

Britain's Transport Infrastructure High Speed Two

January 2009

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Executive summary

1. The past decade has seen a remarkable renaissance in rail travel: passenger numbers have increased some 50% and rail freight by 40%. Passenger choice, better rail services, road congestion and environmental factors are all driving this growth. And, for the first time in 60 years, the rail industry has received the investment in network and service improvements necessary to underpin and sustain this growth. The successful completion of High Speed One and re-opening of St Pancras in November 2007 also give confidence in our ability to carry through transformational rail improvements for the future.

2. The 2007 Rail White Paper described a bold investment strategy for the next five to ten years, focused on the need – highlighted in Sir Rod Eddington's report¹ – to address immediate capacity constraints. The Thameslink upgrade, due for completion in 2015, will allow longer trains to operate more frequently north-south through central London. Reading Station is being rebuilt to remove a major bottleneck on the Great Western main line. Birmingham New Street Station is also being rebuilt. Across the country, we are investing in providing 1300 extra carriages to increase rail capacity, particularly in and around our big cities.

3. In addition, we have given the go-ahead to the £15.9bn new east-west Crossrail line through central London, due to open in 2017. This will ultimately carry 200 million people a year, adding 10 per cent to London's public transport capacity and at least £20bn to the UK economy.

4. Now is the time for us to be planning for Britain's transport, including rail infrastructure requirements, into the 2020s. Large infrastructure projects including wholly new rail lines require a long lead time (both the Channel Tunnel Rail Link and Crossrail had lead times of approximately 20 years), which is why we asked Network Rail last year to examine the case for one or more wholly new rail lines. In October 2008 the National Networks Strategy Group was established, chaired by Andrew Adonis, to steer this work. The Group is also directing work on rail electrification and on priorities for investment in our motorway network.

5. Network Rail's initial work has pointed to a strong case for an entirely new rail line in the corridor from London to the West Midlands. Such a line would enable faster and enhanced services to be run on new and existing lines to Manchester, Liverpool, Glasgow and other destinations in the north of England and Scotland, cutting journey times and increasing capacity substantially. In the South, any new line could connect to a new *Heathrow International* interchange station on the Great Western main line, providing a direct 4-way interchange between the airport, the new north-south line, existing Great Western rail services and Crossrail into central London.

¹ The Eddington Transport Study, December 2006, Sir Rod Eddington
<http://www.dft.gov.uk/about/strategy/transportstrategy/eddingonstudy/>

6. Additional capacity provided through a new line would relieve overcrowding on the existing West Coast line. This is not only England's principal inter-urban express route; it also carries heavy local commuter traffic and freight services. On present forecasts this section of the West Coast main line will become overloaded south of Rugby by about 2025.

7. The successful experience in planning Crossrail and the Channel Tunnel Rail Link – High Speed 1 – was underpinned by new companies established early on to ensure that the right decisions were taken after full consideration and thorough study of technical and financial issues.

8. The Government is therefore creating a new company, *High Speed Two*, to comprise a non-executive chairman, Sir David Rowlands, and a small number of full-time staff, led by a chief executive.

9. *High Speed Two's* purpose is to help consider the case for new high speed services from London to Scotland. As a first stage we have asked the company to develop a proposal for an entirely new line between London and the West Midlands. To reach a view on this, the company will need to assess the likely environmental impact and business case of different routes in enough detail to enable the options to be narrowed down. We expect work to be completed by the end of the year. The Government will thereafter assess the options put forward for the development of the new line.

Rail's renaissance

11. Over the past decade we have seen a transformation in rail usage, both passenger and freight. This has gone alongside rising public investment (now £4bn a year, up from £2bn in 1997) and improved safety and reliability.

12. As Figures 1 and 2 show, passenger miles increased by 3.5% per annum and passenger journeys increased by 3.8% per annum between 1997/98 and 2007/08. During this period domestic freight moved has also increased by over 2% per annum.

Figure 1: National rail passenger journeys, miles (1955 – 2007/08)
Transport Statistics Great Britain 2008

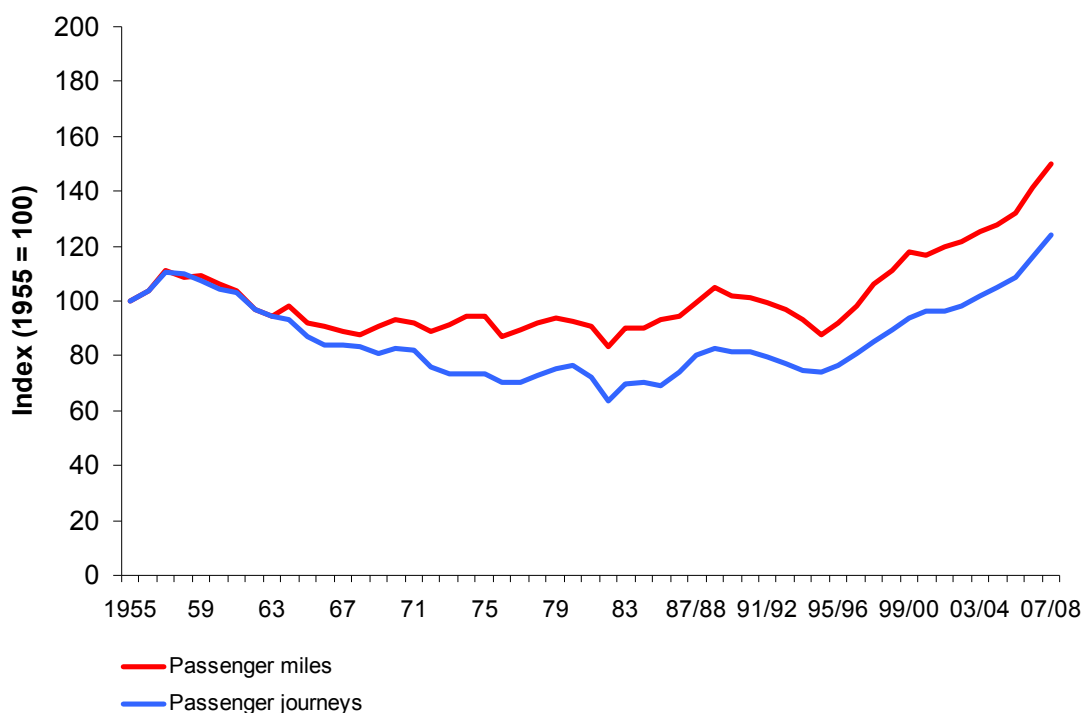
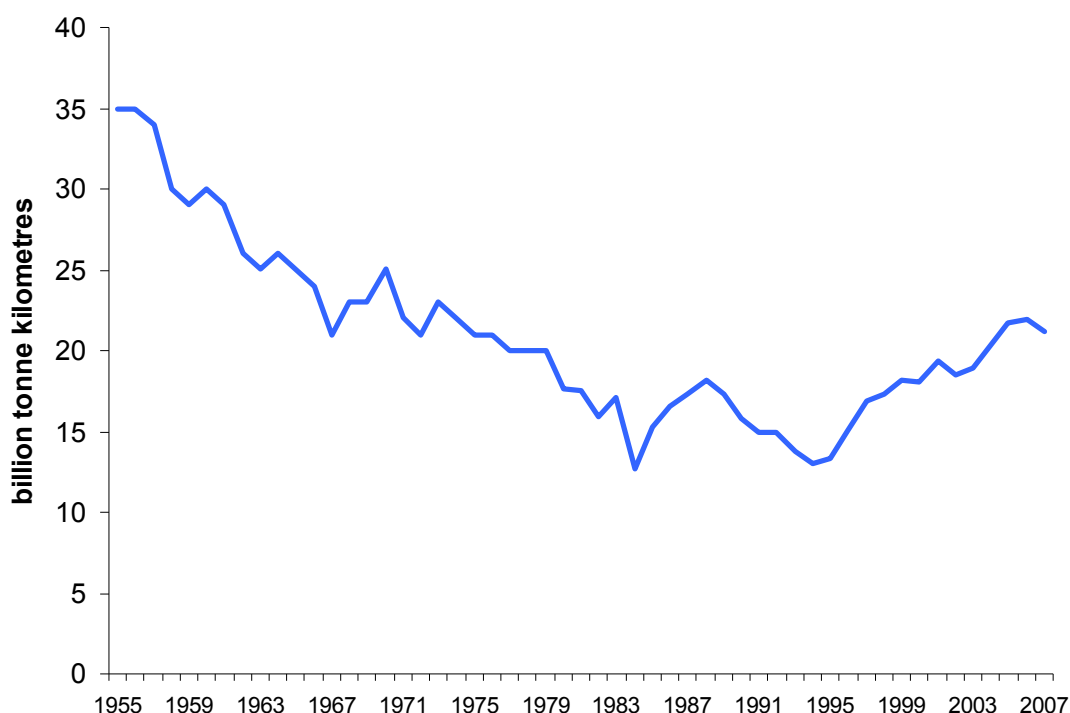


