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Traffic Congestion [including the *Road Traffic Reduction (United Kingdom Targets) Bill 1997/98* Bill 11]

This paper looks at the forecasts of future levels of traffic, at the reasons why traffic congestion matters and considers some of the policies put forward to deal with the problems of congestion. It also provides background to the Private Members Bill, *Road Traffic Reduction (UK Targets) Bill 1997/98,* introduced by Cynog Dafis, to require government to set national targets for a reduction in road traffic. The Bill is due to have its second reading in the House of Commons on 30 January 1997.

The policies available to deal with congestion are intended to reduce the total amount of traffic. Some measures may be restrictive; others will provide improvements in the quality of transport conditions. Some will involve physical factors, others will use price as a tool. Ultimately any individual area is likely to select a variety of measures suitable for its particular circumstances, combining both the "stick" – the restraint measures – with the "carrot" – the improvements in quality of life. Each policy will have a different impact and politicians need to be aware of their objectives before introducing a particular measure: whether their aim is to reduce congestion, to reduce pollution, to encourage a change in people's lifestyle, or to raise money.

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I Introduction

The car has brought freedom, flexibility and mobility to many people but there is increasing concern about the economic cost of road congestion and the environmental effects of pollution from congested traffic. In 1994 the Royal Commission on Environmental Pollution published a report *Transport and the Environment*.[1] The Royal Commission recommended that to achieve an environmentally sustainable transport policy, the growth in road traffic (particularly car traffic) should be reduced and that public transport should meet a greater proportion of travel needs. This is one of a number of reports in recent years that have stressed the need to find ways of reducing dependence on the private car.

Despite the problems of coping with congestion there does seem to be increasing consensus on what is involved, even if policy makers seem far from agreeing on what should be done. Mass car ownership is, and will remain, a vital form of transport; and car ownership will extend yet further through society as the economy grows. The use of cars in environmentally sensitive places needs to be reduced by stronger demand management. Public transport can play a stronger role, particularly into and out of urban centres or on long distance trips between urban centres. Economic development will continue and transport solutions will vary widely from place to place: solutions for the centre of a big city are unlikely to work for the suburbs, around a market town, or the countryside.

The government has made the relationship between transport and the environment one of its key priorities. It has made both subjects the responsibility of the deputy Prime Minister, as Secretary of State heading the Department of the Environment, Transport and the Regions (DETR). He is currently consulting on a green paper on an integrated transport system with the aim of reducing congestion and pollution.[2] A white paper is promised for spring 1998. The aim is to set out an integrated transport policy to provide a "sustainable framework for decision making during the remainder of this Parliament and the years beyond that."[3] He is looking for solutions that combine social and environmental improvements, while promoting economic growth, employment and regional competitiveness. Congestion as such is only a small part of the green paper but the improvements that might come from an integrated transport policy could help the problem.

An integrated transport policy can be interpreted in various ways: the integration of transport policy with other government policies such as land use planning and other environmental policies; the integration of different forms of transport and more specifically the integration of different public transport modes to allow more seamless journeys. It may involve simple examples such as co-ordination of timetables and travel information, improving park and ride schemes, providing cycle facilities and signposting main line railway stations. Radical solutions involve permanently shifting demand to alternative transport modes: walking and cycling for shorter journeys and public transport for others. This may involve increased

[1] Royal Commission on Environmental Pollution 18th report *Transport and the Environment*, October 1994 Cm 2674
[2] Department of Transport *Developing an Integrated Transport Policy*, August 1997
[3] PQ HC Deb 5 June 1997 c.226W

investment in public transport and may require changes to the relative cost of car journeys through for example, increased parking charges or road pricing.

The Royal Commission on Environmental Pollution related transport policy to the aim of sustainable development.[4] It accepted the definition of "sustainable development" put forward by the World Commission on Environment and Development in 1987 as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[5] In *Sustainable Development: the UK Strategy***,** published in January 1994, the Conservative government put forward the following framework for a sustainable transport policy:[6]

- To strike the right balance between the ability of transport to serve economic development and the ability to protect the environment and sustain future quality of life.

- To provide for the economic and social needs for access with less need for travel.

- To take measures which reduce the environmental impact of transport and influence the rate of traffic growth.

- To ensure that users pay the full social and environmental cost of their transport decisions, so improving the overall efficiency of those decisions for the economy as a whole and bringing environmental benefits.

A report by the UK Round Table on Sustainable Development, published in June 1996, emphasised that a sustainable transport sector must satisfy economic, environmental and social needs, now and in the future, and maintain the economic and environmental means to do so.[7]

The policies available to deal with congestion are intended to reduce the total amount of traffic. Some measures may be restrictive; others will provide improvements in the quality of transport conditions. Some will involve physical factors, others will use price as a tool. Ultimately any individual area is likely to select a variety of measures suitable for its particular circumstances, combining both the “stick” – the restraint measures – with the “carrot” – the improvements in quality of life. Each policy will have a different impact and politicians need to be aware of their objectives before introducing a particular measure: whether their aim is to reduce congestion, to reduce pollution, to encourage a change in people's lifestyle, or to raise money.

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[4] op cit Royal Commission 18th report
[5] World Commission on Environment and Development *Our Common Future*, 1987
[6] Department of Environment *Sustainable Development: the UK Strategy*, January 1994 Cm 2426, p. 169
[7] UK Round Table on Sustainable Development *Defining a Sustainable Transport Sector*, June 1996

II Traffic Forecasts

In advanced countries the level of car ownership ranges from 350 to 600 cars per 1,000 population and it is normally estimated that saturation occurs somewhere round the 600 to 750 cars per 1,000 people mark, when everyone who can drive has their own car.

The Department of Transport's practice has been to produce long-term forecasts of road traffic (that is, vehicle-kilometres), rather than overall forecasts of movements of people and goods. These forecasts cover Great Britain for a period of at least 30 years ahead.

The most recent National Road Traffic Forecasts were published in October 1997.[8] The central estimate of this forecast is a growth in traffic from 1996 to 2016 of 38 per cent and from 1996 to 2031 of 60 per cent. A range of 24 per cent to 51 per cent for 2016 and 36 per cent to 84 per cent for 2031 includes most of the range of uncertainty in the forecasts. The forecasts "are based on current policies, the best available evidence of behaviour, and the capacity of the current road network" says the DETR. "They are therefore forecasts of outcomes while policies and behaviour do not change." The intention is to re-run the models every year or so to update the forecasts and to take into account major policy initiatives.

The forecast levels of traffic are largely determined by the assumptions made about economic growth. The new forecasts present slightly lower traffic growth than those of 1989, partly because economic growth is forecast to be slightly slower, but also because the forecasting methods now take into account the nominal capacity of the network. As previously, traffic is forecast to increase, because of increased standards of living, economic activity and numbers of households, but the main single factor is the increase in car ownership. Car ownership forecasts estimate increased growth of 26 per cent per household in metropolitan areas by 2031, compared with 11 per cent in suburban areas, an average 17 per cent. The 1996 ratio of car ownership for the UK was 400 cars per 1,000 people. This is forecast to increase to 520 cars per 1,000 people in 2016 and 570 by 2031.

The eighteenth report of the Royal Commission on Environmental Pollution points out that there is no simple relationship between car use and ownership and gross domestic product (GDP) per head. It looked at the car use and distance travelled in ten developed countries in relation to wealth. Of these ten countries Britain has the lowest GDP per head but came seventh in terms of car ownership per thousand people and third in the average distance travelled by car annually.[9]

A study by the Transport Studies Unit, University of Oxford in 1991 looked at the traffic growth forecasts and the effects of the increase in number of cars per household.[10] Chapter 6 considered in particular the effects of the growth of women in the workforce. It mentioned a Swedish study that found that whereas the rate of increase in car ownership is slowing down among men and nearing saturation point the increase in car ownership for women has only just begun.

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[8] Department of Transport *National Road Traffic Forecasts: Great Britain 1997*, HMSO 1997
[9] op cit Royal Commission 18th report, figure 2-VI
[10] Transport Studies Unit *Transport: The New Realism*, 1991

The Department of Transport deposited maps of current congestion and projections of future congestion in the House of Commons Library in February 1996.[11] The maps were produced by comparing measured, or forecast, traffic flows on individual links with a measure of the capacity for that link. They have been produced by the NARNAS system which provides a method of assessing the level of "stress" or "congestion" on the trunk road network. The system provides a pictorial presentation of possible existing and future problem areas, allowing a view to be formed without detailed analysis of a large set of numbers. The maps do show acute stress in certain areas, but as any individual link is subject to a wide margin of error, the marks should be interpreted as giving only a broad indication of individual conditions.

The recent *National Travel Survey 1994/96* published in October 1997 showed that at 8.50 in the morning about 18 per cent of road traffic in urban areas in term time was generated by the school run.[12] Over the whole "peak" hour from 8 to 9am, the purpose of about one in ten car trips was taking children to school. The proportion of children aged 5 to 15 travelling to school by car has increased from 12 per cent in 1975/76 to 27 per cent in 1994/96 although walking is still the dominant mode. Over the same period there have been decreases in cycling to school from 4 to 1 per cent and in travel by school buses from 9 to 5 per cent. The proportions using public buses and rail services have stayed constant at 13 and 1 per cent respectively.

[11] Deposited paper DEP/3 2895
[12] DETR Transport Statistics Report: *National Travel Survey 1994/96*, HMSO October 1997

III Does Congestion Matter?

A. Economic Effects

There has been increasing concern in recent years about the economic cost of road congestion as well as the environmental effects of pollution from car traffic. Attempts have been made to estimate the "costs of congestion" by taking the legal speed limit on roads or the standards to which they were designed as baselines from which to calculate and cost delays. A study by the British Road Federation estimated that the cost of congestion in Britain's main conurbations in 1985/86 amounted to £3.2 billion.[13] In 1989 the CBI estimated that the nationwide costs of congestion were around £15 billion per annum of which some £10 billion could be attributed to the problems of London and the south east.[14] More recently, Newbery [15]and Maddison (with Pearce and others)[16] have both valued congestion costs at £19.1 billion a year.

Any figure must be hypothetical as the conditions it assumes can never exist in the real world. But increased congestion does lead to slower, more variable journey times, which do impact on economic efficiency.

B. Environmental Effects

The Royal Commission found that emissions from road vehicles were the main influence on air quality over large areas of the UK in which there are no significant industrial emissions. The main air pollutants are carbon monoxide, nitrogen oxide, volatile organic compounds, particulates and sulphur dioxide. With the exception of sulphur dioxide, most of which comes from power stations, transport produces most of these, with almost all emissions coming from road transport.

