



INDEPENDENT TRANSPORT COMMISSION

TOMORROW'S TRANSPORT

MARCH 2001

Transportation Research Group
Department of Civil and Environmental Engineering
University of Southampton
Highfield, Southampton, SO17 1BJ
United Kingdom

Telephone and Fax 44 020 7352 3885
E-Mail t.bendixson@pobox.com
www.trg.soton.ac.uk/itc

Registered Charity Number 1080134

Foreword by the Chairman: Sir Patrick Brown

The Independent Transport Commission was set up in 1999 with the support of the University of Southampton. The aim was to fill an apparent gap in United Kingdom transport planning. This gap concerns the ways in which travel will be affected in the long term by, for instance, urban change, new infrastructure, European policy, rising disposable incomes and new lifestyles.

The members of the Commission, all experts in their respective fields, cover public transport operations and finance, policy formulation, environmental concerns, motoring, communications, and behavioural and technical research. We do not claim the right to be heard. But as a group of people with knowledge and experience of transport in Britain, we believe that what we have to say may be important enough to persuade others to listen.

The Commission has approached its work by establishing principles and by deciding to address the problems of conurbations, suburbs, towns and rural areas, and of inter-urban travel.

The Commission began its work by asking

- *What would happen if there were no change to existing transport policies?*
- *What will be the effect of recently announced changes in policy - particularly the 10 year plan?*
- *What issues have not been addressed, and what more needs to be done?*

This first statement looks both forward and back 25 years. The questions asked indicate the future direction of the Commission's work. In some cases, such as the impact of global travel on resources and on the climate, the aim is to promote debate. In others the Commission will consult, do further work and report again.

* * * *

No foreword would be complete without thanks to the University of Southampton, the Joseph Rowntree Foundation, the Esmee Fairbairn Charitable Trust, the Ashden Trust, the Headley Trust and the Rees Jeffries Road Fund for providing the support and funds that have made this work possible.

I am grateful too to the Members of the Commission (including my predecessor Richard Simmonds) who have freely given so much of their time and expertise, to Terence Bendixson, our Secretary, without whom we would not have reached this point, and to Stephen Coley our expert desk top publisher.

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MEMBERS OF THE INDEPENDENT TRANSPORT COMMISSION

Alan Baxter, Alan Baxter & Associates; **Sir Patrick Brown**, former Permanent Secretary, Ministry of Transport; **John Dawson**, Policy Director, Automobile Association; **Alan Harper**, Group Strategy Director, Vodafone Group; **Professor Peter Jones**, University of Westminster; **Derek Langslow, CBE**, former Chief Executive, English Nature; **Simon Linnett**, Managing Director, N M Rothschild & Sons; **Keith Ludeman**, Chief Executive – Rail: The Go-Ahead Group plc; **Professor Mike McDonald**, University of Southampton; **Lynn Sloman**, Assistant Director, Transport 2000. OBSERVER: **Dr. Alison Jarvis**, Joseph Rowntree Foundation. SECRETARY: **Terence Bendixson**, Visiting Fellow, University of Southampton.

Conclusions

The Commission's vision

The Commission's vision is a Britain where travel, be it on foot, by bus, plane, train, cycle or car, is a pleasure; where the protection of people, towns and the environment from the side effects of travel and transport is given higher priority than today; where improved accessibility to activities reduces unnecessary travel; where road and rail casualties are nil; where all land, sea and air vehicles are quiet and free of damaging emissions; and where people-friendly services are the object of all traffic and transport managers.

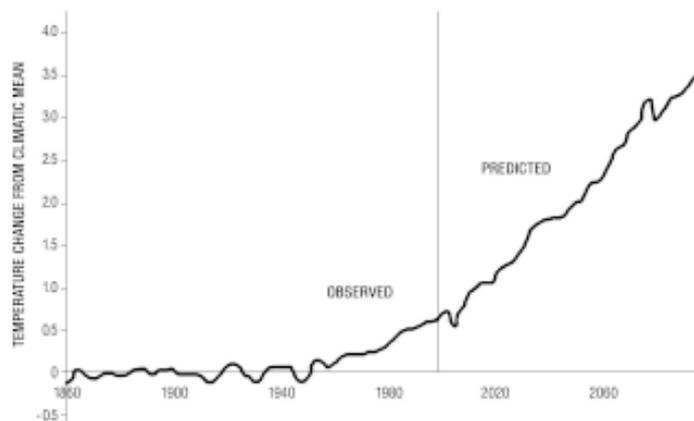
The Commission's aim

The Commission will propose changes to policy designed to give reality to this vision and to lifestyles based on ease of travel, liveable towns and cities and low carbon emissions.

Why do people travel so much?

As growing car and air travel emerge as global phenomena, forecasts indicate an interim fleet of 1 billion road vehicles by 2025 – about one for every 6 people. Global air travel is forecast to double in 15 years.

Economic development will, inevitably, transform the planet just as, on a national scale, it turned rural Britain into a society based on coal, iron and cities. But how? Will incremental change reconcile the rapid growth of powered air and land travel with earth's resources and human well-being? Or will problems persist? More precisely, what will be the role of transport in this process? And why do people travel so much? The Commission believes that Britain should lead on promoting debate about these global issues.



**WHAT WILL 21ST CENTURY ECONOMIC DEVELOPMENT DO TO THE ENVIRONMENT?
OBSERVED AND PREDICTED GLOBAL TEMPERATURE CHANGE**

Source: The Met Office's Hadley Centre and the Climatic Research Unit, University of East Anglia

The Government's 10 Year Plan

The 10 year plan is an impressive technical exercise and breaks new ground in transport planning. It promises upgraded transport management and maintenance, advances in vehicle and information technology, changes in pricing and large and small investments in road and rail infrastructure. The Commission has examined with interest it's modelling of the effect of economic restraints on travel.

Benefits of the plan

The plan could bring many benefits and, as the proposals within it are unfolding, many other changes will be taking place. Incomes and expectations will be rising. E-commerce will be more widely established. New and less polluting designs of cars, buses and lorries will be coming into use. More women will become car owners and users. Elderly, often more cautious drivers, will become more numerous. St Pancras will become a Euro-station. Information technology will guide and advise travellers and make it easier to book and buy linked services. Measures designed to reduce road deaths by 40 per cent will be introduced. Cycling is expected to increase. Clear zones, appropriate speed limits, congestion charging and more effective camera enforcement of traffic law can all be expected to enter the popular consciousness.

