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A. BOUCHE to PM 9.8.88

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cc PM.
(letter only)
cc John Nelson
CAB Office

Prime Minister

REVIEW OF THE ROAD PROGRAMME

1. In the last PES round I forewent an increase in the provision for the national road programme on the basis that a review was undertaken of the longer term needs. My officials and Treasury officials have undertaken a joint study of traffic growth and the options for dealing with it.

2. The final report of this joint review is ready; a copy is attached. For convenience, I attach immediately below this minute the report's one-page statement of conclusions.

3. The report reveals a very serious problem, and a major opportunity for productive investment.

4. Road traffic is growing fast. Congestion is already severe and no longer confined to urban areas at peak times. The review shows that congestion will get significantly worse over the next 12 to 15 years affecting most main routes and motorways in particular, and will continue to deteriorate thereafter.

5. These present and future levels of congestion impose high economic costs. Extra burdens are placed on businesses, which are denied the opportunity to expand and become more competitive. Motorists face frustrating and costly delays.

6. The review may under-estimate the problem because it uses a very demanding definition of congestion. To the public, roads are congested long before they meet the criteria used in the review.

7. The report by officials considers four possible approaches: road building, traffic management, road pricing and encouraging the use of public transport. These are not mutually exclusive. But the report rightly concludes that a significant increase in road building is required to make a real impact. The report suggests that the annual rate of spend on new trunk road schemes would need to be increased from £600m to between £820m and £980m by 1994/95. The report also points out that most of the work should be done by the private sector, but some increase in DTp running costs would be needed.

8. This would be highly productive investment, with a direct pay-off. The report concludes that this increased expenditure would show a high rate of economic return, at least equal to that currently yielded by the present road programme (where the ratio of economic benefits to costs is 2:1). The benefits would be the savings in time and cost to industry and to motorists. No other public expenditure programme can show quantifiable and direct economic returns on this scale.

9. It makes no economic sense to put off this high-return investment and continue to impose unnecessary costs. To do so would stunt economic growth and hence the growth in taxable capacity. We should be building up even more severe problems for the late 1990s. The Government would be rightly blamed, by both industry and the public.

10. The great bulk of this programme would have to be publicly financed. I am working hard to bring more private finance into transport infrastructure, and the seminar I held last week was a further step forward. But private finance will make only a small impact on the central problem in the foreseeable future. It is worth pointing out in this context that each year road users pay nearly three times as much in VED and fuel tax as is spent on road building and maintenance, and the gap has widened in recent years.

11. Like you, I am concerned about present pressures on the construction industry. But the impact on the industry of the long-term programme to which the joint review points would not be felt for some years yet. This would be well beyond the likely duration of the present construction boom. The industry would have time to gear up for greater activity on roads, which anyway accounts for only about 10% of total output by the construction industry. You will see that the Joint Review concludes (para 8.6) that an expansion in the programme would be unlikely to overstretch the industry in the early 1990s.

12. We will also bring pressure to bear as clients, by further steps to encourage competition between contractors and secure optimum value for money. We are ringing the changes more in shortlisting firms for tender invitations, and introducing new blood where feasible. We will be seeking to spread workload and adjust size of job to avoid overloading the market and put work within reach of the maximum number of firms. We will shortly be receiving a report from a CUP recommended consultant (Griffiths) who will be suggesting further measures to sharpen up procurement policies and tactics in the highways field.

13. I do not wish to confuse the present PES round by proposing collective discussion at this stage of the Joint Review or of a long-term expansion in the road programme. However, I propose to return to the issue immediately after the 1988 PES is setttled, with a view to making decisions and a public announcement early in the new year.

14. I am copying this minute to other members of E(A) and to Sir Robin Butler.

P.C.

PAUL CHANNON

28 July 1988

TRANSPORT Roads pt

9. CONCLUSIONS

The Group concludes that:

9.1 There is growing road congestion which is already severe in places and which has high economic costs. It affects both interurban and other roads. Forecasts show that the extent and severity of congestion will get significantly worse over the next 12-15 years affecting most main routes and motorways in particular, and will continue to deteriorate well into the next century.

9.2 The main options considered for easing congestion were:

a) Road building
b) Traffic management
c) Road pricing
d) Encouraging the use of public transport.

9.3 These are not mutually exclusive options. All to varying degrees could help. Traffic management will continue to be needed to cope with urban problems in particular, while public transport can also make a contribution at the margin in urban areas. In addition, there is a case for the consideration of road pricing in Central London though there would be problems of practicability, cost and public acceptability. These three options are mainly appropriate to urban roads, particularly in London where congestion is at its worst.

9.4 On inter-urban routes measures other than road building can have only a limited effect within current policies. A significant increase in road building is therefore required if a real impact is to made on the growth of congestion. The research done for this review shows that, even assuming that all schemes currently in the programme are completed to time, the annual rate of spend on new trunk road schemes would need to be increased from £600m to between £820m and £980m by 1994/95, subject to the availability of funds. This expenditure would show a rate of return at least equal to that currently yielded by the road programme as a whole (the COBA return is presently 2:1).

9.5 Work on any enhanced programme should begin as soon as possible as, even if some schemes can be brought forward quickly and procedures in general accelerated, congestion will inevitably run ahead of new construction for some years. Priority should be given to schemes which can be brought to construction quickly, especially motorway widenings. Most of the work should be done by the private sector, but some increase in DTp running costs would be needed to supervise work on any enhanced programme.

9.6 Although projected levels of demand imply substantial increases in expenditure on road building, the scope for this will depend on decisions about how much can be afforded against the many competing priorities and other demands on public spending. All the arguments in this report have to be seen in the light of this constraint.

REPORT

REVIEW OF THE ROAD PROGRAMME : ENGLAND

1. INTRODUCTION

1.1 This is the final report of a Joint Working Group of Treasury and DTp officials set up to consider traffic growth and policies for tackling it.

2. THE PROBLEM

2.1 In its interim report (copy at Annex A) the Group considered future traffic growth and road capacity. Traffic was forecast to rise by 24%-41% over the next 12-15 years and by broadly the same amount over the following 20 years (reflecting higher forecast rates of economic growth as advised by the Treasury - see Annex B of the interim report). The construction of the present roads programme, and the continuation of present policies for traffic management, will not prevent this increase in traffic leading to a deteriorating service in the form of considerable congestion and costly delay to industry and to the public. Indeed it is likely that a measure of congestion will have to be accepted as a way of rationing road space. The Interim Report also recognised, however, that increased congestion might encourage drivers to make their journeys outside peak times or dissuade them from undertaking casual journeys, and to that extent could adjust demand.

2.2 The attached maps (Annex B) shows the worst-affected roads. Congestion would be worst on the roads already most heavily used, including many sections of motorway.

2.3 Demanding criteria were used to define congestion. For example, on motorways, congestion was only considered to occur when : average speeds would be about 50mph; there would be temporary stop-start operation; incidents would cause considerable delay; and even off-peak traffic would travel at less than free flow speed.

2.4 Using these criteria, new forecasts indicate that capacity has already been reached or will be reached in the next 3 years on some 210 kilometres of motorways in the London area (especially the M25), in Manchester and in Birmingham. A further 400-700 kilometres, including parts of the M1, M4, M5, M6, M56, M62 and M63 will be congested within the next 12-15 years. In total, more than half of the present motorway network will reach capacity as defined above by 2021. On similar criteria 1,300 kilometres of other trunk roads will also reach capacity during the next 12 years.