The Royal Commission looked at the evidence of a number of studies which had attempted to quantify and to value in money terms the environmental and social costs of transport, either separately or in aggregate. This evidence was used to derive broad estimates of environmental and social costs other than congestion costs, while acknowledging the very considerable difficulties both of estimating the effects of damage and of assigning money costs to them. The broad estimates of environmental and social costs included the full costs to the community in congested conditions of pollution, noise and other intrusive social effects, but not the congestion costs which road users impose on each other. On this definition environmental and social costs were estimated to be between £10.9 billion and

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[13] British Road Federation *The Price of Congestion in Inner London,* 1986

[14] CBI *The Capital at Risk,* Transport in London Task Force Report 1989

[15] Newbery DM "Royal Commission Report on Transport and the Environment: Economic Effects of the Recommendations" *Economic Journal* September 1995

[16] Maddison D, Pearce D & others *Blueprint 5: The true costs of road transport,* 1996

£20.5 billion a year for all UK transport in 1994 prices; and environmental and social costs attributed to road transport were estimated to be between £10 billion and £18.3 billion.[17]

When it announced its second report on transport, the Royal Commission particularly sought recent material on this issue. Estimates of the overall external costs of road transport, by type and in total, have been made by Newbery and by Maddison and Pearce. Their estimates of the types of cost quantified in the eighteenth report span an even wider range, from £8 billion to £32 billion a year.[18] In 1993 Pearce estimated the cost of air pollution at £2.4 billion a year, but with Maddison he revised this to £19.7 billion in 1995 on the grounds that new research findings suggested the health effects of pollutants were more serious than previously believed.

It is almost impossible to estimate environmental costs with precision and so caution must therefore be applied in interpreting such estimates.

Congestion brings with it adverse environmental effects but not all the solutions for dealing with congestion are of direct benefit to the environment. For example, road pricing may have a major effect on the congestion levels in urban centres but it does not necessarily have an effect on the overall total amount of traffic. If the policy aim is to decrease harmful pollutants, it may be more successful to concentrate on improvements in the technological developments of better vehicle design and more efficient fuels. Toxic vehicle emissions are falling fast thanks to regulatory changes, but enforcement of emission regulations from worn out or badly maintained vehicles has not kept pace. The Cleaner Vehicle Task Force, announced by the Prime Minister on 14 November 1997 will set up a partnership between government and industry to promote the production and sales of cleaner vehicles.[19] The increase in road fuel duty by an average of 6 per cent a year in real terms will reduce emissions, as well as encouraging the uptake of more fuel efficient and greener cars. Policies such as a variable Vehicle Excise Duty could help this. All such policies will contribute to reducing carbon dioxide emissions from transport and they are also likely to affect congestion as people are dissuaded from using their cars. However the *prime* aim of these policies will be to decrease pollution levels, not to reduce congestion.

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[17] op cit Royal Commission 18th report, para 7.16-7.17

[18] Royal Commission on Environmental Pollution, 20th report, *Transport and the Environment - Developments since 1994*, September 1997 Cm 3752, Table 1.1

[19] DETR press notice 14 November 1997 "Gearing up for a cleaner future"

IV Investment in the Infrastructure

A. Roads

From the late 1950s onwards the transport planning orthodoxy was that future traffic was forecast and then the road space built to accommodate it. The last major roads programme was published in 1989.[20] This "predict and provide" approach has become largely discredited and the roads programme has been progressively cut back. It is now accepted that road capacity cannot be matched to forecast demand and other solutions have to be found. Quite apart from the environmental objections, funding from the public purse is strictly limited and it would be impossible to build roads to cope with the projected increase in the volume of cars forecast.

In June 1997 the government announced a review of the trunk roads programme.[21] Its objective is to determine the role that roads should play in an integrated transport policy and to establish a forward investment programme for the trunk road network in England. Scotland and Wales have separate reviews. The trunk road network in England is 10,500 kms long and although it comprises only 4 per cent of the length of all roads, it carries a third of car traffic, over half of goods traffic and a fifth of bus and coach traffic. The review will not merely consider which road schemes will be added or deleted from the trunk road programme, but will look at the environmental impact of roads and take account of the parallel review on an integrated transport policy.[22] It is due to report in the spring of 1998.

The review does not rule out that there may be situations in which increasing capacity is the best of the available options. The government remains committed to seeking ways for the private sector to contribute to the provision of the transport infrastructure including, where appropriate, road construction and maintenance projects.

Other options set out in the review include making better use of the existing road infrastructure. There is an extensive range of tools either in existence or being developed which can aid the effective management of the road space. Many of these make use of new technology. Controls on access (limiting the number of vehicles entering a junction) and speed (setting and enforcing variable speed limits to smooth flows) are being piloted. Improved journey information in the home (e.g. teletext), in the car (e.g. radio traffic broadcasts) and on the road (e.g. variable message signing) assist travel choice. Travel information can also be more closely linked to park and ride sites and other transport interchanges, such as mainline stations. Space can be reallocated away from general traffic to more selective uses such as bus lanes or cycle tracks. The use of dedicated lanes for buses can help make them more reliable and help increased use of alternative transport. Road space could also be allocated to lorries or to pedestrians.

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[20] Department of Transport *Roads for Prosperity*, 1989
[21] Department of Transport press notice 19 June 1997 "Gavin Strang announces comprehensive roads review"
[22] Department of Transport *What Role for Trunk Roads in England?* A *Consultation Paper*, HMSO 1997

Increasingly, more reliable journey times may be as important as faster journey times.

It is not just the cost of building new roads which is under discussion, but whether they should be built at all. In December 1994 the Standing Committee on Trunk Road Assessment (SACTRA) published a report suggesting that increased road capacity can, in some circumstances, prompt the generation of extra travel.[23] This has led some commentators to argue that as all new roads lead to more traffic, the most effective deterrent to increased use of the car is to leave the roads as they are. While this may be a means of making congestion self-regulating, it would also lead to higher levels of pollution, affect the efficiency, speed and reliability of bus services, reinforce car dependant lifestyles and have a generally adverse effect on the quality of life. It is accepted, however, that more road capacity will only provide temporary relief to urban congestion problems as the relief initially afforded will be eroded over time by induced traffic.

It is also argued that although road capacity cannot be matched to forecast demand, that demand is subject to influence.[24] The view that a traffic scheme will lead to all traffic being displaced from one street being diverted to others is not true as travel patterns are changeable and reactive, not stable. Timescale is also important: long term demand responses may be different from short term. The effects of pedestrianisation provide an example. There is an immediate reduction in traffic, often a short term negative effect on trade that lasts a year or two, then a growth in the number of pedestrians and retail turnover.

B. Public Transport

As road capacity cannot simply increase to deal with increased traffic, improved traffic management and more investment in public transport will be required. The consultation paper on an integrated transport policy asks for ways in which greater use can be made of railways, buses and other forms of public transport, but it also adds that respondents should bear in mind "the tight constraints of pubic funding".[25]

If public transport is to be viewed as an alternative to the car and entice car users out of their cars, it will need to be improved. Cars are preferred because they can provide a quicker journey door to door, they may be needed at work, the return journey time is often unknown and they provide safety. Drivers may be combining a journey to work with taking children to school or meeting someone at the station (so called "combination journeys"). It is also viewed as being cheaper to travel by car. Yet public transport can furnish an alternative in many cases if it is properly organised and funded. It must operate when passengers want to use it, and it needs to be comfortable, reliable, safe and accessible. It is more difficult to cater for the combination journeys. These are very much a feature of present life styles, but measures such as park and

[23] Department of Transport *Trunk Roads and the Generation of Traffic*, HMSO December 1994; *The Government's Response to the SACTRA Report*, HMSO December 1994

[24] Goodwin, PB *Solving Congestion*, Lecture presented on 23 October 1997, ESRC Transport Studies Unit, University College London

[25] op cit *Integrated Transport*, para 15

ride can offer some alternative. Time may also be difficult to deal with: although the actual in-vehicle time can be competitive with the car, it is the getting to the bus or train and the waiting that make the car more attractive.

Following deregulation of the buses and the sale of most of the companies to the private sector, the bus industry has become very fragmented. If drivers are to be persuaded to give up some of their car journeys, there needs to be more investment in passenger information, interchanges (whether it be changing route, vehicle or mode), and in through fares and ticketing. The same is true of rail journeys where the Rail Regulator appears to be finding it hard to persuade the privatised rail companies of the need to provide better passenger information.

There are several major public transport projects either under construction or planned. In London, for example, an extension to the Jubilee Line to Stratford via Docklands and the Greenwich peninsula is under construction and due to be completed in 1998 at a cost of around £1.9 billion. The go-ahead has been given for the construction of the Channel Tunnel Rail Link under the Private Finance Initiative (PFI). Some light rail schemes have recently been developed to meet local transport objectives. Systems, such as the Greater Manchester Metrolink, have been very successful, although others, such as the Sheffield Supertram, have been less so. These schemes are expensive and can be less flexible than some other forms of public transport. Guided buses and trolleybuses have some of the attributes of light rail. Guided bus systems use conventional buses adapted to run on a guideway but can revert to normal street running for some sections of their route. In Leeds a demonstration guided bus scheme is being promoted by the city council in collaboration with West Yorkshire passenger transport executive (PTE) and the bus operators. There has been a revival of interest in trolleybuses. They last ran in the UK in 1972 (in Bradford) but South Yorkshire PTE has obtained parliamentary powers to operate them in Doncaster and Rotherham.

Cost, however, is not the only limitation to meeting the problems of congestion through improvements to public transport. Studies show that public transport improvements are not very effective in persuading large numbers of car owners to leave their cars at home. Even though higher quality public transport often achieves a large increase in ridership, most of the passengers are attracted from other forms of public transport or previously walked or cycled. The Chartered Institute of Transport looked at a number of surveys for its report, *Better Public Transport for Cities.*[26] It found that the strategy studies predicted increases in public transport use of 14 to 20 per cent from large reductions in fares. Major quality improvements led to increases in patronage of over 25 per cent in the UK and 50 per cent or more in some continental cities. But the overall reduction in car journeys as a result of halving fares was in the range of 2 to 2.5 per cent and in vehicle kilometres was some 1 to 1.5 per cent. Improvements in quality of service were more successful in reducing the car's share with reductions in car kilometres of 3 to 9 per cent for urban areas as a whole and 6 to 12 per cent for trips to the centre.

This is not so surprising if one considers the change in behaviour patterns that increased car ownership has brought. Many of the new journeys generated when a car becomes available seem to be non-essential in that they were not made before the acquisition of a car. One

[26] Chartered Institute of Transport *Better Public Transport for Cities*, June 1996

commentator has estimated that if one could re-establish the level of public transport service and patronage to that which existed in 1955, 48,000 million passenger kilometres would be transferred back to buses. Yet this would only reduce the amount of car travel by 8 per cent.[27]

The conclusion must be that even successful transport improvements are unable to achieve a large shift from the car unless complementary measures are taken to restrain car use.

For politicians there will be the added financial problem. It may be necessary to spend on improvements to public transport first, before the revenue producing measures, such as parking charges or road pricing, are introduced, in order to make tough solutions politically palatable. Public accounting conventions add a further problem, as urban traffic charges are classified as a tax rather than a charge. Any income from road pricing therefore goes to the Exchequer and money for improved public transport comes from the Treasury. This will not be seen as compatible with a policy of reducing tax and public expenditure as a proportion of GDP. There is a precedent for change in what happened to parking charges: in 1991 it was decided that the revenue raised from most parking charges could be collected by the local authorities and spent by them on improvements to local transport.[28] It would make restraint measures politically more acceptable at a local level if it could be seen that any increased charges were having a direct affect on the local transport system.