Will the plan deliver what it promises?

The plan focuses on delivering measurable outcomes – reduced congestion, pollution and casualties. ‘Our strategy is to tackle congestion and pollution by improving all types of transport – rail and road, public and private – in ways that increase choice,’ the plan says. ‘It is a strategy for investment in the future to create prosperity and a better environment.’

Possible impediments to achieving this future include:

- *Delays in the delivery of new infrastructure due to shortcomings in planning and procurement and site protests.*
- *Shortages of skilled engineers.*
- *Slower than forecast growth in rail travel leading to reduced borrowing capacity by the rail industry.*
- *Lack of progress by local authorities in implementing congestion and/or workplace parking charges.*
- *Delays in the achievement of fuel efficiency targets due to technological problems or consumer preference for large, well-equipped cars.*
- *Competing demands on public resources*
- *High rates of road traffic growth.*

These and other challenges will have to be met if the government is to deliver the plan on time.

What will be the overall effect of the plan?

Cars currently account for about 65 per cent of all surface journeys in Britain. Walking accounts for over 25 per cent. Fewer than 1 in 10 journeys is made by bus, train, taxi and bicycle. Even over 15 years, whatever improvements are made (and the plan contains many), public transport seems destined to be a minor carrier except where intense land uses or precious landscapes preclude widespread use of cars.

This helps to get in focus likely conditions in the years beyond 2010. Most journeys will still be by car but there will be more of them. There will also be more journeys by bus, train and plane. One view is that incremental advances in policy, technology and management will ensure that this growth in travel is comfortably accommodated in city, suburb and country. The other is that increases in mobility will be won at the cost of losses in the strength of communities, the liveability of towns and cities, the tranquillity of the countryside and other valued aspects of life.

The key issue

The Commission respects both these perspectives but fears that, in the absence of any guarantee of further policy initiatives, Britons in their communities and homes and when travelling could face in 2010 many of the problems besetting them today. Rising incomes will, of course, make possible many new solutions: vehicles will be cleaner and traffic may be growing more slowly. But there will still be more traffic, particularly on the fringes of the great conurbations, in smaller cities and on rural roads. Furthermore the amount of space devoted to parked and moving cars will have to be greater. Is this the kind of future that the British people want? For the Commission, this is the key issue. It leads to the question: what actions, in addition to those in the 10 year plan, ought to be brought onto the political agenda?

How should transport pricing be reformed?

One such action is the reform of transport pricing beyond what is part of the plan. Consumer-friendly pricing could deliver less congestion and more resources for innovative ideas. Lifestyle changes would help too. Property developers, alive to one, promote some city centre flats under the headline 'Walk to Work'. Other legal, regulatory and behavioural changes will also be needed. The Commission will consider consumer-friendly pricing reforms and how they might be introduced.

What should be done about travel conditions in suburbs?

Residents in the suburban and semi-urban fringe districts of Britain's larger cities encounter various kinds of transport problems. Those without cars find it difficult to get about. Those with them often experience queues. The Commission considers that such problems will increase over the coming decade.



RETNA/Phillip Reeson

Liveable streets?

How can streets in towns, villages and cities be made more liveable?

One factor that affects the quality of life is the amount and speed of traffic in the streets where people live, work and play. Traffic is forecast to grow by 17 per cent in provincial towns and cities and by 21 per cent on country roads, and therefore in many villages. In numerous city streets traffic is already unacceptably heavy and dangerous. Large numbers of small street works, including Home Zones, appropriate speed limits, repaving, new street lights and tree planting, will be needed if safety and comfort is to be increased. The Commission considers that liveable streets, noise reduction and health are important transport issues.

How can the delivery of fuel-efficient vehicles be assured?

Increasing fuel efficiency so as to reduce fuel consumption and CO2 emissions is a complex issue. Not only are heavy goods vehicles as much involved as cars but the technology of fuels, engines and vehicles is changing constantly. Consumer choice is influential too. However, most of the reduction in CO2 from transport expected in Britain over the coming decade will come from agreements between the European Union and the carmakers. These promise to cut by a quarter the average fuel consumption of new cars sold in Europe in 2009/9. Delivering the 10 year plan target for reductions in CO2 will therefore depend on technological advances and on factors such as world energy prices, the prevalence of advertising that stresses the rewards of power and acceleration, tax regimes and even fashion.

The Commission believes that successive British governments have been right to play a leading international role in this field. Britain has the necessary diplomatic skills and scientific knowledge to do so. Furthermore, only if the developed countries demonstrate that low carbon economies are practical, is there a prospect of reducing emissions globally.



Toyota's E.com: one route to fuel efficiency

What should be done about the growth of air travel and aircraft noise?

International air traffic is forecast to double over the coming 15 years. Domestic air travel is too: it grew from 3 to 7 billion passenger kilometres between 1981 and 1998 when new air services opened up between a widening array of provincial cities. Both international and domestic growth are associated with increased access traffic and noise.

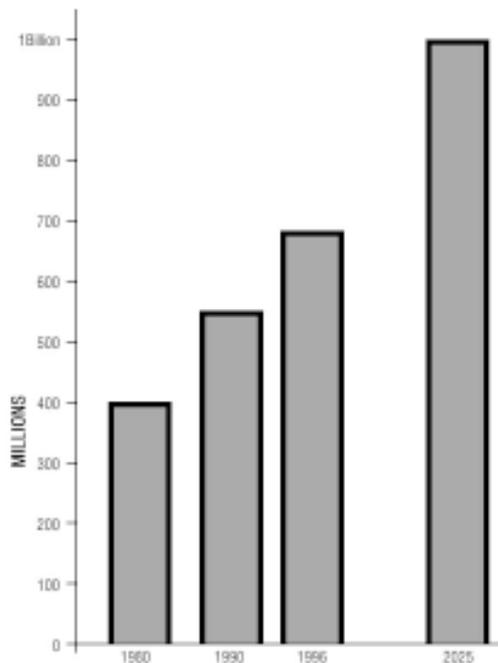
Aviation in the United Kingdom is due to be reviewed in a 30 year plan which, like the decision on Heathrow's Terminal 5, is expected this year. Access to airports apart, the United Kingdom is obliged to seek changes to the regulation of aviation through international negotiations. The Commission believes that the government should play a leading part in seeking to reduce the side effects of air travel and that, within Britain, it should promote enhanced public transport access to provincial airports.