2.5 The demanding criteria used to define a congested road mean that these estimates may tend to understate the extent of the problem and that congestion will be perceived to occur long before these conditions are reached.

2.6 The Group identified these measures which might help to deal with the forecast congestion:

i) Road Building
ii) Traffic Management
iii) Road Pricing
iv) Encouraging Use of Public Transport.

2.7 These options are considered in Sections 3 to 6. London has special problems which are covered in section 7. Section 8 considers implementation.

3. ROAD BUILDING

3.1 The interim report considered the road building option alone and concluded that, if other policies remained the same, a significant increase in expenditure would be necessary to contain the forecast growth of congestion.

3.2 With traffic growth at the higher end of the forecasts, present (1988-89) annual spending on new construction of £600m would need to be increased to a peak of about £980m by 1994/95. Taking the lowest estimate of traffic growth, expenditure on new construction would need to rise to a peak of about £820m. These estimates included only a nominal sum for London schemes which have since been considered separately (see section 7).

3.3 The main activity in the early years would be the widening of existing motorways, especially the M1, M4, M5, M6, M62, M63 and parts of the M25. Many other trunk roads would also justify improvement. While a number of widenings and more straightforward schemes could be brought to construction quickly, the average time taken to bring schemes into use is so long that new construction would lag significantly behind congestion, even with a bigger programme.

3.4 The criteria used are sufficiently stringent for the additional expenditure proposed on these roads to show an economic return at least as high as that provided by the current programme (the COBA return at present is 2:1). The return would principally come from savings in journey times for industry and commerce and private car users. The effect on congestion of the schemes would vary case by case. The availability of sums of the magnitude required to fund a programme of the size proposed would depend on its compatibility with the Government's policies for public expenditure and the claims of other programmes.

3.5 The Group also agreed that if an enhanced programme were to go ahead, an immediate increase in preparation and design work would be needed. Over three quarters of this work would be done by the private sector as at present; but there would be some increase in Civil Service running costs.

3.6 The Group recommended that further work on the other options for reducing congestion should be undertaken, following the interim report. These options have since been examined and the group's conclusions are set out in Sections 4,5 and 6 below. Each is particularly relevant to the special circumstances of London.

3.7 Nothing in the further work of the Group has called into question the findings of the interim report on the extent of the forecast traffic demand or the cost of the road construction programme which would be needed to prevent increased congestion, in the absence of other substantial measures.

4. TRAFFIC MANAGEMENT

4.1 There are two broad types of traffic management measures: those aimed at increasing the capacity of the network, and those aimed at discouraging traffic or certain types of traffic.

4.2 There is a wide range of traffic management measures which can increase the capacity of the road system. These include physical schemes such as minor improvements to junctions and roundabouts; one-way systems; and sophisticated interactive signalling systems. Over many years such schemes have significantly increased the capacity of the road system, especially in urban areas. Traffic management of this kind is usually the first option considered in developing road schemes, and the Group fully supports the continuing emphasis given to this approach. There will be further worthwhile improvements from this source, but they will be incremental, and largely confined to urban areas.

4.3 Traffic management is also used to restrict traffic (eg to keep lorries out of residential streets or vehicles out of pedestrian areas); to slow traffic (eg. by installing sleeping policemen); or to give priority to particular types of vehicle (eg. bus or cycle lanes). These methods are widely used on urban and local roads. They are not usually aimed directly at reducing overall traffic congestion and in some cases may increase it (eg. bus lanes or restrictions on night time access by lorries). Traffic restrictions may also be appropriate to interurban roads, notably the current restrictions on use of motorways by slower vehicles. However, the scope for the application of other types of management methods to restrict traffic on interurban roads is very limited.

4.4 Parking controls can combine both approaches: they are aimed at both increasing capacity and restricting particular types of traffic. As with the other management measures they have an impact principally in urban areas, especially London, and are considered separately in Section 7 below.

4.5 Overall, traffic management is valuable and necessary for improving the capacity of urban roads, though sometimes it is used for other purposes which may increase congestion. A great deal of traffic management is already undertaken, and should continue. However, although these measures will help to relieve urban congestion, they will not "solve" the urban congestion problem; and are complementary to, rather than an alternative to, proposals for road building as they affect urban roads. Management measures have less relevance to inter-urban road congestion.

4.6 Nevertheless, urban traffic congestion is and will remain a major problem, especially in London. If Ministers wish to make a bigger impact on it than is possible by the incremental measures described here, more radical measures would be required, for example increased control on privately supplied parking spaces or some form of road pricing. This is discussed further in the section on London (section 7). Any additional controls would give rise to problems of verification and enforcement. The resources needed for enforcement would be a costly but essential aspect of any successful system of control or pricing. The particular difficulties of enforcing pricing systems are described below and in Annex C.

5. ROAD PRICING

5.1 Road pricing has been considered by the Group. The main objectives of road pricing would be to assist efficiency by directly relating costs to journeys, by imposing charges on vehicles at the point of use. Road pricing should, as a consequence, reduce congestion to a more economic level and might reduce or postpone the need for road construction.

5.2 Road pricing could take various forms. Those considered below are:

1) Taxation
2) Tolls on Individual Roads
3) Area Pricing

1) Taxation.

5.3 In 1986/87 road users paid nearly £9.8bn in fuel duty vehicle excise duty (VED) and car tax. This sum exceeds one year's road construction and maintenance costs by 2.7 times. In financial terms, as a matter of equity, road users "pay their way". Road users also pay more on average than the total costs (excluding environmental effects) which they impose on society and on each other.

5.4 However, for road taxes to be economically efficient the tax paid on an individual journey should cover marginal social costs. For roads these costs are traffic related maintenance, congestion and accident externalities (and environmental costs if they could be valued). The estimates in the previous paragraph cover total, not marginal costs and taxation, and cannot therefore be used to draw conclusions about the economic efficiency of road taxes. Clearly fuel duty, and to a lesser extent VED, vary with use. But both taxes are necessarily inadequate proxies for the marginal social costs imposed by individual vehicles.

5.5 The most important cost imposed by individual vehicles is congestion which is concentrated in urban areas. Existing taxes provide only a blunt charging mechanism and, to the extent that they were practical, forms of road pricing such as ERP, cordon pricing or supplementary licensing would be better tuned to the costs imposed by individual vehicles.

5.6 The prevalence of company cars has distorting effects on traffic which are particularly important in urban areas (especially London) where they are often combined with freely provided off street parking. As the Chancellor stated in the last Budget, the benefit in kind of company cars is substantially undertaxed; he therefore proposed to double the car scales for 1988/89. But the scale of the undertaxation is so great that it cannot be put right in a single year.

2) Tolls on Individual Roads.

5.7 Conventionally tolls would be charged by installing toll booths on roads or at the entrances/exits to roads, as with autoroutes in France. But the National road network, apart from estuarial crossings, is free to the user at the point of use, and public expectations are clearly that existing roads will continue to be provided on this basis. In addition, major works would be required to build toll booths at exits and entrances to existing roads. This makes tolling of the entire trunk road network impracticable. Nevertheless it may be practicable to toll some individual existing or new roads.