C. Planning

The need for integration between transport planning and land use planning has been emphasised in guidance from the Departments of Transport and Environment. The subject is covered in the planning policy guidance (PPG13), dated March 1994, giving advice to local authorities on the exercise of their development planning and control functions. Under the heading "Planning for less travel" it states:

> "In preparing their development plans, local authorities should co-ordinate their policies for transport and other forms of development. Development plans should aim to reduce the need to travel, especially by car, by:
>
> - influencing the location of different types of development relative to transport provision (and vice versa); and
> - fostering forms of development which encourage walking, cycling and public transport use.
>
> To meet these aims, local authorities should adopt planning and land-use policies to:

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[27] Woottan, John *Reducing Car Travel: the Limitation of Public Transport*, Centre for the Management of Traffic and the Environment (CMTE) October 1997

[28] *Road Traffic Act 1991* cap 40

- promote development within urban areas, at locations highly accessible by means other than the private car;
- locate major generators of travel demand in existing centres which are highly accessible by means other than the private car;
- strengthen existing local centres - in both urban and rural areas - which offer a range of everyday community, shopping and employment opportunities, and aim to protect and enhance their viability and vitality;
- maintain and improve choice for people to walk, cycle or catch public transport rather than drive between homes and facilities which they need to visit regularly; and
- limit parking provision for developments and other on- or off-street parking provision to discourage reliance on the car for work and other journeys where there are effective alternatives."

PPG13 marked a significant advance in terms of formal codification of governmental support for the principle of using land use planning controls to regulate transport activity in favour of more environmentally benign modes. But it contained no explicit targets and provided local authorities with no new mechanisms for promoting or funding public transport. The present government regards the closer integration of transport and land use planning as an important part of its current wide ranging review of transport policy.

Land use policies will only have a limited benefit on urban congestion as, in the UK today, there is little room to manoeuvre as the new, and therefore moveable, development is only a very small proportion of the total development of any urban area. Furthermore controlling land use and making urban areas more compact only reduces people's *need* to travel rather than reducing their *desire* to travel.

All government departments may be affected by the need to reduce traffic. The siting of a general hospital or an education policy which allows school choice will affect car journeys and congestion. Industry will also be affected: companies now rely on regular, frequent deliveries from distribution centres rather than keeping stocks themselves.

Future working habits may affect congestion in the future. A study commissioned by the RAC found that as information technology allows more people to work and shop at home, truck journeys will be cut by 20 per cent and commuting by 18 per cent in the next ten years.[29] A similar result was predicted in a study by the Home Office Partnership, on behalf of the DETR.[30] It found that Cambridge's peak hour traffic could be reduced by 30 per cent if all organisations in the city took up new forms of working. Overall travel time, distance travelled and polluting emissions could be cut by 8 per cent without reducing business efficiency.

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[29] RAC *Motors or Modems*, November 1997. Reported in *Financial Times* 14 November 1997 "More computing, less commuting"

[30] The Home Office Partnership *Assessing the impact of advanced telecommunications on work related travel*, October 1997. Reported in *Financial Times* 27 October 1997 "Teleworking could ease city congestion"

V Measures to Reduce Congestion

A. Introduction

Transport planners have been trying to reduce the impact of the private car in urban areas for many years as a result of concern about air quality and the economic consequences of congestion. Exhortation to leave your car at home continues but seems to have little effect. Car drivers are much in favour of better public transport and its increased use - but usually only for everyone else. Despite efforts urban traffic congestion is still rife, and probably growing in most cities.

There is considerable consensus about what an urban transport policy should involve. It will consist of an improved and expanded public transport system, and will involve the control of land-use changes and new development in such a way as to reduce journey and car use wherever possible. However these alone are unlikely to be enough and there will need to be positive efforts to contain or reduce the total volume of traffic. Thus an urban transport policy will include traffic calming to reduce the dominance of vehicle traffic, and traffic restraint and traffic management aimed at reduced flows and increased reliability. It will include better provision for pedestrians and cyclists, and means of improving existing public transport, through bus lanes and bus priority measures, as well as encouraging its use through, for example, 'park and ride' facilities. More radical proposals include charging people directly for the congestion.

The conclusions reached by many of the transport academics and practitioners are that "carrots", combinations of public transport/cycling/traffic management measures, are not enough to reduce traffic in city centres and that restraint measures, such as parking controls or road pricing are needed as well. It is also argued that to achieve public/political acceptability for such policies, improved public transport, providing alternative means of travel, needs to be in place before the restraints are introduced.

A number of points need to be borne in mind when considering possible policies to deal with congestion. Many of the policies mentioned in this section will improve the flow of traffic or dissuade the numbers entering a particular town, but the danger is that once the situation improves, the cars will immediately return. Any improvement in traffic conditions, whether it be by increasing the capacity of the road system or reducing the demand for use of the system, can be eroded over time by congested traffic. A reduction in congestion will have the potential to induce extra trips and traffic, which would not otherwise have occurred. It follows from this that all assessments of measures to reduce congestion should take account of the potential for induced traffic.

Various studies of British cities suggest that radical measures to restrain car use through controls over the amount and price of car parking or the introduction of a road pricing system offer a

good prospect of reducing the amount of car travel and the length of journeys.[31] However if they are applied only to a central area, restraint policies will not have a large effect on the overall volume of car travel. It might reduce central car journeys by 10 to 40 per cent but over the city as a whole the reduction in road traffic might be only three to nine per cent. This would not make a big contribution to the reduction of CO_2 emissions.

Lastly, although the aim is to reduce the number of cars it is not necessarily to reduce the amount of travel. Indeed in most cases it is desired that the economic and social policies of an area should continue. As a result the quality and convenience of public transport will be important.

B. Traffic Calming

In Germany, the Netherlands and many other countries traffic calming has been introduced with the specific aim of reducing the dominance of vehicle traffic and changing the balance of power in streets in favour of residents, pedestrians and cyclists. In this country it has been seen mainly as a road safety measure whereby traffic speeds are reduced and accidents prevented.

Under the *Traffic Calming Act 1992*, which amended part of the *Highways Act 1980*, and the *Highways (Traffic Calming) Regulations 1993*,[32] highway authorities are permitted to introduce traffic calming measures such as chicanes, build outs, pinch points, gateways and rumble devices. Previously there was only clear legal authority for the installation of road humps under the *Highways (Road Humps) Regulations 1990* (now replaced by the *Highways (Road Humps) Regulations 1996*[33]). Many highway authorities had been discouraged from implementing traffic calming schemes such as chicanes or rumble strips for fear of prosecution for causing an obstruction in the road.

A highway authority is empowered to control traffic in its area by traffic regulation orders (TROs) made under parts I and IV of the *Road Traffic Regulation Act 1984*. Section 2 sets out what TROs may be used for and it includes almost anything prohibiting, restricting or regulating the use of a road by traffic or pedestrians. 20 mph speed zones could also be introduced under this legislation. TROs may be used for:

> "**1**. (1) The traffic authority for a road outside Greater London may make an order under this section (referred to in this Act as a "traffic regulation order") in respect of the road where it appears to the authority making the order that it is expedient to make it–
>
> (a) for avoiding danger to persons or other traffic using the road or any other road or for preventing the likelihood of any such danger arising, or

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[31] op cit *Better public transport for cities* 1996
[32] SI No 1943
[33] SI No 1483

> (b) for preventing damage to the road or to any building on or near the road, or
> (c) for facilitating the passage on the road or any other road of any class of traffic (including pedestrians), or
> (d) for preventing the use of the road by vehicular traffic of a kind which, or its use by vehicular traffic in a manner which, is unsuitable having regard to the existing character of the road or adjoining property, or
> (e) (without prejudice to the generality of paragraph (d) above) for preserving the character of the road in a case where it is specially suitable for use by persons on horseback or on foot, or
> (f) for preserving or improving the amenities of the area through which the road runs, or
> (g) for any of the purposes specified in paragraphs (a) to (c) of subsection (1),of section 87 of the Environment Act 1995 (air quality)."

The statutory procedures for local authorities to make TROs in England and Wales are laid down in the *Local Authorities' Traffic Orders (Procedure) (England and Wales) Regulations 1996*.[34]

C. Bus Priorities and Red Routes

Buses provide the main means of transport to many who do not drive a car and are the main alternative to cars in urban areas. Bus services are particularly susceptible to congestion. Passengers are deterred because of slower and less reliable services; delays increase operating costs and so increase fares. Allocation of road capacity to buses improves their speed and reliability for the public and is also commercially advantageous to the operator. Increasing use is being made of "quality partnerships." Under such partnerships, operators provide vehicles to a specified quality, and the local authority provides assistance through traffic management schemes or other facilities.

Bus lanes are road lanes where buses have priority and are the commonest form of bus priority measure. A traffic regulation order under the *Road Traffic Regulation Act 1984* must be made to identify the length of the bus route and to limit its use to those types of bus and other vehicles the authority wishes to allow. Regular and consistent enforcement is essential to their success.

Buses can also be given priority at road junctions, either by permitting buses to make a turn prohibited to other traffic or by adjusting signals when a bus is detected in the traffic. Allowing buses to make a turn prohibited to other traffic is a measure that is usually cheap to install and which can give buses a considerable advantage. Research into the safety aspects indicates that very few accidents involve buses making an exempted turn.[35] To adjust signals, buses can be fitted with an electronic device which can be detected either by satellite using GPS techniques or by static equipment in the highway, linked to the traffic signal controller. The most common form is to fit a bus with a transponder which is detected as it passes over an inductive loop

[34] SI No 2489.
[35] Brownfield J and Devenport J *Road Safety Issues for the Design of Bus Priority Schemes*, 1989 TRL report CR 180

slotted into the road surface. Such systems have been found to provide significant benefit to buses.[36] In some bus fleets, the traditional transponder is being replaced by a newer, cheaper device called a "tag."

In most large urban areas, traffic signals are controlled by some form of computer based urban traffic control system. About half of these are on fixed time plans which rely on historic traffic patterns being repeated in a predictable way. To deal with these problems the Transport Research Laboratory (TRL) has developed an on-line system called SCOOT. This responds continuously to actual traffic demands being detected on the network, and makes continual small adjustments to signal timings to reduce traffic delays. The SCOOT system typically achieves 10 to 15 per cent reductions in delays compared to fixed systems and has now been installed in over 130 cities in the UK and overseas.[37] The newest version showed savings of between 20 and 30 per cent in tests.

The *Road Traffic Act 1991* provides for the designation of Red Routes. These are routes where stopping is strictly controlled to ease the flow of traffic. Double red lines indicate that stopping is prohibited at any time and single red lines indicate where stopping is prohibited at certain times. The only exemptions to red line restrictions are buses at stops and stands, licensed taxis picking up or setting down passengers, the picking up and putting down of a disabled person, for emergency purposes and to avoid an accident. Buses have benefited from the general reduction in congestion and the more reliable journey times. Local authorities outside London can use their powers to establish urban clearways and to introduce stringent waiting and loading restrictions on what they regard as priority routes.

D. Walking and Cycling

Walking and cycling are cheap and healthy – but many urban areas need major remodelling to make them more attractive and to achieve the quality of amenity found in European cities.