Next steps

The Independent Transport Commission has, in this initial examination of transport in the United Kingdom, sought to identify longer term problems. Serious challenges do exist – not least understanding what lies behind the seemingly incessant growth in travel. But the Commission has found nothing, given clarity of thinking and political will, that seems insoluble. The greatest challenge is to ensure that, given prospects of increasing wealth, more travel and rising expectations, the quality of life in village, town, suburb and city is enhanced. The Commission will seek solutions to enable policymakers to respond to this challenge.

1 Why do people travel so much?

People have always travelled. The colonisation of continents, the conquest of countries, flight from famine and the rule of empires were (and are still) based on the movement of people, armies and goods. Wealthy Romans rode between the city and their villas. Even the poor travelled. When Le Corbusier was building the new capital of Chandigarh, some of the bricklayers walked up to six hours a day to and from their villages.



THE RISING WORLD CAR FLEET: ONE BILLION CARS BY 2025?

Source: Compiled by UNEP GRID Geneva from International Road Federation 1997, *Global Environment Outlook, Global Perspectives p.13*

With the growth and spread of wealth, travel for work and leisure have multiplied. In 1950 the average Briton voyaged about 5 miles a day: today it is 28 miles and rising. Foreign package holidays by air account for another huge increase in travel.

As car and air travel emerge as global phenomena, forecasts indicate an interim fleet of 1 billion road vehicles by 2025 – about one for every 6 people.¹ Air travel is growing at 5 per cent per annum.² Meanwhile global population is increasing at the rate of a Germany every year and demographers forecast a levelling off at 8 to 12 billion by the end of this century.³ No comparable levelling off is forecast for travel.

Why does movement seem to be so central to human lives? Is it choice? Is it innate? Or is it thrust upon us by social factors, globalisation, curiosity, artificially low costs, patterns of urban development or even seductive marketing? All we know is that a combination of rising incomes, more people and faster means of travel promise explosions of movement by air, land and sea. Professor John Adams, in a paper for OECD, calls it 'hypermobility'.⁴

What will be the effect of so much movement? Nineteenth century industrialisation turned rural Britain into an economy based on railways, steamships, cities and smoke. What will 21st century economic development do to the globe? Can incremental change reconcile the rapid growth of powered air and land travel with earth's resources and with the quality of life of billions? Or will it bring a poorer quality of life?

The Commission's remit is, of course, the future of transport in Britain. These wider issues are raised because every country is now part of, and affected by, the global economy and its environmental impacts. The Commission believes that the importance of this interdependence cannot be underrated and that Britain should lead in promoting debate about it.

2 The Commission's approach

The issues the Commission seeks to examine are complex, long term and controversial. Given such a remit, it seemed prudent to establish some guiding principles.

- *Travellers have a right to reasonable journeys.*
- *Britain's prosperity requires the movement of people and goods to be efficient, competitive and sustainable.*
- *People and places need to be protected from the detrimental effects of traffic and transport.*
- *Travellers should pay the full costs of their journeys and receive value for money, but poor people should be protected from adverse consequences of such a policy.*
- *Land use patterns that minimise travel are a priority.*
- *Transport policy should take account of the health effects of travel and transport.*

Some of these principles need balancing against others. This is a further complexity but one that confronts all policy analysis. The Commission intends to use these principles in all its work.

3 Looking ahead from the 1970s

Before looking ahead the Commission decided to look back. Britain in 1975 was a country with only half of today's two thousand miles of motorway, innumerable corner shops and fast rising global oil prices. Mining employed nearly 400,000 and commercial business was based on telephones, typewriters and letter post. Forty-four per cent of households had no car.⁵

John Tanner, the then senior economic forecaster at the Transport and Road Research Laboratory, saw Britain in 2000 having between 21 and 28 million cars: his median forecast was 25 million cars.⁶ Tanner may have been too sure that Britain would follow United States' trends. Although the population grew faster than he assumed, Britons owned only 22.8 million cars at the beginning of 2000. Meanwhile Tanner's colleagues in advanced technology were working on driverless taxis designed to run on elevated guide ways. Videophones were thought to be just around the corner.

Cars were seen as a bane and a blessing. The plan for Milton Keynes (1969) said they offered 'freedom of choice and opportunity which more and more will want, and be able, to take advantage of.' It stressed the need for '...easy movement by private cars and their penetration to every point in the city'. But in 1971 the British Road Federation said: 'Britain's roads are the most crowded in the world.' And in 1974 the House of Commons Expenditure Committee recommended 'that national policy should be directed towards promoting public transport and discouraging the use of cars for the journey to work in city areas.'

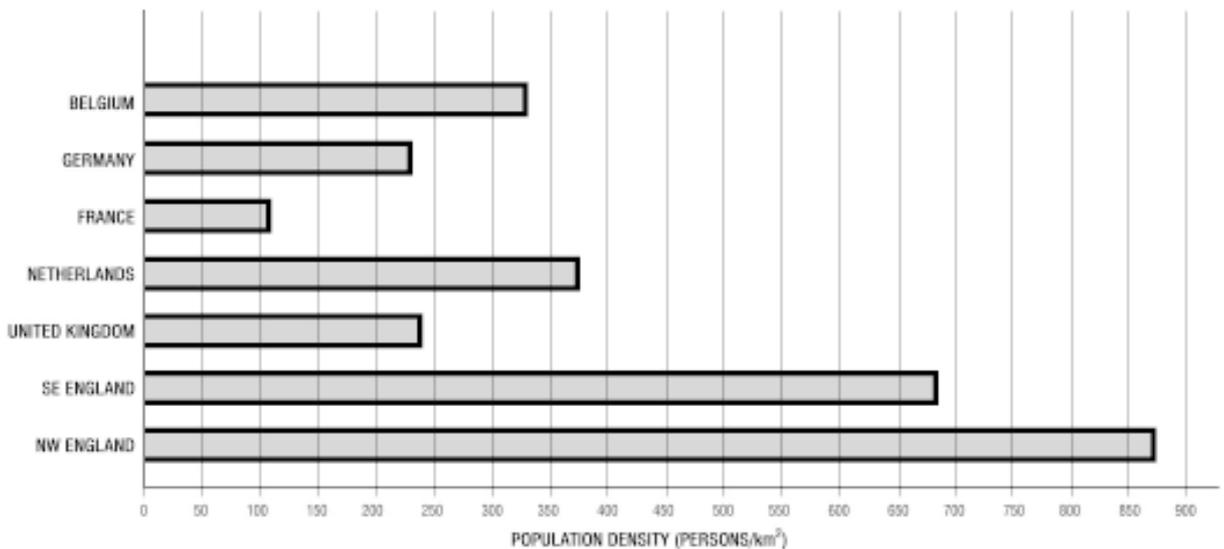
What did the planners miss? Going back further to 1963 and judging by the 'Traffic in Towns' report, certain issues stand out.⁷