Figure 2: Domestic UK goods moved by rail (1955 – 2007/08)
Transport Statistics Great Britain 2008



13. This growth requires additional rail capacity. Significant incremental improvements have been made to the existing network, notably the recently completed West Coast main line upgrade. More are in prospect, notably the Thameslink upgrade in London. Entirely new infrastructure has also been built or is in prospect, notably the Channel Tunnel Rail Link (CTRL), now known as High Speed 1, and Crossrail.

14. The impact of such investment in our railways has in some cases been transformational. For example, rail's share of the London to Manchester rail/air market has risen to two thirds travelling by train, up from one third in 2004, alongside a journey time shortened by over half an hour (to 2 hours 8 minutes for most services) and an increase in frequency from hourly to three trains an hour. Similarly, the domestic services on High Speed 1 will almost halve the journey times between London and Ashford, Canterbury and Folkestone, and are likely to stimulate regeneration in Kent's coastal towns as well as in east London.

Sustained improvement

15. The 2007 Rail White Paper *Delivering a Sustainable Railway* set out an ambitious investment strategy. Over £10bn will be invested in enhancing capacity between 2009 and 2014. The High Level Output Specification, published alongside the White Paper, sets out what the Government requires from the railway in terms of safety, reliability and capacity. Network Rail will need to deliver improvements to accommodate 22.5% growth in passenger numbers in England and Wales and expected 30% growth in freight traffic. 1300 new carriages will be procured to provide more and longer trains on the most congested routes, addressing the rapid passenger growth seen in our major cities such as Birmingham, Manchester and Leeds. Over 500 platforms will be extended to accommodate these longer trains.

16. This investment is intended to reduce congestion and provide a better service for passengers, which is why £150m is also to be spent on modernising 150 stations across England and Wales, backed up by plans to improve access to stations and make better interchange facilities for cyclists and motorists. The opening of East Midlands Parkway and Aylesbury Vale Parkway stations this month are part of a new impetus to encourage motorists to take the train instead.

17. The Department will announce shortly the preferred bidder to build the new intercity express trains (IEP) which will provide future services on the East Coast and Great Western main lines.

18. With £5.5bn committed to the Thameslink project, commuters into and around London will see a reduction in overcrowding on the north-south First Capital Connect service. This will be delivered through longer trains between Bedford, London and Brighton, brand new rolling stock from 2012, 24 trains per hour from 2015, and an expanded Thameslink route providing new, direct journeys to and through London.

19. We are also committed to delivering Crossrail. Crossrail will significantly increase the capacity of the rail network into and across London, relieving congestion and overcrowding on the national railway and on the London Underground. This £15.9bn project will generate around an extra 10% of overall transport capacity in London, add over £20bn to the UK economy, and generate over 100,000 jobs in the City, Docklands and regeneration areas.

20. The Government is also investing in a Strategic Freight Network to promote rail freight. This will comprise a core network of enhanced trunk rail routes, linking key freight origins and destinations, including major ports, freight terminals and distribution depots. These strategic routes will be capable of accommodating more and longer freight trains, with the objective of providing through-running, 7day/24 hour network capability. They will have the ability to handle greater loading gauge, including 'high cube' container traffic from key ports and larger European loading gauge wagons on a route from the Channel Tunnel to the Midlands. The Strategic Freight Network will also promote increased use of electric freight traction.

Planning for the longer term

21. In the longer term, further investments will be needed to allow the railway to continue to fulfil its economic and social potential. The long term economic, environmental and social challenges which the UK transport system must address are set out in the planning framework proposed by the Department for Transport in its strategy paper *Delivering a Sustainable Transport System* (November 2008).

22. The 2007 White Paper *Delivering a Sustainable Railway* considered, on the basis of current demand trends, that existing high and sustained growth might be accommodated for at least two decades within the broad parameters of the current rail network, but noted that a genuinely long-term strategy for the railway should look at the options for further increases in capacity, not least in the light of rail demand growing more strongly than predicted by industry forecasting models. It concluded that any future planning should focus on new line options.

23. Given the long lead times to deliver substantial new infrastructure projects – both the Channel Tunnel Rail Link and Crossrail took or will have taken nearly two decades from commencement of the project to commissioning – in March 2008 the Department asked Network Rail to begin work to help develop a better understanding of some of the more complex future rail options, including new lines.

24. By late 2008, the economic environment had changed dramatically, with the onset of world-wide recession triggered by the credit crisis. In his foreword to *Developing a Sustainable Transport System* the Secretary of State confirmed that the Department remained committed to serious long-term transport planning and, while recognising that we were planning for an uncertain future, announced an acceleration of the pace of work. In parallel, in late October 2008, he established a National Networks Strategy Group, to investigate sustainable transport options for the national road and rail networks.