5.8 Tolls could be introduced on existing roads as a way of reducing traffic. The objective would be to price off the number of trips which produced sufficient benefit for remaining users to offset the cost of the toll. There would also be some loss to those who were deterred from using the road. Where they chose to use alternative toll-free routes they would

impose extra costs on other road users. Traffic diverted from motorways to all-purpose roads would cause greater environmental intrusion and more accidents. Enough toll booths would have to be provided to ensure that toll collection itself did not add to congestion. That would involve acquiring extra land, either at junctions or astride the main carriageway, and collection costs. The roads where congestion pricing would be potentially most beneficial are the most heavily laden sections of the motorways which are part of the strategic national road network. Imposing tolls on these roads as a way of dealing with congestion would be unpopular and Ministers would need to demonstrate that this was more cost effective than increasing capacity and had other advantages. If Ministers wish to explore this option further, the next step would need to be a detailed study of the costs and benefits on an appropriate section.

5.9 Although many of the same issues arise, it may be easier to justify imposing tolls on new roads. Where diversion is not a problem, tolls may be an efficient and equitable means of financing new construction. Thus present policy is to toll estuarial crossings. Elsewhere, the opportunity for traffic to divert may make it impossible for the cost of a new road to be fully recovered from toll revenues. There may also be a case for imposing tolls on new roads in congested urban areas in order to prevent them from generating too much extra traffic. As with private initiatives (see paragraph 5.12), opportunities for tolling should be considered as suitable cases arise.

3)Area Pricing

5.10 There are a number of different methods of charging traffic for the use of a congested area, typically the central area of a city. These include supplementary licensing, cordon pricing and electronic road pricing. The latter would involve a system of sensors at the roadside picking up signals from electronic number plates fitted to all vehicles in the priced area and billing that number. (Electronic road pricing could in theory be applied to the entire network, but practical and political reasons make this very difficult to apply on a large scale for the present.) Area pricing may be an option in the urban context and is discussed in detail in the section on London.

5.11 In the absence of efficient road pricing there is likely to be excessive demand for road space at certain times and places. Even with efficient road pricing some congestion would remain. It is necessary therefore to accept a measure of congestion as a way of rationing road space in circumstances where it is not possible or not efficient to meet demand fully by road building.

Private Initiatives

5.12 There may be cases where the private sector is interested in building, owning and operating roads. Such arrangements may be more cost effective, or there may be scope for wholly new private initiatives, outside the road programme. The Secretary of State for Transport is actively considering the scope for action on these lines. However, the number of cases offering potential for tolling is small, and initiatives of this kind cannot be on such a scale as to have a major impact on the total supply of road capacity. Certainly the few privately funded roads which might be additional would not be on a scale such as to be a solution to the main need identified above.

6. ENCOURAGE USE OF PUBLIC TRANSPORT

6.1 The Group has considered the suggestion in the interim report that increased use of public transport might reduce demands on the road network.

6.2 Car travel has many advantages over public transport, mostly in its flexibility and in the overall journey times it offers. Also, as the perceived marginal costs of car use are low, there are great incentives to chose the car. Public transport can therefore compete only when it offers large advantages in terms of journey times, reliability, comfort or cost. Road freight offers similar advantages over other forms of freight transport.

6.3 The role of Government in influencing the relative demand for public transport and private road transport is to ensure that transport users have freedom of choice in a fair market, i.e. that as far as possible , relative prices reflect relative costs. including congestion. One way of achieving this is to subsidise public transport where there are external benefits of reductions in road congestion. However it is Government policy to reduce subsidies as they encourage inefficiency in the subsidised organisation. Another is road pricing, especially in congested areas, which may as a first order effect encourage a shift towards public transport.

6.4 Therefore in general - because of low cross-elasticities and the effects of the Government's transport policies - there is only limited scope for using public transport to relieve road congestion. But the nature of the problem differs across the country, and these more local and specific issues are described below.

Public Transport in London

6.5 Among the major urban areas London is clearly a special case, since only 15% of commuters travel by car as compared with 50% on average for other conurbations. Traffic congestion on London roads extends throughout the working day and is a severe handicap to the operation of bus services. Some rail services are themselves heavily overloaded and studies of measures to relieve this congestion are in hand. Few road schemes are possible in inner London and given the existing levels of road congestion, it is not the DTp's policy to provide for more car commuters into central London. Further investment in public transport may attract some car users on to public transport, and the consequent congestion benefits may help to justify that investment. But, while little road building is proposed for and into central London, the substitution of public transport for road investment on any scale is not a live issue.

6.6 However, only one third of jobs in London are in the centre. Rail is much less well suited to the diverse pattern of commuting in outer London or most working trips. Nor can it handle short-distance goods traffic; it is generally economic only over the longer haul. There remain questions about how far it is practicable or desirable to cater for traffic demand in London (see section 7). But apart from commuter trips into and around central London increasing use of public transport is not a substitute.

Other Urban Areas

6.7 In other urban areas extra rail capacity could in principle be provided at much lower cost than in London and it may be worthwhile to invest in public transport partly on the basis of the road congestion benefits which can be achieved. However, given that rail accounts for less than 5% of commuting in the other major conurbations and less than 2% in other urban areas a significant increase in rail transport would only result in a very small reduction in road traffic. For example, if rail traffic in conurbations other than London could be increased by 25% wholly from road users, the rail share of the commuting market would only increase to 6% and the reduction in road use would be completely

redressed by only a 2% increase in road traffic.

6.8 Buses are also an option for urban travellers but are rarely chosen by those with access to cars because of waiting times, inconvenient location of stops and unreliable services. They also compete for the same road space although, if reasonably loaded, they use less per passenger. The introduction of road pricing or other measures to reduce private car traffic would make buses more attractive.

Inter-urban Travel

6.9 Inter-urban coach services are mostly used by those without access to a car. Improving such services would not significantly reduce the number of cars on the road; and since this sector is now wholly deregulated and privatised it is difficult to see how Government could effect such an improvement.

6.10 Improving rail services would in theory be a better option. However, the Government's commercial remit for BR's InterCity sector would have to be reversed if the service were to be used as an instrument of policy to reduce the need for road building. Even if this were done, massive additional investment and subsidy would be required to increase BR's inter-urban market share by relatively small amounts and much of the extra travel would be from bus and from generated traffic, rather than from the roads. As an indication of the scale of investment required, a new West Coast Main Line would cost £4-5bn.

6.11 In addition, potential transfers to a new rail facility may not occur because the car would remain more attractive to a large proportion of existing car users particularly for the many relatively short trips which are common on motorways. This suggests that an investment of £4bn would yield more benefit to road congestion if applied to the development of a new road such as widening the M1/M6 to 5 lane dual standard.

Freight

6.12 Rail's share of the total freight market has fallen over many years to only 9% of current freight traffic kilometres. This decline reflects fundamental changes in economic structure and the relative efficiency and effectiveness of road and rail. Improvements in facilities and competitiveness by British Rail may stabilise their carryings but even a move away from a commercial policy and the introduction of subsidy would be unlikely to increase rail freight traffic to the extent that the need for road investment would be reduced.

7. LONDON

7.1 London is a special case for both public transport and road construction. Traffic conditions in London are worse than anywhere else in the country, with accident rates over 50% higher than in other urban areas and severe environmental problems. This is despite the low level of car ownership in the Capital and the relatively low rate of use of cars to commute into London. Incomes in London are not lower than elsewhere and, given the relative convenience of car travel, it is clear that the traffic congestion in London greatly suppresses the level of demand for car travel particularly at peak hours. Journeys are either not made, are made at other times or by other routes or modes. This suggests that if new roads are provided to relieve popular radial routes there would be an increase in travellers and congestion would not be reduced as much as might otherwise have been expected.