- *Expectations about investment in infrastructure were over-optimistic.*
- *The extent of the growth of heavy lorry traffic was unforeseen. (The Newbury case study made no mention of it).*
- *The need to prioritise public transport in traffic and town planning was overlooked.*
- *There was little awareness of the way that parked cars and traffic would transform the safety, convenience and appearances of residential streets.*

4 Looking ahead to 2025

As over the past 25 years, so over the next 25, some things will be perceived dimly, if at all. However, the population will grow and densities will increase. Urban areas will grow by 2 to 3 per cent a year but about 90 per cent of today's buildings will still be there in 2025. Virtually all of today's roads and railways will still be in use and the networks will be only slightly larger. Mobile communications and the Internet promise to make people more connected and less aware of distance. Where cost or congestion impede travel people will be able to turn to digital communications. On the roads there will be more women and more older, slower drivers.⁸

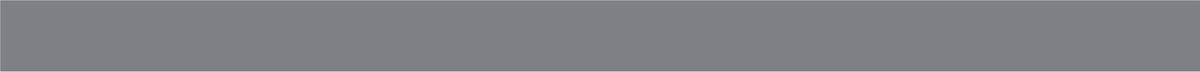
When looking ahead, some stress the importance of technology and argue that, just as the portable typewriter of 25 years ago has become the laptop communications system of today, so cars in 2025 will be clean, quiet, digitally connected and designed for recycling. They also suggest that where now traffic dominates living, fiscal or physical ways will be found to reduce, slow or divert it.



PARTS OF BRITAIN HAVE VERY HIGH DENSITIES

POPULATION DENSITIES IN EUROPEAN COUNTRIES, 1996 AND UK REGIONS 1999

Source: OECD in Figures 1998: www.statistics.co.uk



One advocate of the transforming power of technology is Henry Clay Ford, chairman of the Ford Motor Company. 'In the '60s we could see a lot of environmental problems emerging, but we didn't have the solutions', he said in 2000. 'Now the technologies are coming on stream so fast that the solutions really are in our grasp.'⁹

Others are more sceptical of technology (we still await driverless taxis) and believe that competing demands for investment will limit what is available for new transport infrastructure. Yet others see a future for 'downtown' lifestyles based on walking, cycling, car hire and tele-living. They stress the future political strength of older people and to the potential of global warming (plus the costliness of dealing with it) to change materialist values.

Young professionals in transport see something else. They suspect that transport integration, today's mantra, could give way to efforts to integrate transport planning with attitudes and lifestyles.¹⁰

5 The Commission's vision

The Commission's vision is a Britain where travel, be it on foot, by bus, plane, train, cycle or car, is a pleasure; where protecting people, towns and the environment from the effects of transport is given higher priority; where improved accessibility to activities reduces travel; where road and rail casualties are nil; where all land, sea and air vehicles are quiet and free of damaging emissions; and where all traffic and transport managers aim to deliver people-friendly services.

6 Summary of Transport 2010: The 10 Year Plan

The plan

The government published its 10 year transport plan in July 2000.¹¹ It was, for Britain, a rare exercise in long term planning. The plan embraces public and private investment in railways, roads and all aspects of urban transport – but not aviation. It promises upgraded transport management and maintenance, advances in vehicle and information technology and large and small investments in road and rail infrastructure. It also relies on untried revenue sources such as congestion and work-place parking charges. Models were used to test the effect of the proposals on traffic growth, congestion and CO2 emissions. Tests were also run of economic constraints on travel that were not adopted by the government.

Three scenarios

The authors of the plan constructed and modelled three main scenarios: a 'baseline' showing the effect of maintaining 1998 levels of investment; the plan itself; and the plan plus economic instruments the government chose not to adopt. The unadopted measures were: constant (rather than declining) motoring costs; motorway tolls; and widespread use of urban congestion charges. This chapter will consider only the baseline and the plan. The third scenario will be considered in the next chapter.

Investment

Investment under the 'baseline' would have been everywhere lower than proposed in the plan. Spending in towns and cities on maintaining roads and footways, renewal of street lighting, traffic management, bus services and local road building would all have been lower. So would investment in railway modernisation and the expansion of motorways and trunk roads. And the baseline includes no urban congestion pricing and therefore no traffic reduction or income from that source.

Under the plan, the proposed higher level of investment is forecast to lead to the widening of 360 miles of England's inter-city motorway and trunk roads, the bypassing of 30 towns on them and the rebuilding of many congested junctions. Local authorities would build seventy local road bypasses. Drivers would benefit from improved information and traffic management systems. On the railways, investment of £60 billion would upgrade all main routes particularly those radiating through the populous metropolitan region.

In towns and cities increased investment would lead to new and improved bus, tram and rail services and to the renewal of paving, lighting, signage and other aspects of the public realm. In some places road user or parking charges would provide additional investment funds. Town planning would be used to create greater scope for walking and cycling. Suburbs and the specific problems of the fringes of big cities, where reliance on cars is so heavy, were not considered.