New lines: work undertaken to date

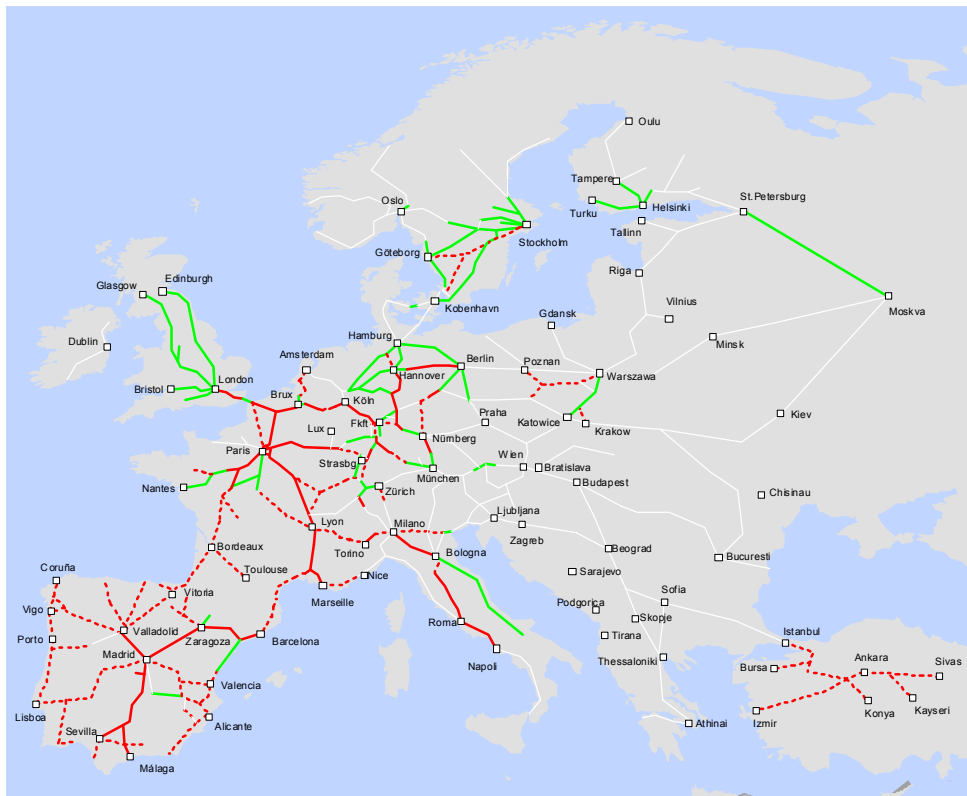
25. A considerable amount of research into new lines has been undertaken since 2000. In 2001 the Strategic Rail Authority (SRA) commissioned W.S. Atkins to carry out a feasibility study to establish whether there was a transport and business case for constructing a new high speed line from London to the North. Atkins considered a range of route sections which could be combined to create a high speed line network, but did not draw a definitive conclusion as to the optimal network configuration. In each case, the options considered were based on high speed rail technology, such as that used in France, with alignments designed for speeds of up to around 220mph (360kph) but with trains capable of running at 186mph (300kph). Atkins supplemented this work, reviewing East and West Coast route options in their 2007 paper *Because Transport Matters: High Speed Rail*.

26. The 2007 Rail White Paper focused on capacity enhancement of the existing network, but considerable prior analysis of new line options was carried out for the Department by Booz Allen Hamilton. This examined, on a comparative basis for conventional rail, high speed rail and 'maglev', issues such as sustainability, carbon impact, journey times and costings for an illustrative route linking London, Birmingham and the West Coast Main Line. The Government intends to make this analysis available to *High Speed Two*, and to publish it soon.

27. In 2006, the not-for-profit organisation *Greengauge 21* was established "to research and develop the concept of a high speed rail network, and to promote its implementation as a national economic priority". Network Rail is a member of the steering group and the Department for Transport and Office of Rail Regulation have observer status. *Greengauge 21* has published various papers, including a proposition for a high speed railway between London and Birmingham, with links to the West Coast main line and a spur into Heathrow (*High Speed Two*, June 2007). A further paper considers five potential corridors for high speed rail (*The Next Steps*, November 2007).

28. Nor can we be blind to international trends. Since Japan opened its first high-speed "bullet train" line between Tokyo and Osaka in 1964 a revolution has taken place in international rail infrastructure, with most large industrial countries following suit and developing high-speed inter-city lines. France, Germany, Italy, the Netherlands, Belgium, Spain, China, Taiwan and Korea all now possess – or are constructing – high-speed systems. The United States is about to do so too, following a successful ballot proposition in California in November 2008 authorising a \$10bn bond to develop a high-speed line between Los Angeles and San Francisco, a distance slightly shorter than London to Glasgow/Edinburgh.

Figure 3: Existing European express services (green), high speed services (red) and planned high speed services (dotted red) 2008²



29. The scale of high-speed development in Europe alone can be seen from the map above (Figure 3). There is currently 3480 miles of high-speed line in operation in Europe, with a further 2160 miles under construction and another 5280 miles planned. However, there are only 70 miles in the UK, with none further planned until now. While this international trend is not, in itself, a justification for high speed rail in the UK, it would be perverse to ignore developments in Europe and the rest of the world.

² Map courtesy of International Union of Railways (UIC).

How a new rail line would build on the Government's current rail strategy

30. The work already carried out indicates that new rail lines could have the potential to deliver valuable economic, environmental and social benefits through:

- providing additional capacity and reducing crowding – for inter-urban journeys on new lines and for regional/local journeys and extra rail freight services by releasing capacity on existing lines;
- reducing predictable end-to-end journey times;
- supporting expected housing and population growth and encouraging regeneration; and
- improving links to key international gateways.

Capacity

31. Last year's transport strategy paper, *Delivering a Sustainable Transport System*, identified fourteen strategic national transport corridors which link England's major conurbations, the busiest ports and airports and other areas with strong economic activity, such as the Thames Valley. This strategic core of the transport system underpins our national and regional prosperity. Among these strategic corridors, the London to the North-West corridor is the single most important and heavily used, presenting both the greatest challenges in terms of future capacity and the greatest opportunities to promote a shift of passenger and freight traffic from road to rail.

32. In respect of the motorway and trunk roads in this corridor, there is heavy congestion and poor reliability on the M1, M6 and M42 during peak periods, particularly around Birmingham and Manchester, and this will considerably intensify. There are also over 2,000 injury road accidents per year (including around 50 fatal accidents) in the corridor, concentrated in the areas of heaviest traffic, particularly north of London, through the West Midlands and Manchester.

33. Figure 4 shows the forecast level of congestion on the highways network in 2025, expressed in terms of the reduction in average traffic speed in the peak period (assuming no further capacity enhancements were made beyond those already committed). This shows significant pressure between London and the West Midlands – and beyond to the North.

34. In respect of rail, Figures 5 and 6, derived from the Department's Network Modelling Framework, illustrate current and forecast 2025 network loading levels in the morning peak period. These maps show that the West Coast main line, between London and the West Midlands, already by far the most intensively used inter-city line in the country, is likely to reach its absolute capacity limit by the mid-2020s – even after the £8.8bn upgrade just completed and implementation of plans for longer trains and in-cab signalling.