7.2 In central London in particular, congestion problems are severe and the scope for dealing with them by road construction is limited. Given these difficulties, it is in London that the case for innovative or radical action to deal with congestion is strongest, and from this, lessons for the rest of the country may be drawn in due course.

Road Building in London

7.3 The scope for road building in all parts of London is limited because of costs, environmental effects, loss of buildings and public opposition. For Inner London there is a need to cater for existing traffic more efficiently where possible and to provide for economic growth and development.

7.4 DTp's programme of improvements is intended to attempt to deal with orbital and other movements which cannot be made by other modes. In Outer London in particular there is a clear demand for additional orbital capacity. No London scheme is easy, but despite the costs and difficulties, such orbital schemes give good economic returns. In Inner London there is some scope for environmental schemes and for some improvement in reliability of journey times. Any such schemes would, however, be very costly indeed.

7.5 Taking into account the complicating factors of suppressed demand and the dominance of rail travel in the Inner area, recent work forecasts that the scope for cost effective investment in improvements to the road network will continue at some £175m per annum after the completion of the current programme. This estimate is slightly higher than the nominal sum included in the interim report. In the view of DTp this represents a realistic and achievable rate of spend.

7.6 Over the next 10 years an increased spend of about £15m over the baseline would be required to deliver the existing programme more quickly and to prepare new schemes. The London Assessment Studies are looking at a wide range of investment scenarios and will suggest new schemes to add to the programme.

Traffic management in London

7.7 Traffic management (other than parking controls) aimed at increasing the capacity of the road system (eg.by one-way systems) has been extensively used in London. Further measures will continue to be needed, but their effects will be marginal because so much has already been done.

7.8 On-street parking has been restricted almost as much as possible in central London. Enforcement is a problem and new measures such as wheel clamping have been introduced. Further improvements may be possible and are being considered separately. Effective enforcement will continue to be needed to make best use of the capacity of the road system, but the scope for significant additions to capacity from this source is very

limited.

7.9 Private non-residential off-street parking constitutes over 40% of total parking provision in Inner London. The control of this facility could therefore, in principle, be used to make a significant impact on demand from car commuters in London. Such control has always foundered because of practical and definitional problems, the cost of compensation, and the issue of principle involved in preventing firms using their own premises at their own cost to provide parking. There would also be problems of the costs and feasibility of verification and enforcement. This type of control would have uncertain effects on the firms concerned, on the economies of the area affected and on public transport where it would be expensive to cope with additional peak demand. The Government does however support local authority policies of limiting parking provision in the construction of new premises.

Road pricing/licensing in London

7.10 London is the best candidate in the UK for road pricing. It suffers from the worst congestion and a radical remedy might be more acceptable here than elsewhere. Indeed the idea has been mooted by various groups but not implemented even on a small scale. There are a number of ways in which pricing could be applied:

i) by supplementary licensing
ii) by cordon pricing
iii) by electronic road pricing.

The objective would be to impose an economically efficient price on road users to reflect the costs which they impose but there is no accepted basis for calculating urban congestion costs. It could be difficult to decide on and justify the level of charge.

7.11 It is clear from an analysis of the methods that road pricing is a complex issue and raises many opportunities as well as difficulties. It could achieve savings in congestion costs. These benefits need to be balanced against the drawbacks. All methods would enable a price indicator to be attached to the use of cars in a congested area thereby giving clear signals to road users about the costs they impose. A complex electronic system would be particularly valuable in this respect as it could provide a sensitive system with the pricing of individual routes at different times of day. The main disadvantages are the generally considerable costs of introducing such systems, the severe problems of enforcement, the lack of sensitivity of conventional and simple methods of pricing and public opposition.

7.12 The problems of road pricing are great, but, if Ministers considered the problem of congestion warranted it, it does seem possible that some sort of system could be introduced. The London Assessment Studies, elements of which have recently been made public will shed some light on how road tolls might work in parts of London. These studies have not looked at the Central area where a pricing system, rather than tolls on individual routes, might be applied. It is possible, however, that LPAC or another organisation will prompt additional work on this in the near future. However, if Ministers wish to take the subject further additional, comprehensive studies would be required.

8. IMPLEMENTATION

8.1 If Ministers agreed an expanded road construction programme along the lines envisaged in this report, consideration would be needed of how this programme could be implemented economically and speedily.

Capacity of the Civil Engineering Industry

8.2 The demands of an increased programme would fall initially on consultancy. About 2000 man years of consultants time are per annum currently employed in scheme preparation and supervision for DTp. In order to prepare and supervise the necessary schemes for an enhanced programme along the lines of that set out in the interim report, almost double that amount of engineers time would be required at an additional cost somewhere in the region of £80m.

8.3 Although there are at present some shortages of particular types of qualified people the rewards of the job in the UK are increasing while demand overseas is decreasing. The market should therefore adjust over the next few years to produce more engineers in the UK. A similar situation exists in the construction industry where there are shortages of skilled labour due to present high demand. Again the market should compensate for these shortages over the next few years, although its ability to do so will depend on changes in demand elsewhere in the construction industry.

8.4 Only about half the current DTp consumption of road building materials goes on new construction. An increase in the new construction programme would therefore only have a marginal effect on the demand for materials. Larger proportions of national consumption of certain materials such as bitumen are used in new construction, but the price of bitumen is related more to the price of oil rather then other variables. The supply of plant and machinery, lighting and other equipment should not create problems so long as industry is warned in time for investment decisions to be made by manufacturers.

8.5 DTp forecasts suggest that price rises in 1988 and 1989 for road construction will be 10% and 8% respectively. Thereafter price rises are forecast to drop back to 5%. This is in line with predictions of trends in the construction industry as a whole and is consistent with the expected reduction in national growth. These forecasts are borne out by a recent NEDO report which suggests that the current boom in construction is likely to peak in 1989 and to end in 1990.

8.6 Road construction represents only about 10% of the output of the construction industry. It is therefore unlikely that, given adequate notice of an expansion in the programme the price of materials and equipment or the demand for unskilled labour would overstretch the industry in the early 1990s. It should also be possible to phase the road programme and to take steps to maximise competition so that the new programme does not itself create inflation. Early in the programme there might be difficulties in obtaining skilled labour but the market should act to correct this over time.

Procedures

8.7 The average time it takes for a scheme to reach construction is about 16 years. DTp has taken steps to reduce this time. Targets for the early sections of the process have been set which should reduce the time taken for these procedures by half. This will over time reduce the average time taken. This will however still be a lengthy period and Transport Ministers have agreed that the schemes which can be completed most rapidly should take precedence. These will be schemes such as the widenings on which the interim report is based where often the statutory procedures are easier to complete and construction can be commenced sometimes within 2 years.