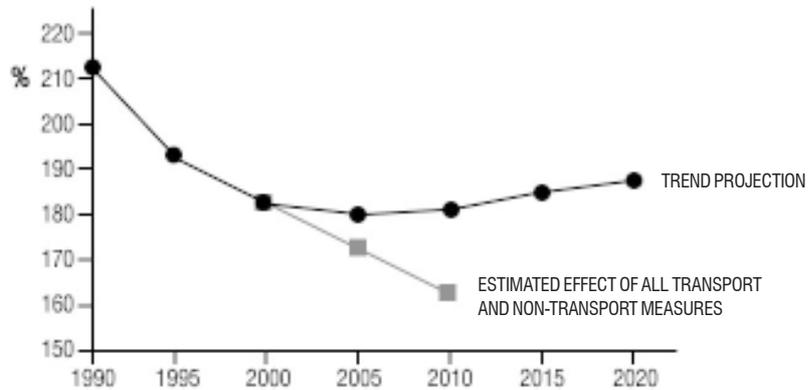
Within London, congestion on the Underground is forecast to ease as train frequencies are increased and people switch to improved bus services for shorter journeys.

Road traffic and congestion

Under the plan, road traffic is forecast to increase everywhere but less than under the baseline because of a shift in travel from car to rail, bus and tram and, as a result of new mixed and denser forms of development, to walking and cycling. The plan indicates that, traffic growth notwithstanding, congestion would impede drivers less than now in big cities and on Trunk roads. Only in smaller cities and on rural roads are delays forecast to increase – but from relatively low levels.

Emissions

All the scenarios assume that cars will become more economical and emit less of the CO₂ that is believed to contribute to global warming. Cars apart, forecast CO₂ emissions are shown increasing from railways, due to additional trains, but falling overall as a result of reduced road traffic growth and congestion. Emissions, such as small particles, that are harmful to health, are also forecast to fall (due to European directives) but are likely to remain as problems in big cities.



BRITAIN IS SHOWING LEADERSHIP IN REDUCING CO₂ EMISSIONS

UK GREENHOUSE GAS EMISSIONS: NEW PROJECTIONS AND ESTIMATED EFFECT OF ALL QUANTIFIED MEASURES, MtC

Source: *Climate Change, The UK Programme*, DETR 2000

Road and rail casualties

Actions set out in the plan are intended to reduce rail crashes and help to cut death and serious injury on the roads by 40 per cent for adults and 50 per cent for children over ten years. Home Zones and 20 mph areas are aimed at the different problem of parental fear that results in children being discouraged or forbidden from going about on foot or bicycle.

Travel and health

The effects of car-based lifestyles on health, which were given prominence in the White Paper on Transport, are, road casualties apart, not listed amongst the 10 year plan's headline challenges.

The effects of transport investment on land use

Reference is made in the 10 year plan to the expected contribution of regional planning to shaping new development to support public transport and promote travel on foot and by bicycle. There is no reference to the effects of the proposed road and rail investment on, for instance, extending commuting catchments.

Summing up

The 10 year plan is an impressive technical exercise and breaks new ground in long term transport planning. In considering it, the Commission has sought to put it in the context of evolving social and economic conditions. These include increased personal wealth and rising expectations about the quality of life. The Commission has also asked the following questions:

- *How would transport have evolved with and without the plan?*
- *Will the plan deliver what it promises?*
- *Given what the plan is expected to deliver, what long term problems are likely to remain, and what ought to be done now to avoid them?*

7 Analysis of the Plan

Transport with and without the plan

As has already been pointed out, the authors of the 10 year plan assumed that, in the absence of any new policy, transport spending would have been at levels agreed in 1998 and would have led to high levels of road traffic growth, congestion and CO2 emissions. The plan, by contrast is forecast to bring reduced growth of road travel with less congestion and reduced CO2 and toxic emissions.

As the proposals in the plan are unfolding many other changes will, of course, be taking place. Incomes and expectations will be rising. E-commerce will become more widely established. New and less polluting designs of cars, buses and lorries will be coming into use. More women will become car owners and users. Elderly, often more cautious drivers, will become more numerous. St Pancras will become a Euro-station. Information technology will guide and advise travellers and make it easier to book and buy linked services. Measures designed to reduce road deaths by 40 per cent will be introduced. Cycling is expected to increase. Clear zones, appropriate speed limits, congestion charging and more effective camera enforcement of traffic law can all be expected to enter the popular consciousness.

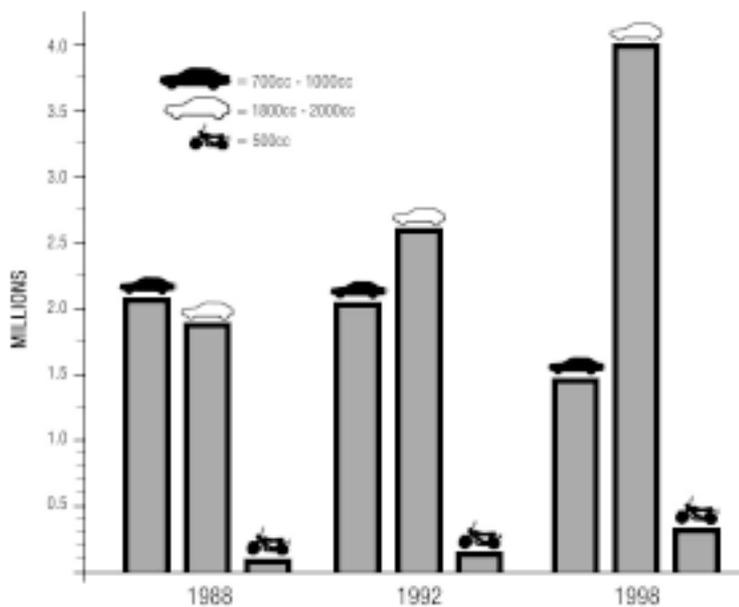
Will the plan deliver what it promises?

The overarching aim of the plan is to make possible more road, rail and urban public transport travel while reducing casualties, congestion and surface transport's contribution to climate change. Possible impediments to the achievement of that aim include:

- *Delays in the delivery of new infrastructure due to shortcomings in planning and procurement and site protests.*
- *Shortages of skilled engineers.*
- *Slower than forecast growth in rail travel leading to reduced borrowing capacity by the rail industry.*
- *Lack of progress by local authorities in implementing congestion and/or workplace parking charges.*
- *Delays in the achievement of fuel efficiency targets due to technological problems or consumer preference for large, well-equipped cars (see graph over leaf).*
- *Competing demands on public resources*
- *High rates of road traffic growth.*



None of these possible impediments raise insuperable problems. Delay, for whatever cause, might be frustrating but it would not invalidate the concept. But this might not be the case should the flow of investment be seriously interrupted. The Hatfield crash, for instance, has provoked a decline in passenger and revenue that, should it persist, will limit the rail industry's power to invest. This underscores the way in which the different components interlock. Motoring costs, for instance, are forecast to fall in real terms. But were they to fall more than is assumed, travellers would switch from rail to road thus increasing congestion and emissions while reducing the ability of the rail companies to finance their substantial element of the investment plan.