Figure 4: Average peak period speeds on key national trunk roads (2025)

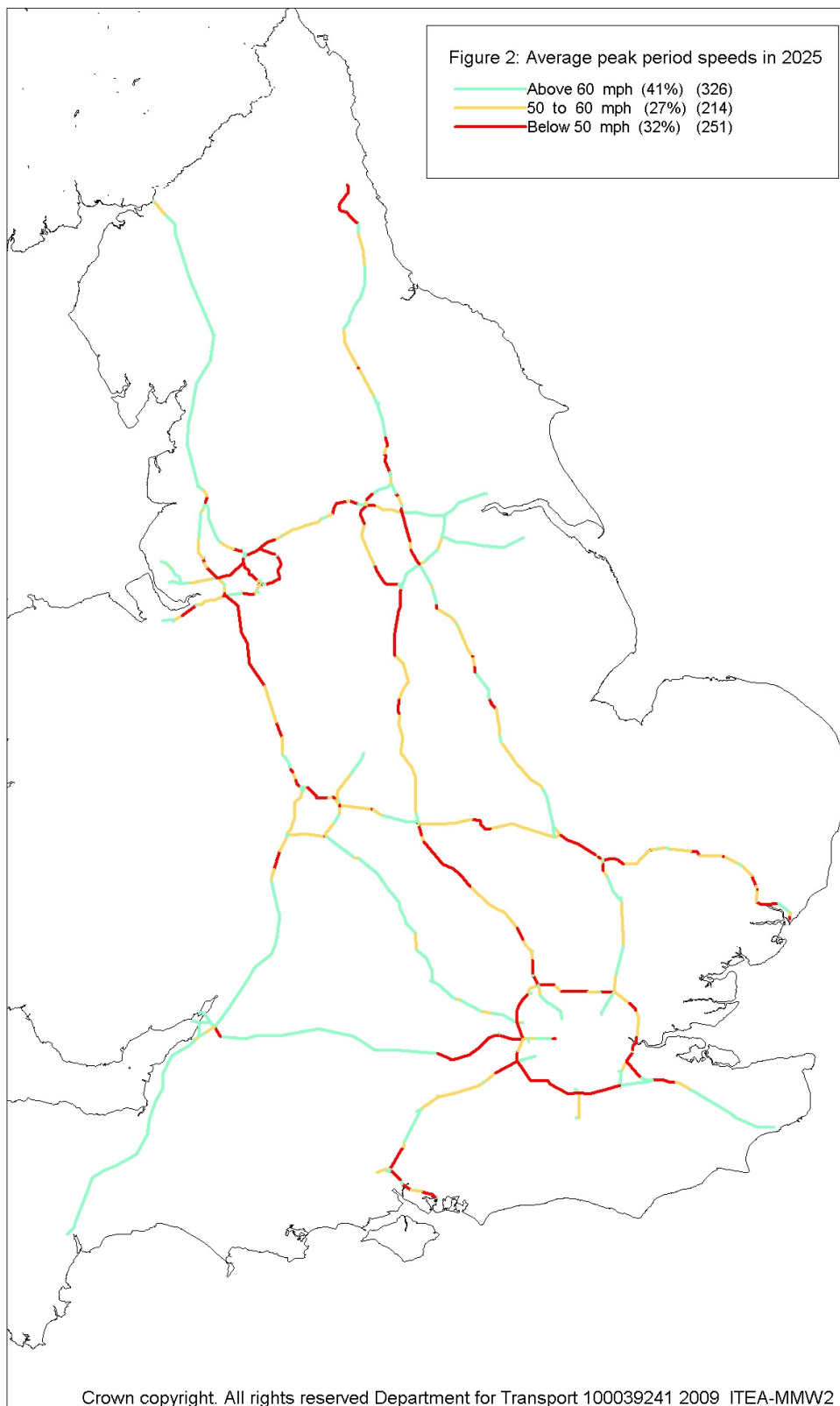


Figure 5: Loading levels in the 3-hour morning peak period, 2008/09

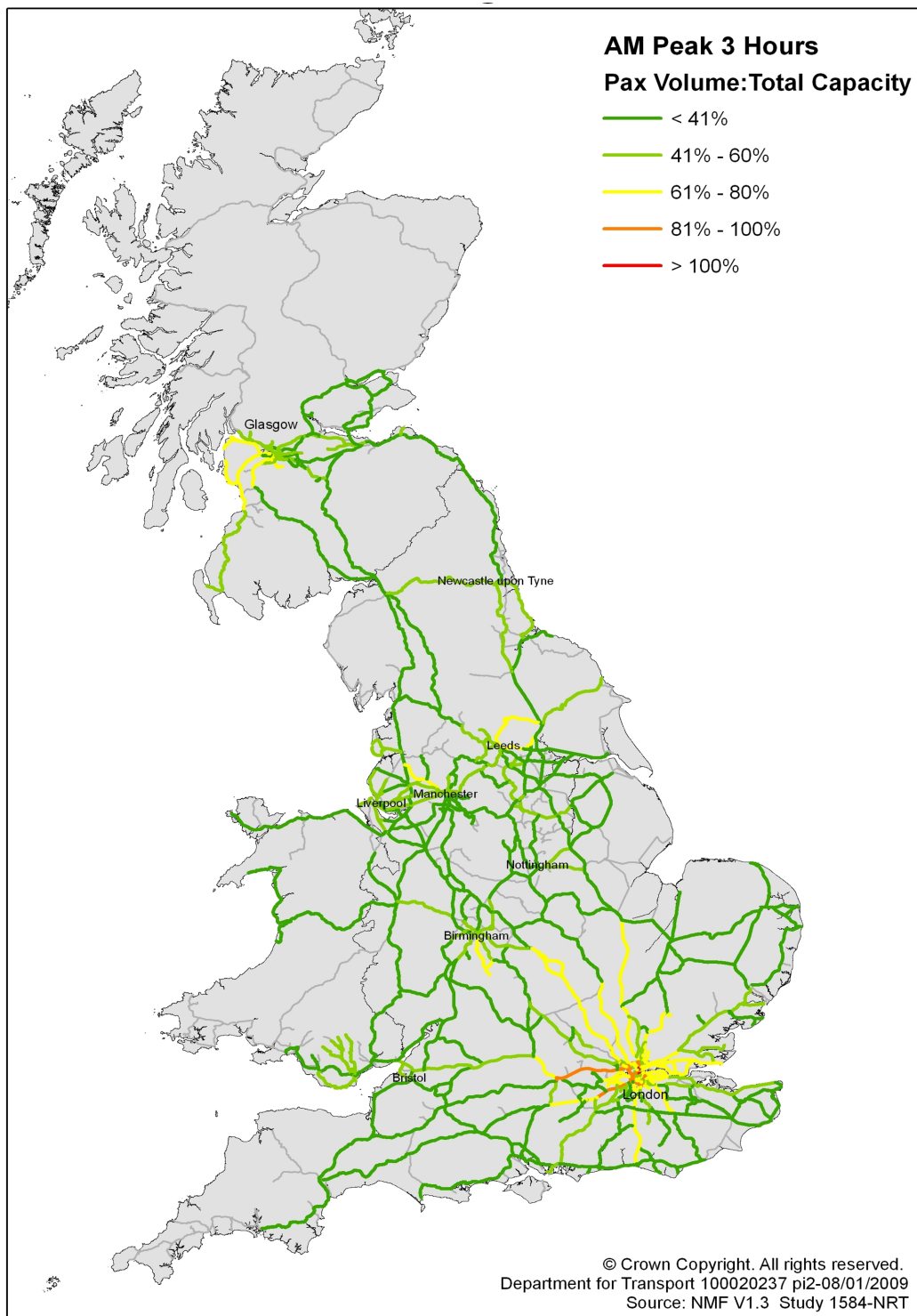
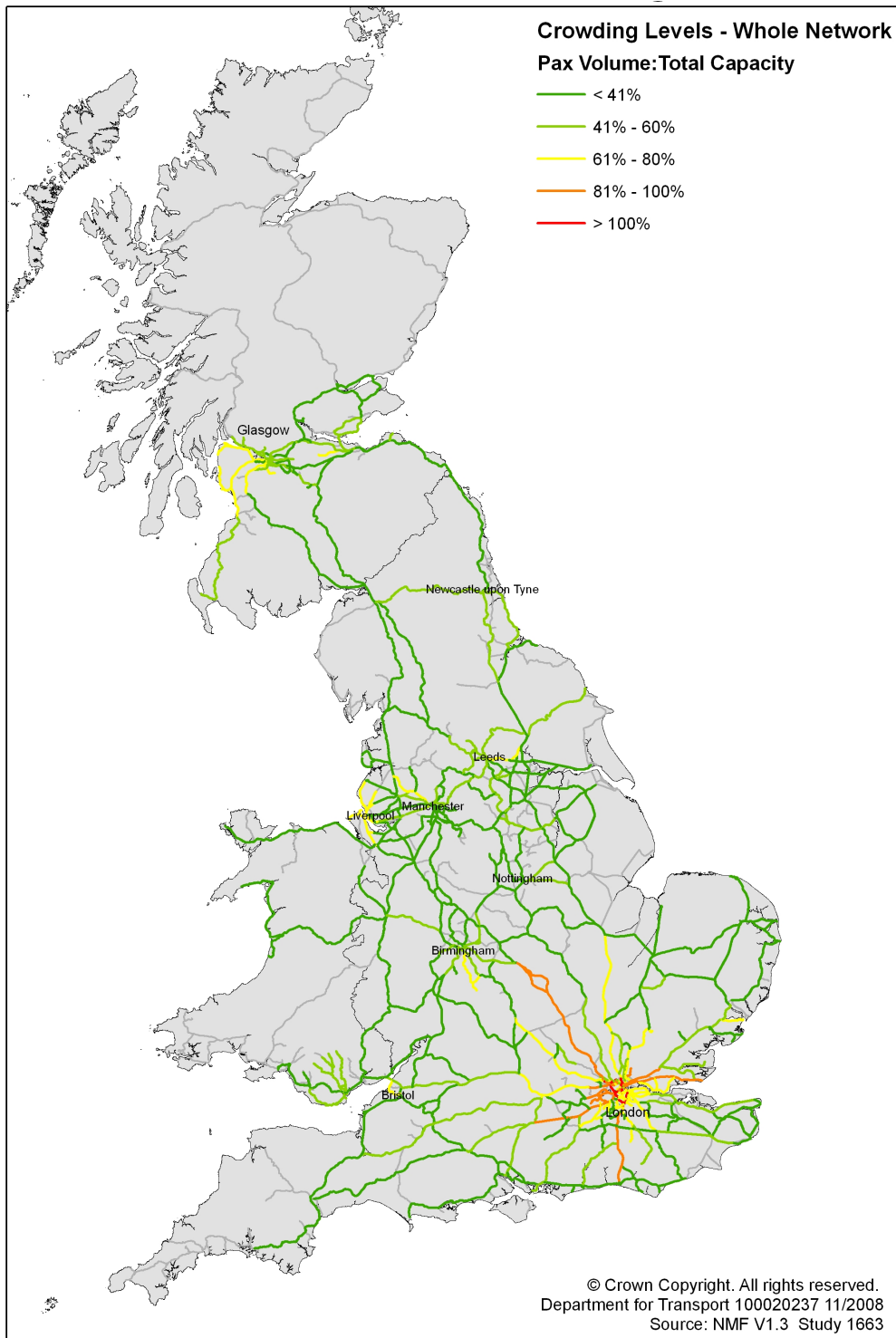


Figure 6: Loading levels in the 3-hour morning peak period, 2024/25



35. The West Coast main line carries heavy commuter and freight loads – 40% of all freight trains in the country use the line at some stage on their journey. It is also exceptional in that even in off-peak periods it handles nine inter-city express trains per hour in each direction. This compares with five per hour between London and Peterborough on the East Coast main line.

36. Unlike the East Coast main line, apart from the planned introduction of longer trains and in-cab signalling there are no significant capacity enhancements to the West Coast route possible without incurring major disruption to passengers and freight services. While it might be possible to provide extra tracks alongside the existing route, the complexity and cost of construction on a 'live' railway would be considerable; and, in any case, parts of the existing Victorian route are tortuous and unsuitable for high-speed running. Whilst Network Rail's work is due to conclude