Appraisal and Evaluation

8.8 The accuracy of these projections depend on the rigour of DTp's traffic forecasts and appraisal methods. Before and after traffic comparisons - carried out on road schemes since 1981 - are encouraging. They show no evidence of any serious bias towards over or underestimating traffic. DTp has however committed itself to continue to extend its understanding and to improve its methods, by further work on:

a) Methods for evaluating the achievement of scheme costs and benefits. This will include:
   - further analysis of errors in traffic forecasts, and an assessment of how future appraisal methodology can correct for such errors.
   - analysis of methods for evaluating the effects of errors in traffic forecasts on time savings benefits.
   - research project to monitor environmental costs and benefits (subject to availability of funds).
   - analysis of the reasons for past unexpected structural maintenance on roads and bridges and an assessment of how there risks might be handled in future appraisals.
   - Monitoring of accident rates on a sample of new schemes over a period of years.

b) Treatment of risk, and appraisal of the "costs of being wrong".

9. CONCLUSIONS

The Group concludes that:

9.1 There is growing road congestion which is already severe in places and which has high economic costs. It affects both interurban and other roads. Forecasts show that the extent and severity of congestion will get significantly worse over the next 12-15 years affecting most main routes and motorways in particular, and will continue to deteriorate well into the next century.

9.2 The main options considered for easing congestion were:

a) Road building
b) Traffic management
c) Road pricing
d) Encouraging the use of public transport.

9.3 These are not mutually exclusive options. All to varying degrees could help. Traffic management will continue to be needed to cope with urban problems in particular, while public transport can also make a contribution at the margin in urban areas. In addition, there is a case for the consideration of road pricing in Central London though there would be problems of practicability, cost and public acceptability. These three options are mainly appropriate to urban roads, particularly in London where congestion is at its worst.

9.4 On inter-urban routes measures other than road building can have only a limited effect within current policies. A significant increase in road building is therefore required if a real impact is to made on the growth of congestion. The research done for this review shows that, even assuming that all schemes currently in the programme are completed to time, the annual rate of spend on new trunk road schemes would need to be increased from £600m to between £820m and £980m by 1994/95, subject to the availability of funds. This expenditure would show a rate of return at least equal to that currently yielded by the road programme as a whole (the COBA return is presently 2:1).

9.5 Work on any enhanced programme should begin as soon as possible as, even if some schemes can be brought forward quickly and procedures in general accelerated, congestion will inevitably run ahead of new construction for some years. Priority should be given to schemes which can be brought to construction quickly, especially motorway widenings. Most of the work should be done by the private sector, but some increase in DTp running costs would be needed to supervise work on any enhanced programme.

9.6 Although projected levels of demand imply substantial increases in expenditure on road building, the scope for this will depend on decisions about how much can be afforded against the many competing priorities and other demands on public spending. All the arguments in this report have to be seen in the light of this constraint.

A

CONFIDENTIAL

REVIEW OF THE ROAD PROGRAMME: ENGLAND

INTERIM REPORT

1. INTRODUCTION

1.1 There are currently 2540 km of motorway and 7929 km of all purpose trunk road in England which are the direct responsibility of the Secretary of State for Transport. This represents only 4% of the total road length, yet this network carries 32% of all road traffic and 58% of all heavy goods vehicle traffic.

1.2 The national road construction and improvement programme has been reviewed about every two years, with new schemes being added as others are completed and expenditure being sustained at around the established level in real terms. Since 1980 road construction prices have fallen relative to prices in the economy as a whole. Between 1980 and 1986 the drop was 23% and the trend has meant that the cost of building roads has become relatively cheaper. However, we cannot rely on this trend continuing and there are now signs that road prices are increasing more quickly. This risk will need to be considered in Phase II of the review. Progress has been made towards completion of major strategic links such as M20, M25, M40, M42, M63/66 and the North Devon Link and new schemes have concentrated on the relief of congested parts of the existing system and the bypassing of towns and villages, rather than on new strategic routes. At present there are plans to build or improve a further 361 km of motorway and 1844 km of trunk road at a cost of some £5 billion. The attached map shows these schemes along with the existing network. The costs and benefits of the planned schemes have been assessed using COBA, a method accepted by both DTp and Treasury, and should give average benefits of £1.90 for each £1 invested.

1.3 There is a commitment to eliminate the backlog of structural renewal by 1992. A fifteen year strategy of bridge rehabilitation and strengthening has also been established to remedy the deterioration in their condition from the growth of heavy traffic and to provide for 40 tonne vehicles, should Parliament agree their introduction to the UK.

1.4 There are also some 10,058 km of non trunk roads which form part of the Primary Route Network (PRN). These are major local roads which, along with trunk roads, complement the motorway network in providing the best routes for longer distance traffic. They make up only 4% of total local road length, the remaining roads being of mainly local importance. The local authority roads in the PRN are kept under review in the light of the development of the motorway and all purpose trunk road systems.

2. NEED FOR REVIEW

2.1 There are signs that the current policy of incremental additions to the Road Programme as described in 1.2 is no longer adequate. Since the Road Traffic Forecasts were revised in 1984, vehicle miles have grown at the upper bound of the range of these forecasts, ie at 3% per annum. If they continue to grow at this rate traffic in the year 2000 will be 50% above the present level. In that event and in the absence of any change in relevant policies or in existing broad levels of funding, many parts of the network will by then be subject to considerable congestion and delays causing great costs and disbenefits as well as public dissatisfaction. Given the funding implications of any increase in road provision it was agreed that a Joint Working Group of Treasury and Department of Transport officials should be set up to consider the evidence and to make recommendations to Ministers by June 1988.

3. TERMS OF REFERENCE

3.1 The full terms of reference and membership of the Group are at Annex A.

In brief, the intention was to:

i) look at the forecasts of future traffic growth and the planned capacity of the network;

ii) evaluate the costs and benefits of past road schemes;

iii) review the allocation of resources between new construction and maintenance.

In the light of these issues the Group was to examine ways of tackling the problems identified, including the possibility of road pricing and greater private sector involvement, and to estimate the resources needed to deliver the options.

3.2 The Group has now considered these points to a stage at which it can report progress to Ministers and ask for guidance as to its future work. The remainder of this paper represents the interim findings of the Group.

4. TRAFFIC FORECASTS

4.1 As explained in 2.1 DTp has worked up to now on the basis of 1984 traffic forecasts. For the purposes of this Review the forecasting model was retained but with revised assumptions. Most notably higher rates of economic growth were assumed than in 1984, - as recommended by the Treasury - to reflect structural changes in the UK economy, higher productivity and improved competitiveness. In addition, the Department of Energy has revised downwards its estimate of petrol price increases.

4.2 Annex B sets out the results of these revised traffic forecasts to the year 2021. It should be noted that the timing of any announcement of the formal adoption of these forecasts will need careful consideration, and they must in the meantime remain confidential.

4.3 The forecasts suggests that growth in car traffic is somewhat less than GDP, especially in the longer term as car ownership reaches saturation level at about 0.6 vehicles per head. The resulting forecast is higher than that in the 1984 National Road Traffic Forecasts (NRTF) giving a 24% to 41% increase in traffic from 1986 to 2001 (15% to 33% in NRTF 1984) and 45% to 80% by 2021 (30% to 61% in NRTF 1984). Although it is expected that freight traffic will increase at a similar rate to that for cars, it is the much greater numbers of cars which constitute the bulk of traffic demand. Looking at different types of road, although motorways have seen a very substantial increase recently (42% 1982/86, compared with 15% for all roads) the revised forecasts do not assume a differential rate of increase for motorways. The higher increase for 1982-86 is thought primarily to reflect the substantial increase in the motorway network during the period.