CONSUMERS ARE MOVING TOWARDS LARGER CARS AND MOTORCYCLES

Source: Transport Statistics Great Britain: 1999. Table 3.3. DETR

Another uncertainty, perhaps the greatest, concerns climate change and its possible side-effects. Estimates for DETR made by ERM suggest that a combination of wetter, stormier winters and hotter, drier summers could necessitate remedial investment in roads, railways, flood defences, water supply and coastal protection.¹² Should this arise investment in infrastructure might be diverted from the priorities in the 10 year plan.

The plan is thus, in some ways, a house of cards. Dislodge one and the whole edifice is affected. However these are short term problems and, as the authors of the plan make clear, their proposals are not set in tablets of stone but will be monitored and, where necessary, updated.

What will be the overall effect of the plan?

Travel can be measured by journeys or by distance. Either way cars and lorries come out on top but counting journeys underlines the often overlooked volume of short trips. Cars currently account for about 65 per cent of all journeys; walking accounts for over 25 per cent. Buses, trains and taxis thus account for less than 1 in 10 of all journeys.¹³ Even over 30 years, whatever improvements are made to bus, tram and rail services (and the plan contains many), public transport seems destined to remain a minor carrier except under certain conditions. The effect of public transport investment will thus be, not so much to replace car travel generally, but to:

- a) *provide for those without cars,*
- b) *assure mobility in places, such as inner cities, airports, and historic towns where dense land uses make mass car use impractical,*
- c) *reduce congestion (and emissions) on urban and inter-urban roads by attracting some traffic growth from them,*
- d) *offer high-quality inter-city services, and*
- e) *enable increased rail freight.*

This helps to get in focus likely travel conditions in the years beyond 2010. Most journeys will still be by car, but there will be more of them, and there will be more journeys by bus, train and plane as well. One view is that incremental advances in policy, technology and management will ensure that this growth is comfortably accommodated in city, suburb and country. The other is that the benefits of increased mobility will be outweighed by losses in, for instance, the strength of communities, the liveability of towns and cities and the tranquillity of the countryside.

The key issue

The Commission respects both these perspectives but fears that, in the absence of any guarantee of further policy initiatives, Britons in their communities, in their homes and when travelling, could face in 2010 many of the problems besetting them today. Rising incomes will, of course, make possible new solutions: vehicles will be much cleaner: and traffic may be growing more slowly. But communities will still be confronted by more traffic, particularly on the fringes of the great conurbations, in other cities and on rural roads. Furthermore the amount of space devoted to parked and moving cars will have to be greater.

Is this the kind of future that the British people want? For the Commission, this is the key issue. It raises the question what actions, in addition to those in the 10 year plan, ought to be brought onto the political agenda? One is undoubtedly the reform of transport pricing beyond what is foreseen in the plan. Consumer-friendly pricing could deliver less congestion and more resources for innovative ideas. New lifestyles could help too. Developers promoting city centre flats under the headline 'Walk to Work' may have identified one. Legal, regulatory and behavioural changes will be needed as well.

8 What long term problems are likely to remain?

The reform of transport pricing

As indicated earlier, one set of changes to transport pricing that could move Britain further towards a low carbon economy was tested in the 10 year plan but rejected by the government. These initiatives were constant (rather than declining) motoring costs, tolls on trunk roads and widespread use of congestion charges in cities. Their effect, set out in the graphic below, would have been to reduce road traffic growth substantially below the levels foreseen in the plan.



ROAD TRAFFIC GROWTH WITH THE 10 YEAR PLAN AND WITH PRICING INITIATIVES NOT ADOPTED BY THE GOVERNMENT

Source: *Transport 2010: The Background Analysis*, Figure 13. DETR 2000

The rejected measures would also, of course, reduce congestion and emissions of CO₂. The 10 year plan gives the following figures:

	Plan	With rejected measures
Congestion	-6%	-15%
CO ₂	30 m tonnes*	29 m tonnes

* coal equivalent

Some pricing reforms are, of course, already in the pipeline. Mayor Livingstone proposes to charge £5 a day to drive into central London and claims that it will reduce traffic in a limited area by 10 to 15 per cent, thereby speeding the buses, reducing taxi times and making it easier to walk. This is a shift towards marginal social cost pricing as proposed by the European Commission in *Fair Payment for Infrastructure Use*, a 1998 White Paper.¹⁴ Such a regime would oblige all users of transport infrastructure to pay – at or close to the point of use – their full external costs.

A new study by Dr Rana Roy, *Revenues from Efficient Pricing: Evidence from the Member States*¹⁵ compares the effects of the European White Paper pricing regime with those in Britain, France and Germany in 1995 and those likely in 2005. Dr Roy suggests that a shift from today's dependence on fuel taxes towards a mix of fuel, congestion, axle-weight and toll charges could create a much fairer system. It would, for instance, reduce burdens on rural car drivers.