1. Walking

A Walking Steering Group was set up at the Department of Transport under the previous administration and on 20 December 1996 it issued a discussion paper, *Developing a Strategy for Walking*.[38] The document summarised what is known about walking as a means of transport and identified reasons why people no longer walked so much. It admitted that little was really known about why it had declined and suggested research may be needed to understand the wide range of transport, environmental and social issues influencing walking as a means of transport. The document outlined a number of factors it believed had contributed to the decline in walking, including the predominance of motorised transport, increasing car ownership, a decline in public transport use, the suburbanisation of cities and

[36] Hounsell, N B and MacDonald, M *Bus Priority by Selective Detection,* 1988 TRL report CR 88
[37] Department of Transport *The SCOOT Urban Traffic Control System*, Traffic Advisory Leaflet 4/95, April 1995
[38] Walking Steering Group *Developing a Strategy for Walking*, Department of Transport 20 December 1996

towns, and an increase in the number of children driven to school. It also suggested some possible ways of making walking more convenient, more pleasurable and safer. These included highway and transport design measures, improved routeing and signing, better personal security (including street lighting), and legislative measures on speed limits and vehicle design. The document also highlighted areas of good practice from around the UK, including the "footstreets" scheme in York, schemes in Birmingham where subways have been replaced by surface crossings, and Worcester with its 2.4 km of traffic free shopping streets. The good practice section lists three authorities who have issued pedestrian policy statements - the City of Edinburgh, Lancashire County Council and the London Planning Advisory Committee. It also referred to the "Safe Routes to School" project (discussed below). To establish a national walking strategy the document calls for increased co-operation between organisations and the general public, and the establishment of working groups to identify factors which inhibit walking and areas of possible future research. It hoped it would lead to the preparation of a good practice guide.

Three working groups have been set up and a Walking Strategy will probably be published in the early summer, a few months after the government's white paper appears. Measures to improve safety for child and adult pedestrians is also a priority of the road safety strategy announced by Baroness Hayman on 15 October 1997.[39]

2. Cycling

Cycle use in the UK has declined as a form of transport in recent years in contrast with some of the other European countries. Cycling accounts for less than 2 % of trips in this country compared with 11% in Germany, 15% in Switzerland and 18% in Denmark.

The government's general policy is to encourage local authorities and others to improve conditions for cycling, particularly on urban roads. This will be done through "the publication of information on good practice and through dialogue with the providers."[40]

Both the present government and the previous one support the National Cycling Strategy, published in July 1996, with the aim of a fourfold increase in cycling by 2012. It aimed to establish a culture which favours more use of bicycles; to develop sound policies and good practice and seek out innovative means of improving access for cyclists. It wants to double cycle use by 2002 and to double it again by 2012 and to increase cycling within existing financial resources by use of the planning system and diversion of resources form other modes. It was developed through a partnership of public and private sector bodies and co-ordinated by the Department of Transport. A National Cycling Forum has been established to guide the delivery of the strategy

Another initiative is "Safe Routes to School", designed to encourage safer journeys to school and to reduce the number of school journeys by car. Figures from the National Travel Survey

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[39] DETR press notice 15 October 1997 "Baroness Hayman confirms new road safety target will be set"; PQ HC Deb 19 November 1997 c.195W

[40] PQ HC Deb 3 June 1997 c.165W

showed that nearly a fifth of peak-hour traffic was for "escort education" purposes, taking children to school. The “Safe Routes to School” project was launched in 1995 by a consortium of local authorities together with Sustrans, the charity which finances and builds cycles routes. The two objectives of the project were:

- To improve the safety and well-being of those school children who already travel to school independently

- To give pupils, parents and schoolchildren the confidence to make the transition away from travelling by car and towards walking and cycling.

The first stage of the project was to analyse the travel patterns of pupils at the sample schools and the next was to introduce physical measures to eliminate the most dangerous aspects of the journeys made to those schools. The project is supported by the DETR and it and other government departments are all trying to create an environment in which people feel their children could cycle to school through, for example, the provision of road safety talks and of cycle stands.

E. Park and Ride Schemes

Park and ride schemes may involve buses or trains. Cars are left in out-of-town car parks and buses are provided to take drivers into town centres. Such schemes usually go hand in hand with some pedestrianisation of city centres. Rail park and ride is of growing importance. In south east England, for example, some 17 per cent of the region's mainline rail passengers park their car at or near a station, about half in a car park. For those travelling into London, park and ride use increases to 21 per cent, and to over 30 per cent of those travelling over 25 km by rail.[41] "Railheading" is a potential problem: the provision of station car parking may encourage drivers to drive part way to London rather than use their local station. One example is Gatwick, where many of the spaces provided for air travellers are used by commuters who catch the express train to Victoria.

For most towns, however, bus park and ride is the norm. Government policy backs park and ride through planning guidance PPG13 and park and ride led package strategies have been supported in 24 local authority areas. Some 30 towns in the UK now have such schemes. Park and ride would seem to be compatible with current integrated transport policy aims, encouraging drivers on to high quality bus or rail services with good interchange facilities, especially if combined with bus priority measures and town centre parking restrictions. In these circumstances the motorist may well be tempted to leave his car and switch to public transport. Park and ride may, however, lead to increases in the overall movements by car although the extra car use adds little to congestion as it occurs on the outskirts of the built up areas.

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[41] Palmer DJ "Developing a parking policy and how to use it effectively in a wider transport policy", *CIT Proceedings* September 1997 vol. 6 no.3

The problems in setting up viable park and ride schemes were raised in a report on their possible use in London, by the London Boroughs Association.[42] The author argues that:

> "schemes need very careful planning, the biggest problem usually being finding suitable sites. Clear objectives and a thorough assessment of need are vital, as is effective publicity and marketing. People must be shown the practical benefits of changing their travel habits. This can be extremely difficult. So the 'service' - car park and bus journey - must be attractive, welcoming, convenient, safe, easy and pleasant to use ... In particular the car park site must be on or close to a main road, easily accessed and visible from it. The site must have excellent security - both for the users and their vehicles. This is vital for success."

In their own report on traffic congestion, the environmental lobby group, Friends of the Earth, argued that a further requirement for success is for the number of car parking places in a town centre to be reduced significantly, while the number available at park and ride sites be expanded.[43] The report cites the successful use of park and ride schemes in several German towns, Lubeck in particular, which instigated a near total ban on car traffic in the city centre over weekends. It concludes:

> "Although park and ride is often targeted at the journey to work, this is rarely effective when parking is available to commuters in the centre. For example, most of the users of Cambridge park and ride are shoppers, while commuters continue to use the private off-street spaces in the city centre, which are still not fully occupied."

A study of bus based park and ride schemes was carried out by the TRL in 1993.[44] One of the aims of this study was to assess the effect on congestion of car drivers switching to park and ride. Some effects of park and ride on traffic congestion were identified from the findings of the questionnaire on which the Report was based and a review of the published literature. None of the papers/articles demonstrated conclusively that park and ride reduced urban traffic congestion. A number of articles implied that the existence of a park and ride scheme would reduce the number of cars entering a town centre by the number parked at the park and ride sites. The report quoted figures on Canterbury which estimated that 4 per cent of traffic on the A28 into Canterbury diverted to the park and ride site whilst others claimed that 5.5 per cent of traffic entering Oxford was diverted to park and ride. The report concluded that even at this level of diversion the liberation of suppressed demand for travel into a town centre often results in there being no real reduction in traffic levels. Equally, lack of any increase in traffic is a success in itself. Evidence from Oxford is that there has been no increase in car traffic in the city centre for the last twenty years, a major achievement given rising car traffic levels. As the report points out this is not entirely due to park and ride but

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[42] London Boroughs Association *The scope for Bus Park and Ride Schemes in London*, August 1992
[43] Friends of the Earth *Less Traffic Better Towns*, July 1992
[44] Pickett MW and Gray SM *The effectiveness of bus-based Park & Ride*, TRL Report 207

also to a number of other factors such as parking fees, number of parking spaces, increased enforcement and other traffic management measures.

The results from the study showed three ways in which park and ride sites could generate more traffic:

1. Reduced travel into town centres. The diversion of journeys into a park and ride site will result in fewer cars being driven into the urban area if park and ride users originate from the sector of the town where the site is located. It is estimated that 75 per cent of users travel from the sector of town where the park and ride is located, but the remaining users would probably travel further.

2. Generation of longer journeys. Some motorists may have made longer journeys in order to travel by bus from the park and ride site rather than drive in congested traffic conditions to a town centre car park, or to visit a town with park and ride in preference to one nearer their journey origin. Both these situations will result in extra traffic using the roads leading to the park and ride site: roads which are unlikely to be in the urban area unless a trip is made across town. The extra mileage generated therefore is likely to be outside the urban area and most journeys are likely to be undertaken outside peak periods.

3. Generation of extra car trips. In one of the four towns studied in detail a third of park and ride users travelled to the town more often following the introduction of such a scheme. Conversely local people, who previously travelled further afield may be attracted to their nearest town/city by park and ride thus reducing journey length. Between 10 and 25 per cent of park and ride users in the study would have travelled by public transport if the park and ride service had not been available.

The effects on traffic congestion of park and ride schemes are therefore not at all clear cut. However the reduction of traffic congestion may be only one of the objectives which a park and ride scheme is intended to achieve. The TRL Report finds that:

> "These conclusions and others within the report, support the view that Park & Ride needs to be examined carefully in terms of what it is hoped to achieve. It is not in itself a panacea and is much more likely to succeed if introduced as part of a comprehensive transport strategy. It is possible, for instance, that Park & Ride will achieve the Government's objective of enhancing the vitality and viability of town centres even if it does not reduce urban traffic congestion".

More recent research by the Transport Studies Unit at Oxford University into the effects of park and ride in York and Oxford found that congestion has not been reduced but that "congestion equilibrium" had been maintained.[45]

The DETR has commissioned further research to discover what happens to private car mileage when sites come into operation.[46]

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[45] Parkhurst, Graham *Park and Ride: could it lead to an increase in car traffic?* Transport Studies Unit 1996

F. Car sharing

High-occupancy vehicle lanes (HOV) are special road lanes for the exclusive use of cars carrying two or more people. They are well established in the USA where they have helped to reduce traffic volumes. They are easier to operate in the USA with its freeways with large numbers of lanes. The main advantage is that they encourage car sharing by people who previously travelled alone, thus reducing the total amount of traffic. A clear understanding of an HOV and easy recognition of such a vehicle would be essential for enforcement purposes.

To date there appears to have been relatively little use of these schemes in the UK - though a pilot scheme was introduced in Ireland last year,[47] and a similar scheme is to be launched in Edinburgh next year.[48] A second type of scheme - whereby driver-only vehicles are banned from one or more lanes of a trunk road - is being considered in Leeds.[49]

Car pooling or sharing schemes in this country have been notable to date for their failure to make a significant contribution. Two of the main drawbacks are the lack of flexibility of travel time and the limited potential seen for making sharing or pooling arrangements. Potentially, both these may be overcome by the introduction of computerised brokerage systems which provide travellers with greater ride-sharing opportunities for a fee. Encouragement by employers may provide the key to greater success with this type of policy.[50]

A study of employer-backed car sharing schemes was published in 1997 by the lobby group Transport 2000:[51]

> "Free taxi rides home for car-sharing workers who have to stay late and shuttle buses between home and office are some of the incentives companies are using to help take vehicles off the road. For employers, the potential benefits include reduced traffic congestion on-site and on nearby roads, a reduction in employee stress caused by driving and the freeing up of parking spaces for more productive use. Several companies around the UK have already set up schemes aimed at cutting commuting by car."