shortly, initial conclusions suggest it would be possible to provide significant additional capacity, while minimising disruption, by developing a new rail line on an alternative alignment between London and the West Midlands.

37. Accordingly, we have identified the corridor between London and the West Midlands as the first stage of any new rail line between London and Scotland.

Growth areas

38. The Milton Keynes / South Midlands Growth Area could benefit particularly from enhanced services using released capacity on the existing West Coast route to support the major housing and population growth which is planned. Milton Keynes / South Midlands is the largest growth area in the UK. It has a population of over 1.6m and covers 1,892 sq.miles, encompassing the counties of Bedfordshire (including Bedford), Buckinghamshire (Aylesbury Vale) and Northamptonshire (including Corby, Kettering and Wellingborough), and the unitary councils of Luton and Milton Keynes.

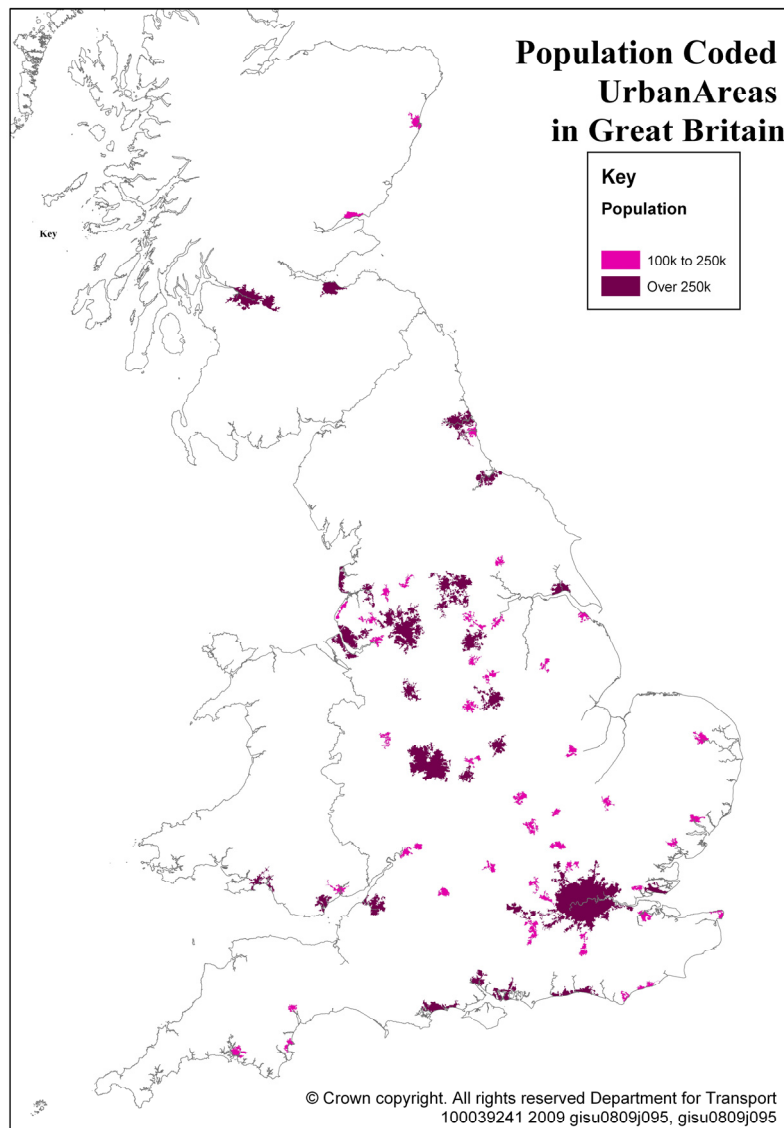
39. Over the 20 year period 2001-2021, the area is expected to provide an additional 224,000 new homes and 192,000 additional jobs. Commuting patterns are expected to be diverse, reflecting a range of employment locations – including London. Planned growth patterns are set out in the table below:

| Area | Housing Provision | Jobs Growth |
|----------------------|--------------------------|-----------------------|
| Aylesbury Vale | 19,400 (9%) | 12,690 (7%) |
| Bedford and Mid Beds | 1,800 (14%) | 27,000 (14%) |
| Luton & South Beds | 27,300 (12%) | 23,000 (12%) |
| Milton Keynes | 44,900 (20%) | 44,900 (23%) |
| North Northants | 52,100 (23%) | 47,400 (25%) |
| West Northants | 48,900 (22%) | 37,200 (19%) |
| MKSM Total | 224,400 (100%) | 192,190 (100%) |

Connectivity

40. The map below (Figure 7) shows how many of the main UK urban areas and centres of population lie in a broad segment to the north west of London – including Birmingham and the West Midlands, cities in the North West, the East Midlands, South and West Yorkshire. A new rail line following a broadly north-westerly alignment between London and the West Midlands, would provide significantly enhanced and faster services to the Midlands, the North of England and Scotland. Over time, subject to the agreement of the Scottish Executive, such a line could be extended to reach Scotland, further transforming connectivity within the UK.

Figure 7: Major centres of urban population in Great Britain



41. A new rail line following a broadly north-westerly alignment between London and the West Midlands would be likely to pass through West London in proximity to the Great Western Main Line and relatively close to Heathrow Airport. This presents a number of potential opportunities to improve surface access by rail to Heathrow Airport.

42. A '*Heathrow International*' interchange station in West London between a new rail line, Crossrail and existing Great Western main line services could provide convenient access to Heathrow, building on the £15.9bn investment now committed to Crossrail. There is also the potential to construct a spur into Heathrow – or to route a new line via the airport. An early priority will be to consider these options for serving the airport and to identify the optimum solution.

43. Options also need to be considered for a possible terminus in London. An interchange with Crossrail on the Great Western main line would provide, in addition to a rapid connection to Heathrow, a direct, fast and high capacity Underground connection for passengers to a range of destinations across central and east London. This could be as well as, or in place of, the extension of an existing north London terminus to accommodate the new line. Interchange with other services on the Great Western main line would also provide links between the new line and destinations in west London and the Thames Valley.

44. A new line offers the potential to link with the High Speed 1 route from St Pancras International to the Channel Tunnel and the European High Speed rail network. Such a connection could improve rail journey times and connectivity between the Midlands and the North and key European destinations.

45. All these station and route options will be carefully assessed by the *High Speed Two* company over the course of 2009.

Modal share

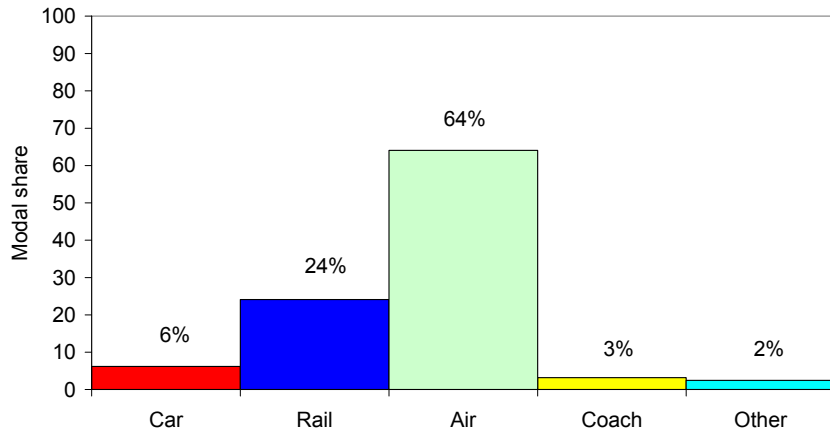
46. Figure 8 below shows the inter-urban modal share of passenger travel between London and Scotland, the North West and North East, Yorkshire & Humberside, and the West and East Midlands. These data are drawn from the National Travel Survey (2002-06).

47. The dominance of air travel to Scotland and of the car to the Midlands clearly reflects the importance of journey distance in modal choice. However, the significant rail market share (52%) to the North East – a region well served by efficient and reasonably fast rail services – is noteworthy and suggests the potential for high speed rail services to deliver further modal shift in other regions.

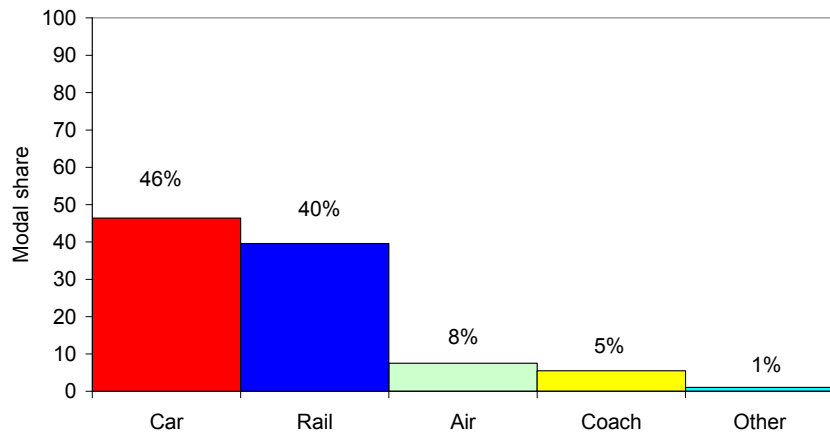
48. The potential environmental benefit of such modal shift obviously depends on the absolute numbers of passengers travelling on each route. Applying the National Travel Survey data to National Rail Trends data (2006-07) published by the Office of Rail Regulation suggests, for example, that the total size of the travel market between London and the West Midlands is twice that between London and the North West and more than six times that between London and Scotland.