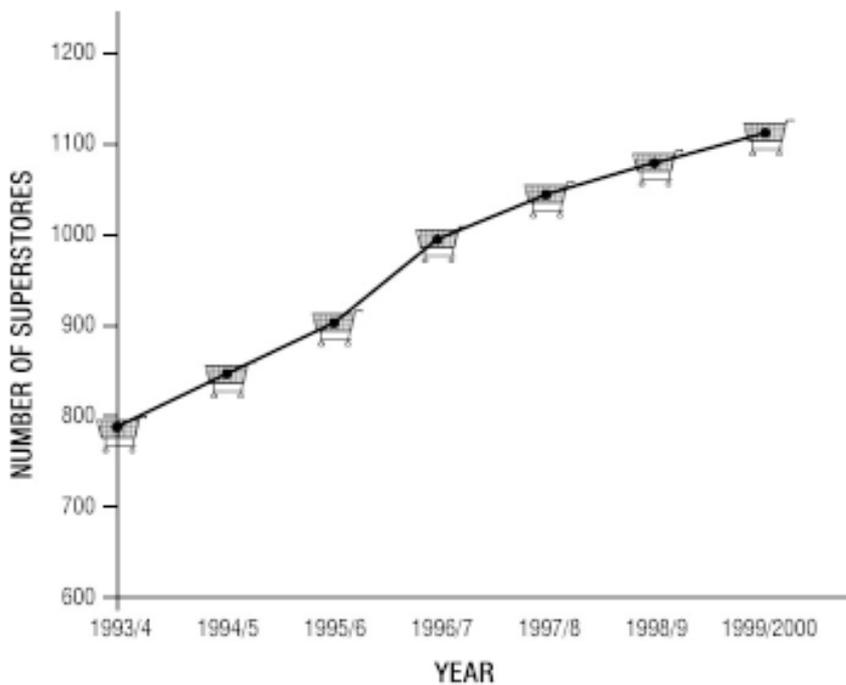
Different regimes of transport pricing can be expected to lead to very different patterns of travel and environmental impact. The Commission believes that given goals of greater fairness and efficiency and an improved environment, there is a good case for reforming existing patterns of road, rail and air transport pricing, including the subsidy of rail and road commuting. Ensuring that prices do not artificially promote mobility or the dispersal of land uses, nor create competitive disadvantages, nor impose unfairness will be major challenges.

- *How should the government move further in the direction of transport prices that would reduce social, congestion and environmental problems?*



Travel in suburbs and urban fringes

Over 25 years, even over 10 years, patterns of land use in Britain will change. The government's urban white paper, for instance, aims to give further impetus to the urban renaissance that has already got under way in cities such as Manchester, Leeds, London and Liverpool. The rural white paper, framed in the context of declining farm incomes, promises new economic development, affordable houses, and improved local services. The 10 year transport plan will contribute to improved bus, tram and rail services in cities, improved rural bus services and enhanced inter city road and rail connections for commuters and rural communities.



EVEN OVER SHORT PERIODS, PATTERNS OF LAND USE CAN CHANGE

THE GROWTH OF LARGE DRIVE IN FOOD STORES IN THE 1990s

Source: IGD

How far will this array of policy innovations contribute to an urban and a rural renaissance? With this in mind the Commission asked Professor Sir Peter Hall and Dr Stephen Marshall to consider the likely effects of the 10 year plan on land use. They identified four main effects:

- a) *In cities increased investment in transport and in the public realm leads to improved living conditions and makes inner cities more attractive to live in. Local population increases could follow.*
- b) *Investment in railways and Trunk roads radiating from cities such as Manchester, Leeds and London leads to extended commuter catchments.*
- c) *Further shifts of people from urban to rural districts adds to the number of households dependent on cars.*
- d) *Growth in long distance rail freight leads to a concentration of road/rail transfer depots, distribution centres and manufacturing around the M25 and where railways cross main roads (A14 & A45/43) from the Midlands to the East Anglian ports.*

The Commission intends to discuss this work widely and, in particular, to consider how the balance of investment between urban and inter-urban transport in 10 year plan is likely to affect the suburban and semi-urban fringe districts of larger cities. Residents in such districts encounter various transport problems. Children, disabled people and those with low incomes find it difficult to get about. Those with cars experience the frustration of queues. Rising incomes, leading to more cars and travel, will add to these problems without providing transport for all.

- *What will be the effects of investment in the 10 year plan on urban and rural land use?*
- *What travel problems are likely in suburbs, city fringes and rural areas and what should be done to reduce them?*

Making streets more liveable

A person's quality of life is greatly affected by the amount and speed of traffic passing his or her front door. This a major transport issue - even if it rarely seen as such - and with traffic forecast to grow in all kinds of places it is a problem that needs to be addressed. Traffic is already uncomfortably heavy in numerous streets and over ten years it is forecast to grow by 17 per cent in provincial towns and cities, 21 per cent on country roads, and therefore in many villages. In big cities such as Leeds, Manchester and Birmingham it is forecast to grow by 10 per cent. Small street works such as Home Zones, appropriate speed limits, repaving, new street lights, tree planting and parking control schemes are the tools currently available to offset traffic nuisances.



How can residential streets be made more liveable?

Noise

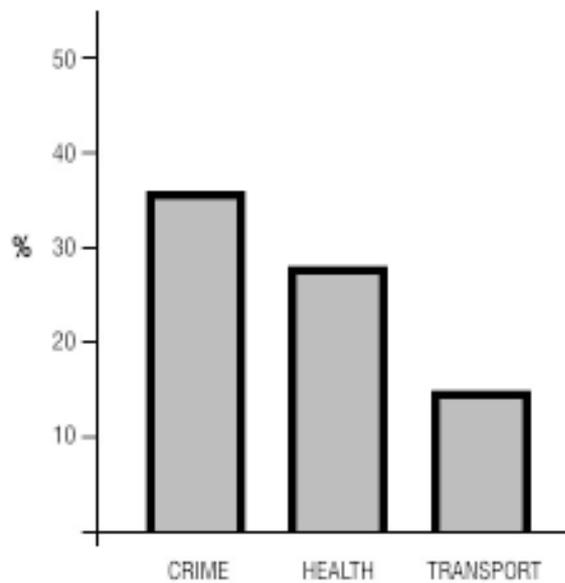
Noise nuisances are being abated by quieter paving materials and better engine design, but augmented by high-speed railways and trunk roads, growing night-time road and rail traffic. Looking ahead, a possibly unintended consequence of congestion charging could be added noise from increased use of scooters and motor bicycles.

Healthy living

The Transport White Paper of 1968 noted that car ownership can contribute to unhealthy lifestyles. Referring to coronary heart disease, the biggest killer of adults in Britain, it said: 'Part of the blame is that we drive too much when we could walk or cycle.'¹⁶ But the picture is not all bad. 'Health walks' are beginning to be prescribed by doctors. And under certain land use conditions large numbers of residents walk to work – 25 per cent in the cities of Bath and Westminster but only 7 per cent in suburban Solihull.¹⁷



Reduced car use could produce a combination of less congestion and pollution on the one hand, and fitter, healthier and more positively minded people on the other. Short journeys are the key issue. Getting on for half of all journeys are under two miles and 35 per cent of them are made by car, a big increase since the 1980s.