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[46] *Local Transport Today* 6 November 1997 "Park and ride studies suggest assumed benefits do not always add up"
[47] *The Irish Times*, 27 September 1996 "Car share scheme to get trial on Irish roads"
[48] *Scotland on Sunday*, 6 April 1997 "Car pool scheme trial for capital"
[49] *Guardian*, 26 June 1997 "Dummy run for multi-use cars"
[50] Coombe, Denvil *Urban Congestion: are the solutions cost effective?* Paper presented at conference on Urban Congestion, 10 July 1997
[51] Transport 2000 *Changing Journeys to Work* 1997

Successful programmes highlighted by the initiative include:

> Boots' Nottingham headquarters where more than 500 of the 6,000 staff registered for a car-sharing scheme within its first six months. Incentives to join included a free taxi ride home at the end of the day if a sharer had to work late. and missed his car home. Boots hopes to reduce car commuting by 10 per cent over the first three years and a further 10 per cent over the next five years.
>
> Thames Water in Swindon found its free shuttle buses between the town centre and its offices often carried only a handful of passengers. Following discussions with staff the buses were re-routed to two residential areas and passenger numbers grew. The scheme also proved popular with other workers on the same business park who pay a reduced fare. The company calculates the buses cost £275 a year per employee but leasing additional car parking space would cost nearly double.

According to a PQ there are two current research projects assessing the effectiveness of shared vehicle arrangements in Germany and other European countries, which should be published early in 1998.[52]

G. Green Transport Plans

"Green Transport Plans" are plans introduced by employers to reduce the impact of their transport patterns on the environment, including reducing the impact of their employees' travel. They are an opportunity to raise the awareness of organisations and their employees about the consequences of their transport choice and the benefits of choosing suitable alternatives. It can cover a range of issues including commuting, business travel, fleet management, deliveries and other commercial activity. They can be as simple or as complex as suits the work of the department or its location.

The aim of green transport plans is to improve air quality, reduce health risks and reduce congestion in towns and cities by:

- reducing the level of unnecessary travel, and
- encouraging the travel that does have to take place to do so in a way which minimises the environmental impact.

In 1997 the government, businesses and environmental groups launched a 'green commuting' initiative aimed at showing companies that quite small changes in organisation or office sites could pay dividends. According to Transport 2000, experience of companies shows that changing employee commuter habits involves careful preparation, detailed staff discussions

[52] PQ HC Deb 14 November 1997 c.696W

and sustained publicity campaigns. The seven companies involved in the green commuting initiative are The Body Shop, Boots, DHL International, Hewlett-Packard, NatWest, Richard Rogers Partnership and the Royal Mail.[53]

H. Taxation Measures

Motoring taxation is made up of two elements, vehicle excise duty (VED), which can be considered a tax on ownership, and fuel duty, which is a tax on use. Over the years the balance of taxation has shifted towards fuel policy and the policy of recent UK governments has been to charge duty on road fuels at rates which will not only raise sufficient revenue but also take account of the need to conserve finite stocks of fuel and of the general environment. The Royal Commission on Environment Pollution, in its twentieth report, proposed increasing and graduating VED and new taxes on road and fuel use. It also suggested reforming a tax system which encourages the use of company cars but gives no help with the purchase of season tickets, and does not tax the benefit of a free company parking space.[54]

The Department of Transport publishes an annual table showing the relationship between the revenue from road taxation (VED and fuel duty) and the public sector costs of road infrastructure in Britain.[55] The most recent edition is reproduced overleaf. It does not, of course, include those economic and environmental costs that the Royal Commission was trying to quantify.[56]

1. Vehicle Excise Duty

Vehicle excise duty was first introduced for four-wheeled motor road vehicles on 1 January 1889 by the *Customs and Inland Revenue Act 1888*. Historically the road fund tax was used for the building and upkeep of roads. This is no longer so and it is now a general money raising tax. VED is a fixed annual tax charged on every "mechanically propelled vehicle" used or kept on a public road. The rate is currently £150 for a car regardless of size. VED on goods vehicles is not a flat rate and depends on gross weight and axle configuration. Lorries meeting certain low emission standards may have their VED reduced by up to £500. The relevant legislation is the *Vehicle Excise & Registration Act 1994* and changes to the rates and coverage of the duty are made in the Finance Acts.

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[53] op cit Transport 2000
[54] op cit Royal Commission 20th report
[55] Department of Transport *The Allocation of Road Track Costs 1996/97*, Table 9
[56] see section III of this paper

Table 9 Road taxation revenue and road costs in 1996/97: classified by vehicle class

Thousands /£ millions at 1996/97 prices/ratio

Vehicle class	Number of vehicles	Road taxation revenue and road costs (£ million at 1996/97 prices[1])					Taxes to costs ratio
		Road taxes			Road costs	Taxes less costs	
	thousand	Fuel tax	VED	Total			
Cars, light vans and taxis[2]	24,458	13,300	3,590	16,890	4,130	12,760	*4.1 :1*
Motorcycles	658	50	25	75	20	55	*4.1 :1*
Buses and coaches	79	395 [3]	25	415 [3]	240	175	*1.7 :1*
Goods vehicles over 3.5 tonnes GVW	436	2,980	570	3,550	2,160	1,385	*1.6 :1*
Other vehicles[4]	1,486	425	25	450	175	275	*2.6 :1*
All vehicles	27,117	17,150	4,230	21,380	6,725 [5]	14,655	*3.2 :1*

1. Rounded to the nearest five.
2. Includes goods vehicles under 3.5 tonnes.
3. Includes all fuel duty paid although some is rebated to local operators.
4. Crown, disabled and other vehicles exempt from VED, haulage, machines, 3-wheeled motor vehicles, special types, recovery vehicles and non plateable vehicles.
5. Excludes expenditure allocated to pedestrians: £ 483 million

Abolition of VED

It is sometimes argued that the VED should be abolished and the whole cost should be raised through duty on fuel. According to the House of Common's Library Statistical Section, to replace the £4.2 billion currently raised from VED by an increased charge on fuel would mean an increase of about 46p a gallon.

The main argument put forward for abolishing VED is that it would encourage fuel efficient and environmentally friendly vehicles. According to estimates made by the Institute for Fiscal Studies, in 1990, the change from taxing ownership to taxing the use of cars would cut car use by 8 per cent in one year.[57] This would immediately effect the amount of fuel consumed, the damage done to the environment and the congestion on the roads.

Second, it is argued that such a policy would be fairer. If one taxes motorists through duty on petrol, or through road pricing, rather than the VED, those who use most fuel and cause most pollution will be taxed most. The counter argument is that such a move would increase the costs for those who live in rural areas and of firms with high mileage costs. There would also be inflationary consequences.

Reform of VED

[57] Pearson, Mark & Smith, Stephen *Taxation & environmental policy: some initial evidence*, IFS commentary no. 19 1990

Rather than abolish VED, some have argued that it should be used to influence the purchase of cars which are environmentally friendly: large cars should be taxed more heavily and VED should be related to engine size - although it does not necessarily follow that smaller cars are more fuel efficient.

The Royal Commission argued that although increasing the level of VED would slow the spread of car ownership, it would be unfair on those families who were only now able to afford a car.[58] Increasing VED might seem an appropriate way of requiring road users to make a payment to cover external costs, but it preferred this to be done through payments which were associated with use rather than ownership. However it did feel that VED could be graduated or varied in order to influence behaviour in environmentally beneficial ways. Specifically the Royal Commission recommended that VED on heavy goods vehicles be graduated according to the emission limits their engines were designed to meet, and that reduced rates of duty should be payable for vehicles meeting planned emission limits.

The Institute for Fiscal Studies argued in *Options for 1997* that a VED should be differentiated according to emissions rather than fuel efficiency alone, but it also pointed out that although such measures may have a positive effect on reducing transport related pollution, it may have the opposite effect on the volume of traffic:[59]

> "Whilst measures to encourage vehicle fuel efficiency may have a positive effect on reducing transport-related pollution, they are likely to have the opposite effect on the actual volume of traffic by reducing the cost per mile of vehicle travel. Thus measures to combat pollution may exacerbate the other main externality associated with transport, which is that of congestion."

2. Road Fuel Taxation

In the government's first Budget, Gordon Brown reaffirmed the Conservatives' pledge to increase road fuel duties annually, and raised the amount of the increase from five to six per cent in real terms.[60] An annual increase above the rate of inflation was first announced by Norman Lamont in his March 1993 Budget. He announced a 10 per cent increase in road fuel duties, partly to compensate for the revenue loss from the abolition of car tax in November 1992. He went on to announce that it was the government's intention to increase duties on average by at least 3 per cent a year in real terms in future Budgets.[61] This long term strategy sought to return greenhouse gas emissions in the UK to 1990 levels by the year 2000, as agreed at the United Nations convention on climate change at Rio.

In the following Budget, in November 1993, his successor, Kenneth Clarke, made the commitment that all road fuel duties would be increased on average by at least 5% in real terms in future Budgets.[62]

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[58] op cit Royal Commission 18th report
[59] Institute for Fiscal Studies *Options for 1997: the Green Budget*, IFS 1996, pp 50-51
[60] HC Deb 2 July 1997 c.311
[61] HC Deb 16 March 19.93 c.183
[62] HC Deb 30 November 1993 c.937

Changes in fuel prices may have an effect on the choice of cars driven but it may have less effect on congestion levels. No one can accurately forecast the future, but it may be that the duty change needed to have any meaningful impact upon road use would be well in excess of increases that would be politically acceptable.[63]

It is also argued that increases in fuel duties have a disproportionate impact on rural communities. The issue was debated at some length in January 1995, when a second increase in fuel duties was introduced to compensate for VAT not being extended from 8% to 17.5% on domestic supplies of fuel and power.[64] One of the principles behind excise duties is that they be charged in a universal fashion, on all those who purchase a particular good. In the case of fuel duties, the principle cannot fail to have distribution effects, given the greater reliance in rural areas on transport, both private and public. Even so, exemptions or reliefs tailored to particular areas would, from one perspective, subsidise - through the tax system - someone's decision to live in a given place, without attention to the circumstances in which they do so. One could argue that compensation for living in these areas, and support for businesses located there, could be better targeted through the benefits system, or by the provision of regional aid. A wider point, and one made by the then Paymaster General, David Heathcoat-Amory, in this debate, is that fuel costs merely represent one cost of living in a rural area, which has many other benefits.

3. Company cars

Tax liability on company cars is reduced by one third if the car is driven more than 2,500 miles on business a year and by two thirds if more than 18,000 miles is driven. The present system therefore encourages drivers to use their cars and provides no incentive for employees to drive environmentally friendly cars.