Figure 8: Inter-urban travel by mode. Data extracted and aggregated from National Travel Survey 2002 – 2006.

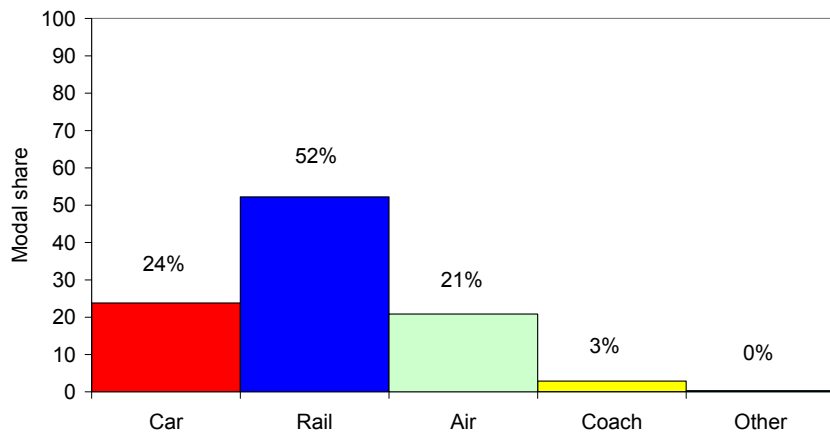
London - Scotland



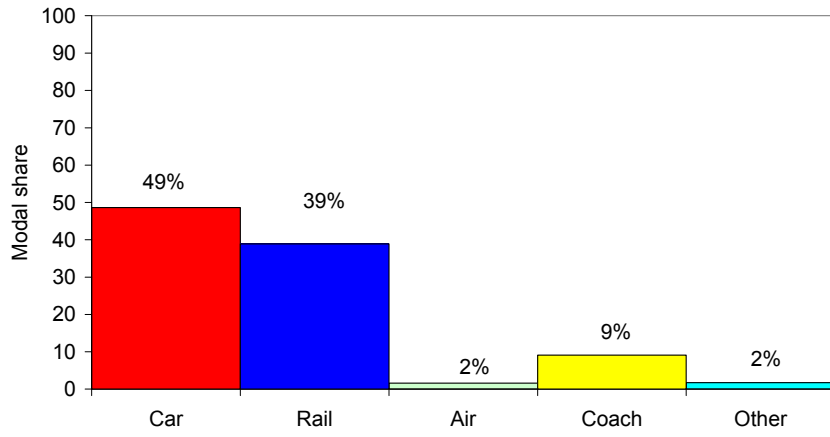
London - North West



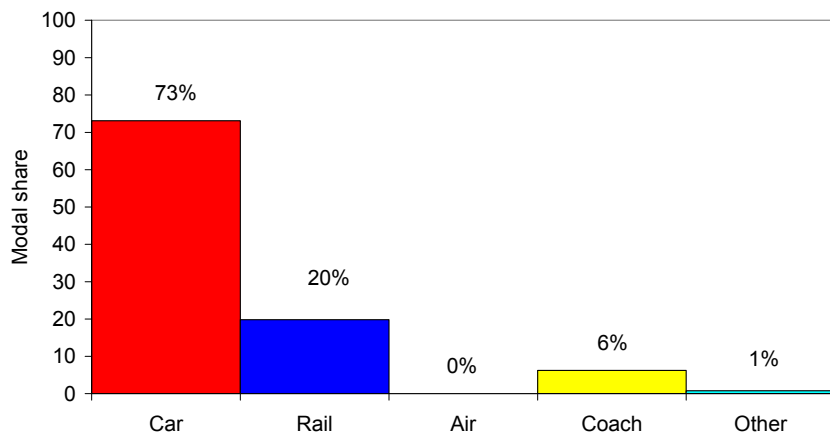
London - North East



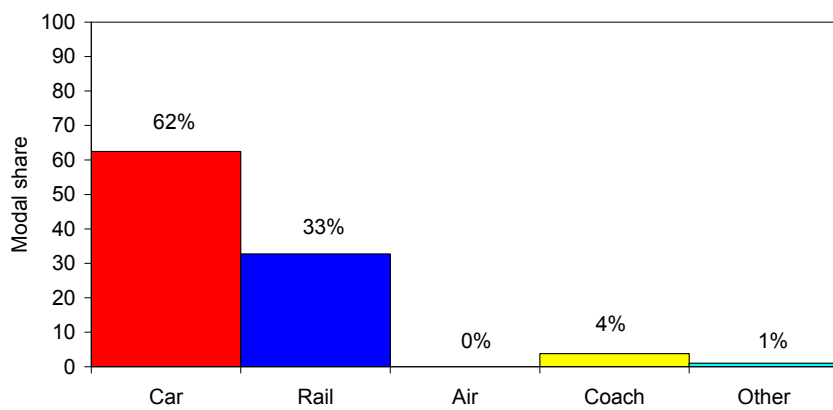
London - Yorkshire & Humber



London - West Midlands



London - East Midlands

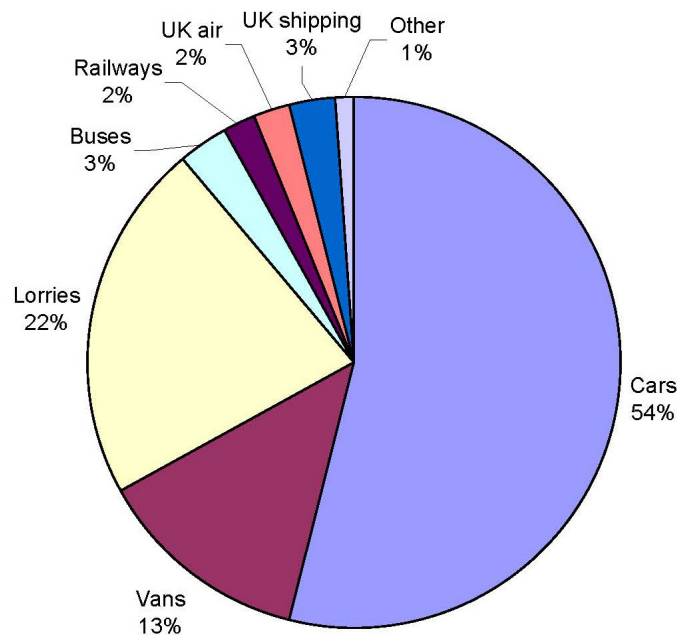


Carbon

48. The Stern and Eddington reports underlined the importance of tackling transport's contribution to the UK's carbon emissions. The Climate Change Act 2008 set out an 80% reduction target in CO₂ emissions by 2050 across all sectors, and recognises the significant contribution needed from a reduction in emissions from the transport sector.

49. Rail is a relatively energy-efficient means of transport, contributing only around 2% to the overall carbon dioxide emissions of the UK domestic transport sector (Figure 9). Whilst the rail industry still has to reduce its own emissions, it can play an important role in shaping the UK's transport emissions in the future. Key to this is ensuring there is sufficient capacity on the railway network to provide the travelling public a choice in their mode of travel and the logistics industry with sustainable transport options.