4.4 Further work is to be undertaken to test the reliability of these aggregate forecasts of traffic growth to consider the relative probability of the different ends of the range, the significance of traffic generated by opening new roads (especially new motorways) and the factors which will eventually determine when the saturation levels of car ownership are reached.

5. EVALUATION OF ROAD SCHEMES

5.1 The Department of Transport has carried out systematic checking of traffic flows in road schemes since April 1981, comparing actual flows against forecast flows. The aim of this work is to validate appraisal methods and identify any weaknesses.

5.2 Before and after studies of 38 schemes have been analysed and give encouraging results. For nearly a quarter of schemes, forecast first yearflows were within 5% of actual levels and over half had differences of less than 20% from observed levels. In 5 cases traffic was overforecast by more than 40%. Three of these cases were related to inaccurate forecasts of population or local economic development, one was linked to another scheme which was delayed and in one case drivers chose to continue to use a route through the town centre rather than the bypass. Taking the results overall there was no evidence of systematic bias towards over or under estimating. The Group has agreed that this is generally a good record. Details of the methodology and results of the studies are at Annex C. The analysis of checks on a further 24 schemes will be available by May 1988 and will enable more conclusions to be drawn about the accuracy of the Department's assessment of schemes.

5.3 The system of back-checking currently in use is however not comprehensive and for the future it will be worth undertaking more detailed back checks. The assessment of benefits such as reductions in accidents has, for example, been found to be lacking owing to the statistical problems of assessing events which occur infrequently in any given place. Also, monitoring returns record only first year traffic, not subsequent growth. DTp will look in more detail at the assessment of benefits, but in the interim, the Group found existing traffic monitoring a useful check on the broad reliability of traffic projections.

6. CAPACITY CONSTRAINTS

6.1 In order to calculate the effect of the forecast growth in traffic on the motorways and principal roads it has been assumed that roads currently in the road programme will be built and that existing underlying policies towards roads and road use will continue. The forecasts were applied to motorways, to all purpose trunk roads and to the local road element of the Primary Route Network, in order to identify where capacity constraints will occur. The costs of remedying severe overloading were calculated and tabulated. (See below).

Motorways

6.2 A severe test was used to define capacity as applied to motorways, taking the "highest sustainable peak traffic in good conditions with no specific disruptions". At this level average speed is about 50mph with flows on the verge of instability (ie some temporary stop-start operation). In these conditions capacity (as defined) is likely to be excceeded in peak periods, incidents will cause considerable delay and even off-peak traffic will travel at less than free flow speed. It is probable that this situation would be considered unacceptable before capacity (as defined) was reached and widening of motorways before then has proved to be economic.

6.3 The forecasts in paragraph 4.2 were applied to all motorways. Even after allowing for completion of schemes already in the Programme the results are disturbing. Capacity as defined above has already been reached on the M25 and some other motorways near London, Manchester and Birmingham, and is it estimated that it will be reached elsewhere by the early 1990's on both high and low growth forecasts. On high growth, by early next century most of the M1 from the M25 to the M6 junction would require widening to dual 4 lanes (D4) from D3 as would parts of the M4, M5, M6 and near Manchester, the M56, M62 and M63. The relief provided by the Birmingham North Orbital Route and M40 would not remove the need to widen the M1 and M6. By 2021, most of the M1 to the M6 junction and almost all the M25 would need to be of greater capacity than D4, while most of the rest of the M1, the M6 to Manchester, and the M62 across the Pennines would need to be D4. Some existing D2 would require successive widenings to D3 and D4, and one or two links even more.

6.4 On the low growth forecasts, constraints will arise on the same motorways, but to a lesser extent or later. About 60% of the M25, parts of the M1 and M4 close to London, the M62 near Manchester and M6 near Birmingham need to be wider than D4 by 2021 to avoid capacity constraints arising.

Lengths of Motorway and Costs

- High Growth

6.5 On the assumption of high growth up to 2001, about 10km of motorway will require widening from D2 to D3 to avoid capacity constraints, 400km D3 to D4, and 125km to wider than D4. By 2021 an additional 80km of widening D2 to D3, 400km D3 and D4 and 300km beyond D4 will be necessary. In total therefore more than half the existing 2540km of motorway will need widening by 2021 over and above the widenings already in the programme.

- Low Growth

6.6 On the assumption of low growth up to 2001, some 7km will require widening from D2 to D3, 250km D3 to D4, and 75km beyond D4. Over the period 2001 to 2021, an additional 35km will require widening D2 to D3, 150km D3 to D4 and 80km beyond D4.

All Purpose Trunk Roads

6.7 Constraints on all purpose trunk roads (APTRs) were assessed by using a representative sample of 16% of the route length of the network. Again a severe test of capacity was applied and APTRs were considered at capacity where peak traffic flows became unstable with stop-start operation. This varies with the numerous different standards of APTR from single carriageway to D3. Here again conditions are likely to be considered unacceptable before these levels are reached.

6.8 Taking account of existing plans for improvement but not of the affects of the Channel Tunnel or roads within the M25 (the subject of a specific study), the general picture is that improvements will be needed to all types of APTRs all over the country, including the existing D2 roads. On high growth, some 1300km of APTRs will require improvement by 2000, and some 2500km by 2020, and on low growth 900km and 1800km respectively. The current length of APTR in England outside the M25 is just over 7500km. High growth to 2020 would therefore require the improvement of nearly a third of the APTR network.

The Benefits

6.9 As the test of capacity was so severe for both motorways and APTRs, we judge that schemes undertaken to relieve these constraints would give rise to benefits at least of the same order as those currently produced by road schemes, ie. £1.90 for each £1 invested.

The Costs

6.10 The following tables and graphs show the anticipated costs of the programme which would be required for high and low growth for motorways and all purpose trunk roads (collectively called trunk roads) assuming that other policies remain the same. It is clearly difficult to give an accurate assessment of the likely costs so far ahead and the tables are intended only to give an idea of the general magnitude of the programme.

6.11 Construction - After the PES years, expenditure on the existing construction programme has been phased to show the sort of tailing off we would expect. Before construction of the extra capacity identified in the Review could begin schemes would have to be designed and cleared through statutory procedures. This would begin in 1989/90 and would take some time to reach a peak as projects moved from planning to actual construction. This would therefore inevitably lag to some extent behind the actual need for extra capacity, some of which is already required to accommodate todays traffic levels. In the longer term there would be a need to maintain the effort, meeting the demand which forecasts show will continue to increase to 2020.

6.12 Maintenance - Columns 1 and 5 are used to show maintenance requirements. The first shows the needs of existing roads and those already in the programme it also includes the cost of the 15 year bridge strengthening programme. Higher levels of traffic necessitate more maintenance and this is reflected in the high growth table. Also shown are the maintenance requirements of the roads proposed in this review. These costs increase from 2010 when reconstruction begins to be required.