In autumn 1995 the lobby group Transport 2000 published the results of a study on company cars which argued the current system was distortionary, inefficient, and seriously damaging to the environment.[65] The report was especially critical of the fact the system encouraged drivers to drive more, and fabricate their tax returns, simply to reduce the amount of tax they paid on this benefit:

> "Drivers are actually rewarded with higher tax breaks the more they drive on business. This encourages company car users not only to drive more than they need, but to falsely declare their mileage, thereby depriving the Exchequer of revenue. The Inland Revenue currently requires no evidence on tax returns that claimed business mileage is actually undertaken. These fundamental weaknesses, together with other breaks still available to employers who buy or lease the cars, keep in place a culture of car use which runs directly counter to

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[63] op cit Woottan 1997
[64] HC Deb 23 January 1995 cc 99-104
[65] Transport 2000 *Company Cars*, October 1995

> Government aims to reduce car dependency, air pollution and pressure for building developments on green field sites."

At the time the *Economist* gave a positive view of the Transport 2000 report, adding that separate research carried out by an independent consultancy, the Metropolitan Transport Research Unit, on the tax-exempt status of free parking, suggested that drivers of company cars faced significant incentives to use their cars as much as possible: "After years of tinkering, it is surely time for the chancellor to sort this out. A tax on non-residential parking, combined with a system which taxed company cars on the basis of their true value to a private user and so did away altogether with the tax break for unprovable claims of business miles driven, would go some way to achieving a more rational system."[66]

In June 1997 the Ashden Trust, an environmental lobby group, published a report on company cars with London First and the University of Westminster's Transport Studies Group. Drawing on a number of surveys of drivers and fleet managers, the report concluded that, "the current tax discounts awarded to company car drivers reaching defined business mileage thresholds lead to some distortion of declared business mileage, possibly increasing this by around 5% … about 60% of this distortion arises from additional business mileage being driven (adding about 1 billion miles)." The study also found that "the availability and cost of parking is an important factor influencing the decision to commute by car, equally affecting those with company and private cars."[67]

Overall the authors recommended that business mileage discounts be replaced "by a tax which relates to the number of private miles driven" so that the "personal 'perk' value of the company car to the driver [would be] directly reflected in the amount he/she pays" and that the "fuel consumption figure (ie, the mpg) of the car be applied as a factor to the list price" in determining the value of the taxable benefit. In addition, it was suggested that the taxable benefit of free fuel should be calculated on a different basis to encourage better driving behaviour, that an evaluation of workplace parking policy should be commissioned, and that commuters and businesspeople should be encouraged to use other forms of transport.[68]

Despite these criticisms, the taxation of company cars would appear to be politically sensitive. In April 1996 the Labour Party reacted quickly to scotch rumours that it had firm plans to use the tax system to curb company car provision,[69] though the possibility of reviewing these tax rules was raised in the Party's transport strategy document published the following month which stated, "the structure of company car taxation should be reviewed to encourage more energy efficient and environmentally sustainable car use. We fully recognise however that for many jobs the provision of a car or other motor vehicle is essential."[70]

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[66] *Economist* 25 November 1995 "A suitable target"
[67] Ashden Trust *Company car taxation: a contribution to the debate*, June 1997 pp 6-7
[68] ibid pp 8-9
[69] *Guardian* 19 April 1996 "Labour blames dirty tricks for car tax leak"
[70] Labour Party *Consensus for Change*, May 1996 p.14

4. Taxing company parking

The provision of free parking by an employer to an employee as part of their remuneration was chargeable to tax up until 1988. In cases where a car park was owned by an employer, and its use made available to a large number of employees, the measure of the benefit was taken to be the annual value of the space (either the rent paid by the employer, or, where the land was owned, its annual rateable value). The annual value to any one individual of a parking space was often negligible in practice, with the result that the benefit was *de minimis* and not charged to tax.[71] In his Budget Speech of that year the then Chancellor, Nigel Lawson, noted a growing tendency on the part of employers to give benefits in kind, and that the taxation of the considerable numbers of persons now given free parking "threatens to become an administrative nightmare." He proposed that this particular benefit be exempted from tax altogether.[72] When debated in Standing Committee, the then Paymaster General, Peter Brooke, explained the rationale for this measure in more detail:[73]

> "The essence of the clause is that it is an administrative nightmare to tax the benefit that is derived from car parking spaces. It is difficult to quantify the value of the car parking space on an individual basis. The value assigned to each parking space would derive from the difficult exercise of apportionment of the rental value, or the rateable value, of the entire business premises. Many car parks are operated on a first-come, first-served basis, so space is not always available, and many employees do not bring their cars to work every day. Even under the existing arrangements, if a car is there for business purposes it is not taxable. Moreover, the amounts involved would be quite small in terms of what would be realised. It would be expensive on employers in terms of compliance costs, and it would not be an effective tax because of the expense of collection. I suspect that some employees would give up their spaces and park on the streets, to the detriment of traffic movement ... The benefit of car parking is provided throughout the income scale, and many people on modest incomes receive it ... For all those reasons, I urge my hon. Friends to support the clause."

The measure was adopted. Since then, the possibility of taxing parking has been raised in the press. A number of reports are mentioned in the section above, and a report by the National Economic Development Council published in April 1991 recommended it.[74] The matter was also discussed by the Transport Select Committee, when it examined the issue of urban road pricing. In its final report, the Committee noted that taxing parking spaces was one way, among several, to restrict or deter vehicle use in town, but it did not recommend its use, simply noting that it had been abandoned in the past because of its complexity.[75]

Taxing or charging for private non-residential (PNR) parking is relevant to the success of parking policies. For controls over parking to be fully effective there needs to be some form of

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[71] HL Deb 16 June 1986 cc 588-589
[72] HC Deb 15 March 1988 c.1009
[73] Standing Committee A, 14 June 1988 c.410
[74] *Independent* 4 April 1991 "Subsidised parking 'should be taxed'"
[75] Select Committee on Transport *Urban Road Pricing*, 22 March 1995 HC 104-I 1994-95 p.xxx

control over existing PNR parking. It is estimated that there are three million parking spaces at commercial premises in the UK. [76]

The Environment Committee proposed a car park tax be levied on out of town shopping centres, either as a fixed sum per square foot of parking space, or as an addition to the Uniform Business Rate.[77] Their argument was that a tax would make out of town shopping relatively more expensive and thus make town centre shopping more attractive. Making town centres more attractive would encourage the use of public transport. Whether such a tax would have this outcome is more questionable. Tesco argue that it could be absorbed entirely by the retailer in which case it would be ineffective, or it could be passed on to the consumer in higher prices, which would be unfair to those without cars, often the poorer members of society. If it was passed on to the motorist, through car park charges for example, it might not make much difference to behaviour, either because customers would park outside the car park or because a car is considered necessary for carrying the goods.[78] Tindale and Holtham argue that such a tax should not be applied to parking places at shops, cinemas and the like on the grounds that these spaces are not private: they are open to members of the public using the facilities. Food shopping in particular is an activity for which a car is very useful.[79]

I. Parking enforcement

Controls on parking are at present perhaps the most important tool available to local authorities, since the availability of parking spaces and the cost of parking to the motorist can have a major influence on the level of traffic entering a town. The TRL considered five options for reducing car trips to city centres: halving public transport fares, raising fuel costs by 50 per cent, doubling parking charges, halving the number of parking spaces, and applying a central area cordon charge.[80] The models predicted that the resultant decrease in car use would be 20 per cent if the number of parking places was halved. This compared with a decrease of between one and two per cent if fares were halved, 2 to 3 per cent if a cordon charge was applied or parking charges doubled, and 4 to 6 per cent if fuel prices rose.

The main problem, however, is that controls cannot readily be imposed on private non-residential parking (PNR) which typically accounts for 40 to 60 per cent of all town centre space. The availability of convenient, guaranteed, free or cheap parking is a major factor influencing people's decision to drive to work. Even the harshest controls on public parking will have little effect on this and may simply result in an increase in traffic driving through the area.

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[76] Tindale, Stephen and Holtham, Gerald *Green Tax Reform*, IPPR 1996, p. 85
[77] Environment Committee *Shopping Centres*, 4th report 1996/97, March 1997 HC 210
[78] Tesco's submission to the review on integrated transport, 1997
[79] op cit Tindale and Holtham p. 88
[80] Dasgupta M, Oldfield R, Sharman K and Webster V *Impact of Transport Policies in Five Cities*, TRL report 107 1994

Following changes in the law in 1991, local authorities are now able to be responsible for enforcing their own parking controls and so parking policy can become part of a wider traffic management policy. They are also able to use any surplus money from the parking account on other transport projects.

The principal idea behind the *Road Traffic Act 1991* was to give local authorities, initially only in London, complete responsibility for all "permitted" parking. They would decide what to do, administer the scheme and keep all the income from it. There would be guidance from central government, but the responsibility for the schemes would rest with the local authorities. Formerly, local authority parking attendants could only deal with collecting parking meter charges and issuing excess charge notices. All other permitted parking offences came into the area of criminal law so had to be administered by the police and their traffic wardens. By removing all permitted parking from the criminal law and making it a civil matter, it is possible to allow local authority parking attendants to administer it. The local authorities are able to keep the fees from parking meters, charges associated with wheelclamping and vehicle removal, and the money from the new penalty charge notices (PCN). Penalty charges are ultimately enforceable through the civil courts as a civil debt.

The government did not consider that it would be appropriate to allow local authorities responsibility to take on "prohibited" parking. This was still subject to criminal sanctions so it felt its enforcement should continue to be the responsibility of the police. The powers of the police appointed traffic wardens were extended so they could take responsibility for enforcing the law on endorsable offences (as long as the vehicle is stationary) as well as the non-endorsable as previously. The money from penalties associated with this group of offences continues to go to central government.

The new arrangements came into force in London on 4 July 1994 when most parking offences were decriminalised and enforcement became the responsibility of the local authority. The new arrangements were originally only to apply to London but an amendment to the *Road Traffic Bill* in the House of Lords allowed the Secretary of State to extend the arrangements to areas outside the capital.[81] On 11 May 1995, it was announced that local authorities outside London could now apply to take over parking enforcement from the police. Local authorities wishing to introduce the new system would be expected to meet the minimum requirements laid down in the *Guidance on Decriminalised Parking Enforcement outside London*.[82] Twenty councils are considering introducing the new powers and five have already done so.

Where PNR space is small, or already fully used, and through traffic can be controlled, parking controls can be effective in reducing car use. This in turn should reduce congestion, environmental impact and accidents. Performance will depend very much, however, on the way in which controls are applied. Simply reducing space may merely increase the amount of time spent searching for parking space, which may have adverse impacts on congestion.

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[81] HL Deb 10 June 1991

[82] Department of Transport *Guidance on Decriminalised Parking Enforcement outside London,* local authority circular 1/95 HMSO 1995

Controls are generally inexpensive to implement, but usually require continuing expenditure on enforcement if they are to be effective.