CONCERN ABOUT HEALTH RANKS HIGHER THAN CONCERN ABOUT TRANSPORT

Source: Public Attitudes to Transport in England: MORI for CFIT: July 2000 (2,024 interviews)

The Commission believes that, as the government rolls forward the 10 year plan, the goals of liveable streets, noise reduction and health issues should be given more prominence.

- *How can the negative impacts of increasing car ownership and use be reduced in the streets in which people live and work?*
- *What more can be done to reduce road traffic noise?*
- *How can the goal of healthy living be drawn into transport decisions?*

CO₂ emissions and fuel-efficient vehicles

The UK is a major player in international negotiations over climate change and the government's national programme demonstrates leadership and promises to move Britain from a carbon based economy. In an examination of the longer term, the programme says: 'Global emissions may need to be reduced by 60 to 70 per cent if we are to avoid dangerous climate change. Developed countries may need to make a deeper reduction, perhaps over 90 per cent.' Meanwhile the government aims, over two decades, to reduce 1990 CO₂ emissions by 20 per cent.¹⁸

Transport accounts for a quarter of UK carbon output, the third largest source and one that grew by 2 per cent in the decade up to 2000. (All greenhouse gases from transport grew by 5 per cent over the same period.) The cause of this growth was a mixture of traffic increases, traffic congestion (which increases fuel consumption per mile), more powerful goods vehicles and the popularity of large cars. Emissions harmful to health, by contrast, fell by half over the 15 years to 1999.

A key target of the 10-year plan is to cut carbon emissions from transport. The plan starts with the saving of 4 million tonnes of coal equivalent that is forecast to flow from agreements between the European Union and the motor industry. These are due to result from new cars being, on average, a quarter more economical by 2008/9 than they were in 2000. The plan aims to reduce carbon emissions by a further 1.6 million tonnes by such measures as tax discs and company car allowances that reward individuals and fleet managers who choose fuel-efficient models.¹⁹

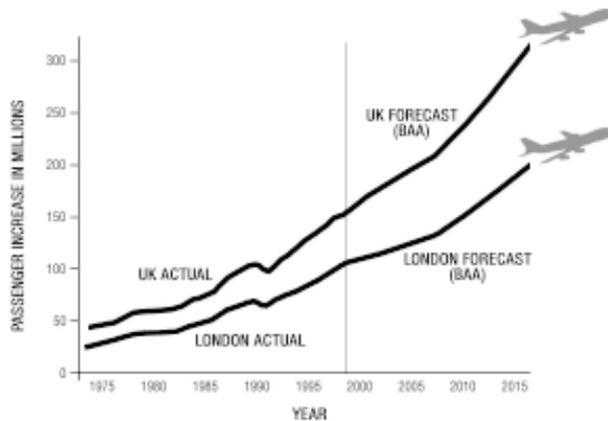
Reducing CO₂ emissions is a complex issue. Delivering the 10 year plan target for reductions in CO₂ will depend on factors such as world energy markets, technological advances, the prevalence of advertising that stresses the rewards of power and acceleration, tax regimes and even fashion. The Commission believes that successive British governments have been right to play a leading international role in this field. Britain has the necessary diplomatic skills and scientific knowledge to do so. Furthermore, only if the developed countries demonstrate that low carbon economies are practical, is there a prospect of reducing emissions globally.

- *What steps can government and the motor industry take to ensure an end to CO₂ emissions from road vehicles?*
- *How can a fundamental shift be brought about in attitudes towards energy consumption and travel?*

Air travel, airports and noise

Air travel has global and local dimensions. Globally it is part of a process of industrialisation and wealth formation that, over 15 years, is expected to double it.²⁰ This will result in increased high altitude emissions, noise and airport construction – a phenomenon that is considered under ‘Why do people travel so much?’

Within Britain, aviation is important to the economy and, between 1981 and 1998, domestic air travel grew from under 3 to 7 billion passenger kilometres. Over the same period air services were established between a widening array of provincial cities. Faced by these global and local prospects, the government is working on a 30 year aviation plan and is this year due to make a decision on Heathrow’s Terminal 5.



ACTUAL AND FORECAST GROWTH OF AIR TRAVEL TO, FROM AND WITHIN THE UK

Source: BAA Annual Report 1999/2000

The newest aircraft consume only one third as much fuel per passenger mile as they did 40 years ago but this improvement has been offset by increases in global air traffic. These trends lead the Intergovernmental Panel on Climate Change to forecast that aircraft fuel consumption could grow at 3 per cent a year. Carbon emissions would then rise from 115 to at least 245 million tonnes a year between 1992 and 2015. Aviation also contributes to carbon emissions through surface traffic to and from airports.²¹

Progress in dealing with this global phenomenon is slow. Understanding of the damage caused by stratospheric emissions is imperfect; tax is not levied on aviation fuel; and international aviation is not covered by the Kyoto protocol.

Access to airports apart, the United Kingdom is obliged to seek changes to the regulation of aviation through international negotiations. The Commission believes that the government should play a leading part in seeking to reduce the side effects of international air travel and that, within Britain, it should, with the example of Heathrow in mind, promote enhanced public transport access to provincial airports.

- *What action should be taken by the government, the European Union and the airlines to reduce environmental damage implicit in air travel forecasts?*
- *What long term policies for air travel and access to airports are needed to avoid foreseeable problems?*

9 Next steps

The Independent Transport Commission has, in this initial examination of transport in the United Kingdom, sought to identify longer term problems. Serious challenges do exist – not least understanding what lies behind the seemingly incessant growth in travel. But the Commission has found nothing that, given clarity of thinking and political will, seems insoluble. The greatest challenge is to ensure that, given prospects of increasing wealth, more travel and rising expectations, the quality of life in village, town, suburb and city is enhanced. The Commission welcomes reactions from all quarters to the issues raised in this initial report. (Addresses will be found on the title page). Having considered such responses and done further work the Commission will discuss possible solutions in professional, political and policy-making circles. The Commission's aim is to identify solutions to likely long term transport problems.

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