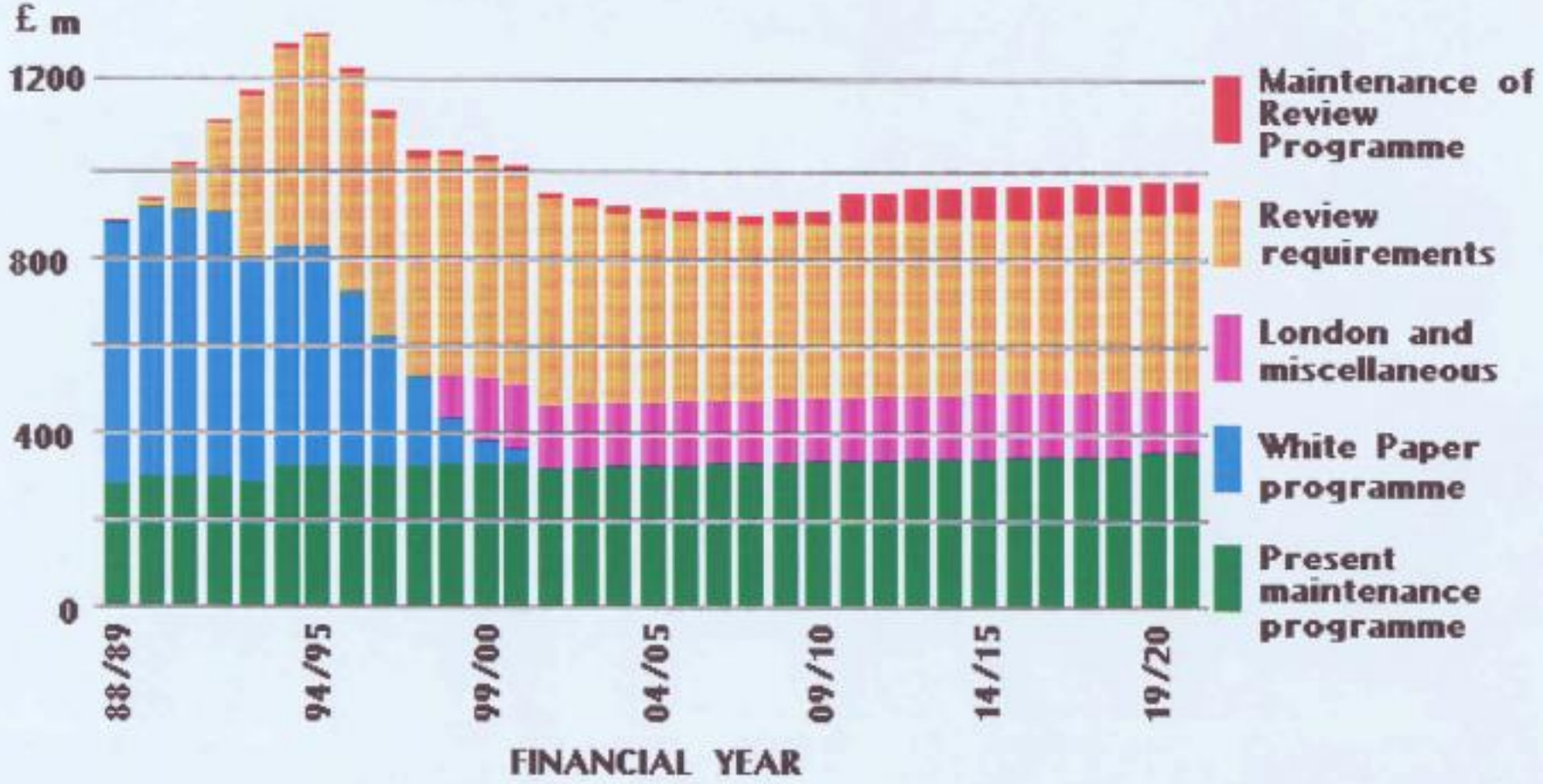
6.13 London and Miscellaneous - This column is intended to give a very general illustration of what the new construction needs of London might be. This will be further explored in Phase II of the Review. It also includes an element for schemes required for environmental, safety or other reasons but not related to capacity constraints.

All costs are shown at 1985/6 prices.

TRUNK ROAD PUBLIC EXPENDITURE REQUIREMENTS: HIGH TRAFFIC GROWTH (£M)
1985/86 PRICES

	(1)	(2)	(3)	(4)	(5)	(6)
FINANCIAL YEAR	MAINTENANCE OF PRESENT PLANNED NETWORK	WHITE PAPER NEW CONSTRUCTION PROGRAMME	ROAD PROGRAMME REVIEW REQUIREMENTS	PROVISION FOR LONDON AND MISCELLANEOUS	MAINTENANCE OF CAPACITY IN (3)	TOTAL REQUIREMENT
1988/89	282	597	0			879
1989/90	304	608	25			937
1990/91	304	605	100			1009
1991/92	304	600	200		3	1107
1992/93	294	500	375		4	1173
1993/94	322	500	460		5	1287
1994/95	322	500	480		5	1307
1995/96	322	400	500		7	1229
1996/97	322	300	500		7	1129
1997/98	332	210	500		8	1050
1998/99	332	100	500	100	8	1040
1999/2000	332	50	490	150	9	1031
2000/01	332	30	480	150	12	1004
2001/02	318		470	150	12	950
2002/03	320		450	150	13	933
2003/04	322		430	150	13	915
2004/05	324		420	150	14	908
2005/06	326		410	150	15	901
2006/07	328		410	150	15	903
2007/08	330		400	150	15	895
2008/09	332		400	150	17	899
2009/10	334		400	150	17	901
2010/11	336		400	150	60	946
2011/12	338		400	150	60	948
2012/13	340		400	150	61	951
2013/14	342		400	150	62	954
2014/15	344		400	150	62	956
2015/16	346		400	150	63	959
2016/17	348		400	150	63	961
2017/18	350		400	150	63	963
2018/19	352		400	150	65	967
2019/20	354		400	150	65	969
2020/21	356		400	150	65	971
	10844	5000	12800	3400	888	32932