J. Road pricing (congestion charging)

The idea of road pricing first surfaced in the early 1960s. New car registrations - only half a million in 1958 - jumped in 1963 to more than one million (today they are about 2 million). Traffic in the big cities was chaotic. Ernest Marples, then the Transport Minister, appointed two working parties to find solutions. One led to Sir Colin Buchanan's report *Traffic in Towns* which for the first time counted the environmental cost of the use of cars. The second, much less known, was Dr. Reuben Smeed's report, *Road Pricing: the economic and technical possibilities.*[83] Smeed argued that if drivers were charged for the delays they imposed on one another, some of them would travel at different times, by different means or to different places - and that time wasted on traffic jams would be reduced. The Department of Transport accepted the argument and awarded contracts to firms to develop electronics which would identify cars passing through buried toll gates. However the trial which eventually took place in 1975 was not in Britain, but in Singapore where it has continued to be used ever since. The next area to experiment with road pricing was Hong Kong in 1985. An experiment conducted there was a technical success but it was not permanently introduced as the elected representatives feared that the records, logged by a central computer, would be a threat to the privacy and freedom of drivers. These sort of arguments led to the UK government rejecting the idea of road pricing in 1990.[84] In a speech in June, Cecil Parkinson said the theoretical attractions of charging motorists for congestion were considerable but the practical problems - of fairness, of technology and of enforcement - he saw as "mind-boggling".[85]

The theoretical case for road pricing derives from the rationale that the users of roads, like the users of any other valuable and limited resource, should pay all the costs arising from their use. Only then will the decisions on whether, when, where and how to travel be made correctly. Road users are currently charged for the right to use roads but the marginal use is largely "free". Congestion costs money and a road pricing system which assesses congestion can ensure those who contribute to it, pay for it.

The practical reasons for introducing road pricing are that it offers a way of financing investment in public transport and that it provides a means of deterring people from driving in urban areas.

The main objections to road pricing have been that it is unfair and impractical. Rich drivers are bound to find changes less burdensome than poor drivers. On the other hand, only 20 per cent of the poorest quarter of households own a car compared with 93 per cent of the richest. Road

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[83] Ministry of Transport, 1964
[84] PQ HC Deb 23.1.90 cc 616-7W
[85] Department of Transport press notice 11 June 1990

pricing, by improving traffic flow, ought to improve the efficiency of bus services which are used disproportionately by the low paid.

Road pricing can be designed to control the overall level of traffic in an area. In Singapore, the system concentrated on reducing traffic in the central area at congested times. This resulted in around 50 per cent reduction in car trips inside the area (in conjunction with tighter parking controls and better public transport) but congestion and pollution increased on the ring road. In other situations road pricing has been used primarily as a revenue raising tool with no desire to reduce traffic levels significantly. The Norwegian "toll rings" in Bergen, Oslo and Trondheim fall into this latter category.

Fears about the technology now seem to be misplaced. Experience overseas would seem to show that road pricing is practicable. If a system were to be introduced in this country, it would be based on electronic road pricing. This relies on some form of automatic vehicle identification, or detection of roadside charging points by vehicle-borne equipment. As a suitably equipped vehicle passes a charging point the fact is registered and a charge is made. Either roadside equipment records the event for later billing or it causes a device in the vehicle to make a charge by incrementing a meter for subsequent reading, or by subtracting value from a stored card which must later be replenished. Any system has to be capable of handling automatically large flows of moving traffic and of processing cashless transactions. There must be no record of individuals' journeys as this is seen as an unacceptable intrusion into people's lives.

Various studies have been made both of the technical possibilities and the likely revenue that might be raised by the introduction of road pricing in individual cities. A study into congestion charging in London was commissioned by the Government Office for London and published in 1995.[86] There have also been studies of Bristol, Cambridge and Edinburgh. These studies have considered alternative systems of charging, the availability of suitable technology, options for implementation, the likely impact on travel patterns and distributional issues. It was estimated that a charge of £8 for each inbound journey in central London would reduce traffic there by 22 per cent and raise £465 million a year. A £2 charge would achieve a third of the reduction in traffic and would raise £160 million. The studies of Cambridge and York suggested that a reduction in traffic of 15 per cent would be achievable.[87]

On 4 August 1997 the start of the Leicester Environmental Road Tolling Scheme (LERTS) was announced.[88] The scheme is testing the responses of 100 volunteer drivers for six months to different levels of charge for entering Leicester along the A47 corridor. If the volunteer drivers prefer not to pay the charge, they have the option of switching to the new park and ride service linked to the city centre by a comprehensive bus priority system. Volunteers, who have been given a travel budget, have their vehicles fitted with an on-board unit that enables payments to be deducted automatically from a smartcard "electronic wallet"

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[86] MVA Consultancy *The London Charging Research Programme*, HMSO 1995
[87] op cit Royal Commission 20th report para 6.32
[88] DETR press notice 4 August 1997 "Urban road project goes live"

as they drive past roadside radio beacons. The smartcard can also be used to purchase park and ride tickets. The LERTS project is a collaboration between the DETR, Leicester City Council and Leicestershire County Council. According to early reports, motorists are prepared to pay an extra £4 a day rather than use public transport. A daily charge would have to be as high as £6 to deter motorists from entering the city centre.[89]

The Conservative government considered introducing urban road pricing but following the report into congestion charging in London, it concluded that there was no accurate or proven technology existing for such a system and as a result it decided not to introduce it. In its 1996 green paper, *The Way Forward,* it explained:[90]

> "This work has significantly advanced knowledge of the advantages and disadvantages of charging. It confirmed the potential benefits, specifically the potential congestion charging offered to bring about a significant reduction in traffic levels in the charged area, with consequent improvements in journey speeds and reliability and reductions in emission levels. But it also identified a number of complex issues, relating primarily to administration and enforcement, that need to be addressed before congestion charging could be a realistic policy option. The government concluded on that basis that a congestion charging scheme could not be implemented this century, but that work could continue on the subject. Further research and development is in progress, in partnership with interested local authorities."

The Labour government, in its consultation paper on an integrated transport policy, raised the issue of using the price mechanism to influence travel choice, including the possibility of charging for road use. The government has an open mind and is considering the economic impact of new policies.[91]

Much depends on the precise circumstances of any policy but on balance congestion charging, in combination with the removal of non-residential parking spaces, is the means favoured by transport professionals to permanently decrease the amount of traffic entering a town. It can also produce very high revenues. It may be politically difficult as people tend to resent being charged for something previously not charged for. For road pricing to be acceptable, significant improvements in public transport are likely to be required as a precondition.[92] A crucial question is who will keep the revenue stream. There are problems associated with any attempt to hypothecate the revenue to transport and also with local government spending the extra revenue on local transport schemes. A possible alternative is to establish a private/public sector partnership to fund the public transport improvements.[93]

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[89] *Times* 29 December 1997 "Charges fail to price drivers off the road"
[90] Department of Transport *The Way Forward* 1996
[91] PQ HC Deb 15 December 1997 c.36W
[92] Colis, Hugh *Road Pricing – Bristol Case Study*, Paper presented at conference on Urban Congestion, 10 July 1997
[93] Begg, David *Urban Road Pricing: Time for Action* CMTE October 1997

VI Targets and the Road Traffic Reduction Legislation

The *Road Traffic Reduction (United Kingdom Targets) Bill 1997-98* is the latest in a series of Private Members Bills designed to introduce targets for the reduction of road traffic into legislation. Only one of the Bills has been passed, the *Road Traffic Reduction Act 1997*, a Private Member's Bill introduced by Don Foster and passed in March 1997.[94] It followed a number of earlier, unsuccessful efforts to introduce targets for road traffic reduction into national legislation. In an effort to achieve some consensus, the 1997 Bill differed from its predecessors in a number of respects and the final Act passed was a somewhat watered down version of the Bill it started as. Cynog Dafis came fifth in the 1997/98 ballot for Private Members Bills and he has taken the opportunity to return to the subject of national targets.

This section describes the 1997 Act, the previous attempts at legislation and the contents of the *Road Traffic Reduction (United Kingdom Targets) Bill 1997-98*. It also looks briefly at some views on the use of targets.

A. The Road Traffic Reduction Act 1997

The *Road Traffic Reduction Act 1997* started as a Private Member's Bill introduced by Don Foster on 20 November 1996.[95] In the Foster Bill as first printed, the Secretary of State for Transport was not required to set national targets for the reduction in road traffic, although he could set regional targets. This differed from earlier drafts which had advocated a nationwide goal of stabilising road traffic at its 1990 level by the year 2000, with subsequent reductions of 5% by 2005 and 10% by 2010. This was removed following discussions between Don Foster and the then Minister of State at the Department of Transport, John Watts, to try to achieve a Bill acceptable to as many as possible. As a result John Watts gave conditional support to the Bill at second reading although he indicated then that the Conservative government would want to see a number of further changes made to the role of central government and the tier of local authority affected.[96]

Don Foster's Bill placed a duty on local authorities to draw up local traffic reduction plans setting targets for reducing or curtailing the growth of different types of traffic in their area by the year 2005 and the year 2010, and to set out the measures which were, in their opinion, necessary to achieve these targets. It specifically mentioned some of the measures which could be included in such a plan, such as traffic calming and pedestrianisation. Drastic changes were made to the Bill at committee stage.[97] Instead of being a Bill "to establish targets for a reduction in road traffic levels in the United Kingdom; to require local authorities to draw up

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[94] cap 54
[95] HC Deb 20.11.96 c. 994
[96] HC Deb 24.1.97 cc 1207-1229
[97] Standing committee C, 19 February 1997

local road traffic reduction plans; to require the Secretary of State to draw up a national road traffic reduction plan to ensure that the targets are met," the legislation became an Act "to require local authorities to prepare reports relating to the levels of road traffic in their areas." Instead of requiring local authorities to set a target of a specific reduction by a specific date, for the different types of road traffic, and to set out the measures necessary to achieve those targets, section 2 of the Act merely requires them to review the situation in their areas and, if they consider it appropriate, to prepare a report specifying targets for the reduction of road traffic in their areas. All the other details in clause 2, and clauses 3 to 5, were deleted from the Bill and are to be included in the guidance issued by the Minister. This guidance was issued in draft on 15 January 1998 and comments on it are sought by 20 April 1998.[98]

The *Road Traffic Reduction Act 1997* is significant as it represents the first time that the reduction of traffic has been endorsed in legislation as a general policy. It was important as a statement of intent endorsed by government and supported by all political parties. It reflects a new way of thinking and a new attitude to the problems of traffic congestion. On the other hand, those disappointed by the outcome of last session's Bill argue that the legislation was a compromise, a cynical action by a government who were careful to support it only after drawing all its teeth. It is unlikely to be the means of implementing new policies, and in any case can do nothing about motorway traffic or encourage other modes of transport such as rail travel.

The Act also has a certain interest as a piece of legislation no one would have expected to be passed. This was a Bill drafted by Friends of the Earth and backed by the Liberal Democrats. A rather obscure 'green' EDM became government backed legislation and perhaps shows that a cautious policy aimed at lessening the dependence on the car is being adopted across the political spectrum.

B. Road Traffic (United Kingdom Targets) Bill 1997-98

1. Introduction

Cynog Dafis came fifth in the ballot for Private Members Bills and on 18 June 1997 he presented the *Road Reduction (United Kingdom Targets) Bill 1997-98* to introduce national targets into legislation. The second reading is on Friday 30 January 1998.

Early Day Motion 18 on *National Targets for Road Traffic Reduction* was put down on 3 June 1997 and has 355 signatories.