Figure 9: UK domestic transport sector CO₂ emissions 2005

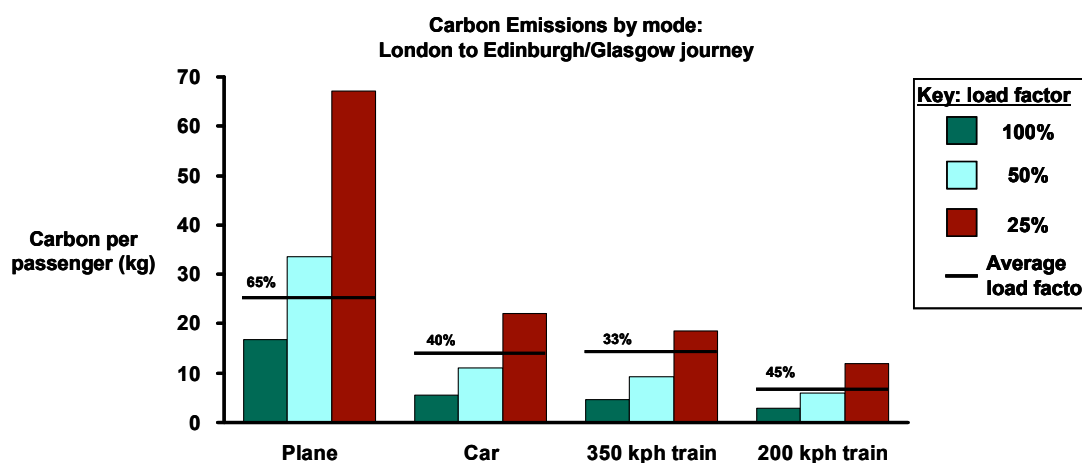


50. Stern was clear that we must tackle climate change in the most economically efficient manner, and Eddington was clear about transport's role in supporting the productivity of the UK economy and sustainable growth.

51. Major transport schemes need to provide a good fit with the economic, environmental and social goals set out in the *Delivering a Sustainable Transport System* planning framework. A new rail line will expand a transport mode that is generally more energy-efficient than short haul air and long distance road journeys, whilst increasing the capacity of our inter-urban networks and tackling the potential impact of congestion on economic growth and employment.

53. The changes in transport's overall carbon emissions delivered by a new line will also be influenced by a number of factors. Figure 10 below shows that, depending on load factors, carbon savings can occur when passengers on a new line have transferred from car or air. However, passengers who transfer from existing rail or who are making new or longer trips will add to transport's overall emissions.

Figure 10: Carbon Emissions by Mode, London to Edinburgh/Glasgow



54. Figure 10 summarises analysis on carbon emissions, by mode, from the July 2007 Rail white paper. It is important to understand the critical influence of load factors on the comparative carbon emissions. For example, the assumption in Figure 10 is a given load factor of only 33% for high speed rail services, a figure derived from the average load factor on existing inter-city services³. However, Eurostar reports a load factor of over 60%. The most modern Japanese Shinkansen services generate less than a sixth of the carbon per seat of corresponding domestic air service. And it is interesting to note that the Shinkansen, with an average load factor larger than the Eurostar, holds an 80% share of the traffic volume between Tokyo and Osaka, a distance of approximately 340miles (550km).

55. Finally, the energy generation mix is vital to the environmental performance of rail. The energy efficiency of the Eurostar trains decreases when on the GB rail network because of the difference in energy generation mix with France. Increasing the non-carbon energy generation in the UK will increase the energy efficiency of any new rail services on a new line, be it high speed or conventional.

³ Note: Average load factors are calculated as follows:

- 200kph train is average seat utilisation of intercity services;
- 350kph train assumes same number of passengers as average intercity service;
- car is based on 2005 average car occupancy of 1.58 persons per vehicle, divided by an assumed average capacity of 4 persons per vehicle;
- air is for domestic flights. Radiative forcing is not included in the calculations.

Source : DfT analysis (DS00080); RSSB's Traction Energy Metrics Report (DS00217); Defra, Guidelines to Defra's Greenhouse Gas Conversion Factors for Company Reporting 2007; Transport Statistics Great Britain 2006 edition

Line speed

56. The accepted definition of 'high speed' is trains capable of travelling at speeds over 150mph (240 kph). Such speeds are unattainable on Britain's conventional network, even with significant additional investment. The £8.8bn investment in the West Coast main line, together with tilting trains, makes possible speeds of up to 125mph (200 kph) but even this increase in line speed is not possible over parts of the route because of line constraints. Some high speed trains are capable of speeds up to 200mph (320 kph), as seen in Japan and parts of Europe, although it is important to note that the trains tend not to travel at maximum speed for some or even the majority of their journey.

57. A new high speed line to the West Midlands could cut journey times to Birmingham to well under an hour, with commensurate time savings to various destinations beyond Birmingham.

58. If a new line is to be built, it must demonstrate value for money and be underpinned by a robust business case. Work for the 2007 White Paper suggested that the cost of building a new high-speed line capable of accommodating high speed services is not significantly greater than that of a new conventional line but a maglev would be some three times more expensive than the 'rail' options. The costs of the only operational maglev system in the world (the Shanghai airport link) are about three times greater than those of equivalent high speed lines.

59. Furthermore, a maglev line would not be able to be integrated with the existing rail network in the UK, or with high speed rail and Europe's existing high speed lines. An integrated system provides much more operational flexibility, and benefits a far wider range of destinations which can be served by high-speed trains using new and existing routes (as will be the case with the domestic services on High Speed 1, which will use the high-speed line from London to Ashford and then transfer to conventional lines).

60. The high energy consumption of maglev also suggests that the environmental cost would be disproportionate in relation to the benefits of incremental speed and reduced journey times.

Next steps

61. In taking forward the work to develop 'High Speed 2', the task now is to assess the feasibility and credibility of a new line. This will need to include proposals for a route from London to the West Midlands, together with appraisal of the environmental, planning, technological, capacity, value for money and funding issues for consideration by the Government.

62. We propose to follow a similar approach to that taken in the development of proposals for the Channel Tunnel Rail Link and for Crossrail and establish a separate company charged with advising Ministers on these issues. The company, *High Speed Two*, will start work immediately. Its interim Chairman is Sir David Rowlands. It will draw on resources from Network Rail as well as from the Department, recruiting externally as required. It will be informed initially by existing consultancy work undertaken for Network Rail and the Department, commissioning further work as required.

63. The *High Speed Two* company will work in close collaboration with the Government in developing its plans. The remit of the company is to consider and to provide advice to the Government on the costs and benefits of:

- a. A proposed route with any options as appropriate;
- b. Options for a *Heathrow International* interchange station on the Great Western main line with an interchange also with Crossrail;
- c. Options for access to central London and the other cities served;
- d. Options for linking with HS1 and the existing rail network, including the potential for services to continental Europe;
- e. Financing and construction proposals.

64. On all these issues the company will draw on the extensive experience of HS1 and Crossrail, including in securing private finance (including developer contributions) and wider non-governmental contributions. It will also draw on international experience as appropriate.

65. The company will report formally on these issues by the end of the 2009, and the Government will assess the options for the new lines thereafter. A decision to proceed would involve an initial public consultation on the proposed route or route options.