports work to optimum capacity. Despite excellent rail links to Heathrow and Gatwick for instance, 71% and 78% of passengers respectively travel to these airports by road.[106] For Birmingham, Manchester and Luton airports, these percentages are even higher: 90%, 92% and 99% respectively.

2.10 Regular traffic jams several miles in length on the M25 approach to the Dartford crossing are attributable to a high proportion of freight traffic heading for channel crossing termini. This is a picture reproduced at ports around the country, which could be eliminated with attention to the design of a properly integrated transport system. In many cases, such congestion is caused by short sighted refusal to accept the need for an additional motorway lane.

2.11 Strategic routes should be prioritised to ensure that the primary road network operates effectively without congestion and keeps the British economy moving. This requires investment in key trunk road improvements to include bypasses to aid flow, decrease environmental impact, and improve safety for villages. These roads also require median separation (dualling), the grade separation of interchanges and, where necessary, cut-and-cover tunnelling and extensive tree planting to minimise community impact. RUA believes that these schemes must also provide segregated facilities for pedestrians, cyclists and horse riders. The daily queue of vehicles at choke points on major routes continues to demonstrate the failure of capacity provision. Single carriageway bridges, over rivers and under railways, traffic lights and roundabouts which block strategic journeys, and bypasses awaited for decades, all reflect a failure to recognise the reality of what has happened and will continue to happen as the population expresses its will by its deeds.

[102] TfL, 2008.
[103] TfL, 2006.
[104] Road File 08/09, RUA, based on DfT 07 statistics.
[105] Road File 08/09, RUA, based on DfT 07 statistics.
[106] Civil Aviation Authority, 2007.

2.12 There should be more use of PFI to fast track such infrastructure construction requirements and Government commitment to introducing ultimately a road pricing system that will produce sufficient funds to invest in projects of this type. The private funding of road travel revealed by aggregate household expenditure on owning a car (£130 billion per annum)[107] indicates the potential income streams from road users. The resistance to ever-increasing motoring taxation, whether as fuel duty or collected by congestion charging, does not (research and use of the M6 Toll indicates) extend as adamantly to funding road or transport improvement.

3. New Developments

3.1 The target of 80% reduction in CO_2 emissions by 2050 is challenging. Domestic transport accounts for 24% of the UK's CO_2; 12% is produced by cars.[108] However, cars' emissions have stabilised at roughly 1990 levels despite an 18% increase in car traffic over the period to 2005.[109] Vehicle manufacturers are fast-tracking their development of environmentally sensitive engines which will be less reliant on fossil fuels. Almost complete decarbonisation of road transport is a realistic ambition.[110]

3.2 Free-flowing traffic halves emissions, with traffic stuck in jams travelling at 5mph producing double the emissions of traffic flowing at 50 mph.[111] Better road design, such as straighter roads, that allows traffic to flow freely, helps to reduce emissions significantly. Adding a lane to a congested motorway can yield reductions in CO_2 emissions of nearly 40%.[112]

3.3 Economic development and growth should be encouraged in areas already linked to the existing or future strategic road network to ensure that minimal change to the road network is required in order to maintain an efficient and integrated transport system that does not intrude on residential areas and community centres.

3.4 Designated growth areas around the country may themselves need no more than link roads to the major road network. Traffic levels for the link roads, and therefore their contribution to the level on the major road network, can be predicted using known impact factors and modelling, making it possible to plan required capacity without adding to congestion.

3.5 Emerging road technologies such as GPS based and other intelligent transport systems should contribute greatly to the reduction of congestion on our major road network. They also promise safe and efficient free-running of traffic. They will allow a much fairer distribution of costs for the use of the road network to road users and, assuming a fully authorised regulator as described in our bullet point summary, a means of providing funding for a network with the appropriate capacity and of the appropriate quality. RUA strongly supports their introduction to help reduce congestion and, therefore, environmental impact, although this will not have a sufficiently significant effect to negate the high predicted rise in traffic. To ensure a truly effective introduction of such systems, every vehicle in the UK will require additional equipment to collect and/or receive information. The forecast lead-time for development of such equipment is 10 years, during which time the road network will become even more congested. RUA sees these systems as significantly contributing to road safety by, for example, alerting drivers to the presence of other road users such as motorcyclists, cyclists and horse riders; as a source of advice on speed limits to replace cameras and fines; and an aid to locating parking spaces. There is also the prospect for in-car, real-time information to reduce the cost and clutter of road signage.

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[107] Road File 08/09, Funding, RUA.
[108] Committee on Climate Change.
[109] CfIT, Transport and Climate Change, 2007.
[110] King Review Part 1, 2007.
[111] Highways Agency, 2003.
[112] SINTEF Group, 2007.

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