The main reasons put forward for introducing further legislation and for the need to set national targets for road traffic reduction can be summarised as:[99]

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[98] PQ HC Deb 15 January 1998 c. 262W

[99] *House Magazine* 8 December 1997 "Transport integration the way to cut road congestion" by Cynog Dafis; Friends of the Earth's submission to the review on Integrated Transport

1. A further Road Traffic Reduction Bill is needed to complete the process begun by the *Road Traffic Reduction Act 1997*. That Act has a number of weaknesses. It omits national roads (trunk roads and motorways) from the traffic reduction plans to be drawn up by local highway authorities. This could result in traffic being pushed off local roads and onto trunk roads.

2. While giving traffic reduction duties to local authorities, the 1997 Act omits the most important and powerful traffic authority in the country – the Secretary of State. The result of this will be that there will in effect be national targets for road traffic reduction – set by the sum total of local targets. But this will be a national policy by the back door, there will be no direct "national interest" input into it and no proper integration between local and national authorities.

3. The current situation cannot ensure a properly integrated transport policy. An integrated transport policy must be clear as to what it intends to achieve and the only sustainable aim of an integrated transport policy is road traffic reduction.

4. Targets will have to be assessed anyway. The government will have to calculate how much traffic reduction is needed to meet its CO_2 targets and air quality standards, and work towards reducing traffic by that amount.

5. Public targets will be more effective than unpublished ones. The government has said that it must send clear signals about its transport policy in order for it to be effective. Industry and local authorities, as well as the general public, will make adjustments according to the way that government indicates policy will change. Therefore, saying clearly that their policies are designed to reduce traffic by x% will make the policy more effective than keeping x% as a behind the scenes guideline.

In June 1997, when he introduced his Bill, Cynog Dafis proposed that the Secretary of State adopt an explicit set of targets for reducing road traffic levels over the next years, so that by the year 2010 road traffic in the UK will have fallen by 10% from its level in 1990.[100] This was similar to the original proposals he put forward when he introduced his first *Road Traffic (Reduction) Bill* on 11 July 1994 and in subsequent Bills (see below). Critics of the idea of national targets have argued against the introduction of specific targets and their focus on reducing road traffic miles. They claim that any targets set should address the problems caused by excess traffic not the traffic itself i.e. targets should be set for the problems of congestion, air quality and noise. The Bill's supporters considered this argument disguised the point that excess traffic is the cause of a myriad of problems which can either be addressed by a myriad of targets or by one transparent and straightforward target aimed at the root of all these problems – too much traffic.

The current Bill has been discussed with the Transport Minister, Glenda Jackson, and as a result Mr. Dafis has agreed to compromise. Specific targets are not included. He has also allowed that the government can use indicators other than road traffic when it sets targets, if it considers they

[100] op cit *House Magazine*

would be "more appropriate for the purpose of reducing the adverse impacts of road traffic". He does spell out, however, what the adverse impacts are and includes such factors as air quality, congestion and accidents, in the Bill.

2. The Bill's Provisions

The details of the Bill are set out below.

Clause 1 defines "road traffic" as mechanically propelled vehicles on the road, excluding public transport.

Clause 2 requires the Secretary of State to set national targets for road traffic reduction in the United Kingdom, and publish them in a report to Parliament. The aim is to reduce the "adverse environmental, social and economic impacts of road traffic".

However the Secretary of State is not required to specify these targets if he considers that other targets or measures would be more appropriate for reducing the adverse impacts of road traffic. If he does so decide, he must explain his reasons for doing so in his report to Parliament and include an assessment of the impact of these other targets or measures on road traffic reduction.

In preparing the report, the Secretary of State is to take into account the adverse impacts of road traffic, including those specifically listed in the Bill:

- Emissions of green house gases;
- Effects on air quality;
- Effects on health;
- Congestion;
- Effects on land and biodiversity;
- Danger to other road users; and
- Other social impacts.

The Secretary of State is to publish progress reports at least every three years.

The Secretary of State is to publish the first report within twelve months of the Act coming into force.

Section 3 allows any expenses to be met by Parliament.

Clause 4 extends the Act to Northern Ireland.

C. Previous Bills

The *Road Traffic (United Kingdom Targets) Bill 1997/98* is the latest in a series of similar Bills on this topic introduced in Parliament since 1994, on all but one occasion by Cynog Dafis.

Cynog Dafis introduced his first *Road Traffic (Reduction) Bill* as a Private Member's Bill on 11 July 1994. The Bill was not printed, although Mr Dafis put down an Early Day Motion to garner support. [101]

Mr Dafis introduced a similar Bill in the 1994/95 session under the Ten Minute Rule procedure. This time it was printed and he was able to make a speech in the House.[102] Again it was accompanied by an EDM.[103] During his speech, he said:

> The Government are committed to the use of economic instruments to achieve environmental targets, the annual 5 per cent. real terms increase in petrol duty figures prominent among them. I would not deny the validity of such instruments, which need to considered in the context of the vital debate on environmental taxation as against taxation on people and employment. To depend purely and simply on economic instruments would be ineffective, inequitable and damaging to rural areas such as my constituency, where there is currently little alternative to the motor car and where distribution costs are significant.
>
> The Bill, which has been prepared by Friends of the Earth and the Green party, approaches the problem from the other direction. It requires the relevant Secretary of State to draw up a United Kingdom-wide road traffic reduction plan with targets of stabilisation by the year 2000; a 5 per cent. reduction in traffic by 2005; and a 10 per cent. reduction by 2010. Local authorities are required to draw up plans for reducing traffic through measures related to public transport and rail transport, appropriate planning policies, traffic calming, Pedestrianisation and public education.

On 20 March 1996 Mr Dafis introduced another Bill under the same procedure, and was able to speak on it in the House of Commons.[104] It mirrored his 1994/95 Bill. Again, it proposed that the Secretary of State for Transport adopt an explicit set of targets for reducing road traffic levels over the next sixteen years, so that by the year 2010 road traffic in the UK would have fallen by 10% from its level in 1990. The Secretary of State's action was to be mirrored by local authorities, and - should they wish - by parish, town and community councils, who were to draw up plans to reduce road traffic in their own areas. No specific targets were to be set by Parliament for these local initiatives. The Secretary of State was to report on the success of his measures to Parliament on an annual basis, and to conduct a full review of the plan's effectiveness at least once every three years.

The Bill's sponsors argued that it was by a combination of explicit targets, and public accountability, that a steady reduction in road use might be guaranteed. Clearly, underlying this

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[101] EDM 1520 1993/94
[102] Bill 105 1994/95, HC Deb 25.4.95 cc. 663-5
[103] EDM 839 1994/95
[104] Bill 89 1995/96, HC Deb 20.3.96 cc. 397-400

aim was the argument that the unchecked growth in road traffic would have seriously detrimental effects on the quality of life in this country.

EDM 21 1995/96 was supportive of the Bill's aims and had 119 signatories. It was tabled by one of the Bill's sponsors, Frank Cook, although it predated the introduction of the 1995/96 Bill and referred instead to Mr Dafis's 1994/95 Bill.

D. The Use of Targets

The new Bill's supporters may be optimistic that a Labour government will be more supportive of their Bill. Keith Bradley was the front bench spokesman during the passage of the 1996-97 Bill and at second reading he supported the idea of local targets although he made no mention of national ones. The Labour Party's transport document, *Consensus for Change*, discussed the functions of central government and referred to targets. It said "After negotiation with regional and local partners, government will also establish transport targets, consistent with its strategic aim. These targets must be soundly based and broad in their focus".[105]

The consultation paper on developing an integrated transport policy is less definite. One of the issues to be considered is:[106]

> "Would transport policy be enhanced by adopting a range of transport "targets," against which to assess progress? If so, what form should they take? Should they be national, regional or local?"

The Conservative government was not convinced of the efficacy of national targets for reducing traffic levels although it did endorse them at a local level. Its views were set out in the green paper, *Transport: the Way Ahead* as follows:[107]

> "13.24 The government accepts the need for measures which influence traffic, and reduce traffic growth. But … the government is not so far convinced that national traffic targets would be practicable. There is too great a risk of imposing costs on society which would not be justified by the benefits produced.
>
> 13.25 The government believes a more effective approach is to focus measures directly on the impacts of transport supported, where appropriate, by specific targets for reducing those impacts.

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[105] op cit *Consensus for Change* para 2.2
[106] op cit *Integrated Transport* p.13
[107] op cit *Transport - the Way Ahead* chapter 13

> 13.26 Traffic targets can, however, be a useful and sensible tool for dealing with specific situations at local level and for helping to focus attention on strategies and measures needed. The government will therefore monitor closely the progress which local authorities are making on the greater use of traffic targets and the effects on traffic levels of the measures described elsewhere in the paper."

During the second reading debate on the *Road Traffic Reduction Bill*, the Minister, John Watts identified four main concerns about the problems of introducing national targets:[108]

- How can the wide variation between different parts of the country be allowed for.
- At national level very few measures can substantially reduce traffic; more measures are available at local level.
- Targets based on increasing public transport use will not necessarily have a corresponding effect on reducing traffic.
- There are already a range of targets that affect the environmental impact of transport, including targets for reducing carbon dioxide emissions and the air quality targets.

Other bodies have criticised the arbitrary nature of the targets which were to be set. Organisations such as the British Roads Federation argued that the targets were not set with any assessment of the environmental, economic or social implications of trying to achieve them.[109] It also feared that if road traffic reduction became the most important measure of transport policy, other equally important goals, such as air quality, road safety and congestion, might suffer. Friends of the Earth, on the other hand, have argued that a significant reduction in traffic is needed if it is to mean anything: a technical reduction, say 1 per cent by 2075, would be meaningless. Furthermore, calculations point to a 10 per cent reduction in traffic levels (as well as the expected increase in fuel efficiency of new cars) being needed to achieve 20 per cent reductions in CO_2 emissions from the transport sector.[110] They argue that reducing road traffic by 10 per cent is both practical and feasible.

The Royal Commission on Environmental Pollution came out in favour of targets in its eighteenth report but it did not include a target for the overall level of road traffic. Its view was that imposing an arbitrary limit on a national total conceals a complex reality and it preferred to introduce specific measures to reduce the harmful effects of the transport system. The twentieth report did not lay down set recommendations and targets but set out the key areas in which improvements were sought.[111]

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[108] *Road Traffic Reduction Bill* second reading debate, HC Deb 24 January 1997 cc 1224-1229
[109] BRF press notice 15 January 1998 "BRF questions validity of the Road Traffic Reduction Bill"
[110] op cit Friends of the Earth
[111] op cit Royal Commission, 20th report para 6.42

VII Further Reading

Institute for Public Policy Research (IPPR) *Cleaner, Faster London: Road Pricing, Transport Policy and the Environment,* Green Paper No. 1 1989

Chartered Institute of Transport *Paying for Progress - a report on congestion and road user changes,* March 1990

Oxford Review of Economic Policy Summer 1990, "Pricing and Congestion: Economic Principles Relevant to Pricing Roads" by David Newbery

NEDC *Amber Alert: Relieving Urban Traffic Congestion,* Report of Traffic Management Systems Working Party October 1991

Friends of the Earth *Less Traffic, Better Towns,* 1992

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