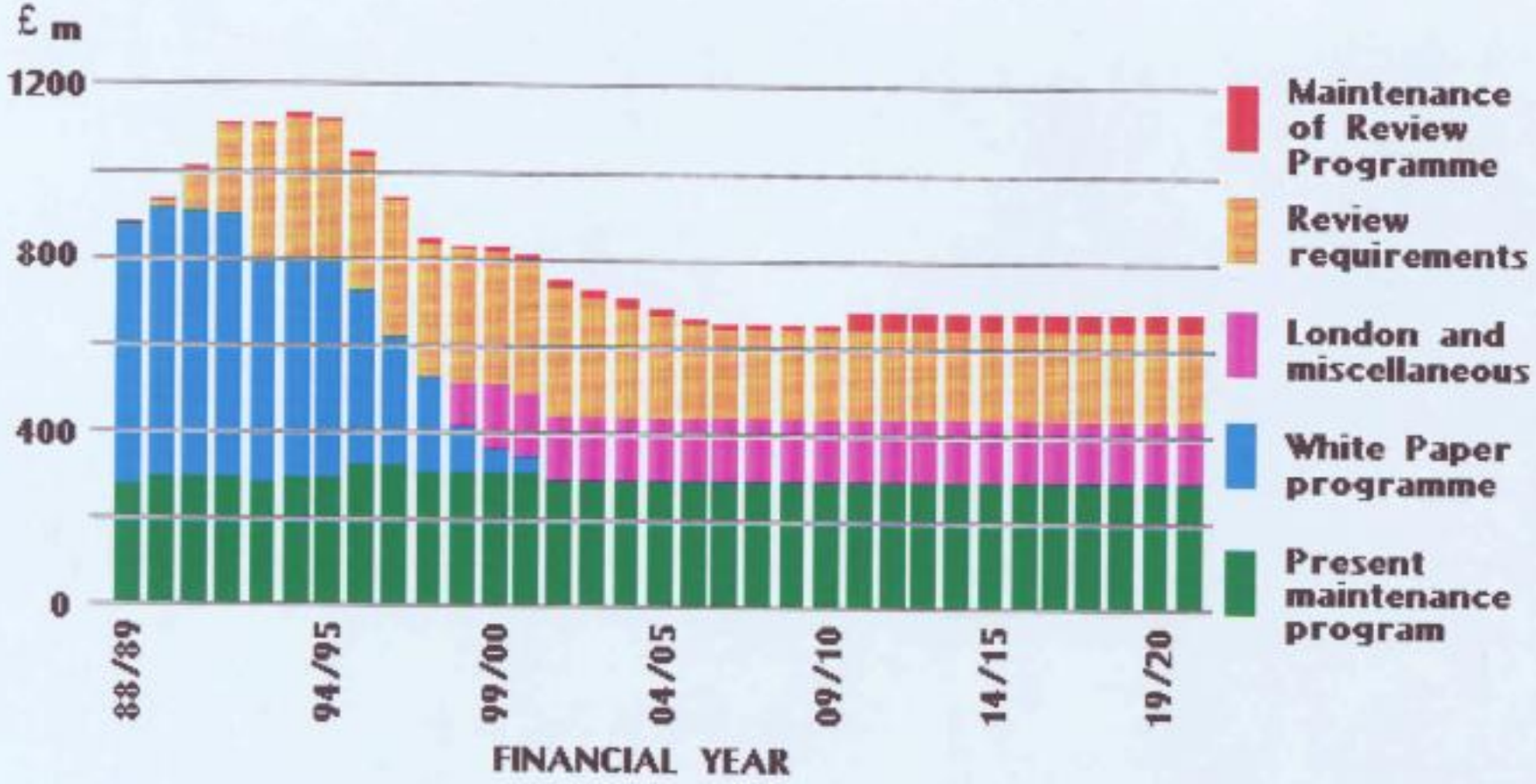
TRUNK ROAD PUBLIC EXPENDITURE REQUIREMENTS: HIGH TRAFFIC GROWTH (£m) 1985/86 PRICES



TRUNK ROAD PUBLIC EXPENDITURE REQUIREMENTS: LOW TRAFFIC GROWTH (EM)
1985/86 PRICES

	(1)	(2)	(3)	(4)	(5)	(6)
FINANCIAL YEAR	MAINTENANCE OF PRESENT PLANNED NETWORK	WHITE PAPER NEW CONSTRUCTION PROGRAMME	ROAD PROGRAMME REVIEW REQUIREMENTS	PROVISION FOR LONDON AND MISCELLANEOUS	MAINTENANCE OF CAPACITY IN (3)	TOTAL REQUIREMENT
1988/89	282	597	0			879
1989/90	304	608	25			937
1990/91	304	605	100			1009
1991/92	304	600	200		1	1105
1992/93	292	500	315		1	1108
1993/94	307	500	320		3	1130
1994/95	307	500	310		3	1120
1995/96	327	400	310		4	1041
1996/97	327	300	310		4	941
1997/98	317	210	310		5	842
1998/99	317	100	310	100	5	832
1999/2000	317	50	305	150	7	829
2000/01	317	30	305	150	8	810
2001/02	298		295	150	8	751
2002/03	298		270	150	9	727
2003/04	298		250	150	9	707
2004/05	298		230	150	9	687
2005/06	298		210	150	9	667
2006/07	298		195	150	10	653
2007/08	298		195	150	10	653
2008/09	298		195	150	10	653
2009/10	298		195	150	10	653
2010/11	298		195	150	39	682
2011/12	298		195	150	39	682
2012/13	298		195	150	39	682
2013/14	298		195	150	40	683
2014/15	298		195	150	41	684
2015/16	298		195	150	41	684
2016/17	298		195	150	41	684
2017/18	298		195	150	42	685
2018/19	298		195	150	42	685
2019/20	298		195	150	42	685
2020/21	298		195	150	42	685
	9982	5000	7300	3400	573	26255

TRUNK ROAD PUBLIC EXPENDITURE REQUIREMENTS: LOW TRAFFIC GROWTH (£ m) 1985/86 PRICES



LOCAL AUTHORITY ROADS

6.14 The Group also looked at the investment needs of the local authority PRN (see 1.4) to 2021. The same traffic forecasts and, as far as possible, the same methodology were applied to these roads as to the motorways and all purpose trunk roads. Unlike the other analyses, however, roads inside the M25 were considered and the likely effects of the Channel Tunnel were included. It is important to note that only 4% of local roads are on the PRN and the picture for the remaining roads could be very different. No estimate has, however, been made of the need for investment in purely local roads as these fall outside the Group's Terms of Reference.

6.15 For the purpose of the study it was assumed that where forecasts based on annual average daily traffic flows suggested there would be an economic benefit in improving a road, this would be done. In fact, flows would be quite high before schemes became economic, particularly for urban roads, where schemes would cost more and were therefore required to carry greater traffic loads before improvement than rural roads. Average costs were applied to the schemes likely to be needed.

6.16 The results suggest that nearly £5.9 bn will need to be spent on the local authority PRN between 1985 and 2021. Although this is a significant sum, it does not represent a need to increase investment above current levels. This does not necessarily mean that local authorities will not need to increase spend on non PRN roads if they are to relieve increasing congestion.

7. MAINTENANCE ON MOTORWAYS AND ALL PURPOSE TRUNK ROADS

7.1 Future maintenance costs are taken into account both in the COBA assessment of new roads and in DTp's standards on their strength and width. The earliest versions of COBA included maintenance costs which now seem low; the most recent version, introduced in 1981, incorporates costs which are generally comparable with current expenditure of actual maintenance costs.

However, this does not appear to be the case for single carriageway roads and this will be reassessed in the next revision of COBA early in 1988.

7.2 Standards for highway strength and width compare initial construction costs with future maintenance costs, including traffic delay costs and it has been found that the optimum design life is 40 years (including an overlay after 20 years for flexible pavements). This had been incorporated in new design standards issued by DTp in 1987. Bridges are designed to last over 120 years and different criteria therefore apply.

7.3 The Group was satisfied that lifetime costings had been thoroughly explored and that DTp's standards and assessment techniques should provide the correct balance between the costs of initial construction and future maintenance.

7.4 Carriageway maintenance costs are likely to peak over the next 5 years while the present backlogs are eliminated, but should steady at a slightly lower level thereafter. Higher traffic flows will however require a higher proportion of reconstruction rather than overlay and so will be more costly. The 15 year programme of bridge assessment and strengthening, costing over £1 billion is needed to enable certain older types of bridges to continue to carry safely increasing weights of traffic, and to carry out remedial work on bridges which have deteriorated, for instance as a result of chloride attack. Existing PES plans do not fully provide for either of these programmes, so additional resources for new construction cannot be made available by switching from road maintenance before the early years of next century.

8. NEED FOR CHANGE

8.1 The evidence of the forecasts, supported by past performance, and the estimates of constraints clearly suggest that a continuation of the existing policy of incremental increases to the road programme , assuming a constant base of funding and no other policy change will not be sufficient to ensure that traffic at the levels likely to be reached in 2000 will flow smoothly and without uneconomic delay.

8.2 The Working Group has therefore considered what policies are available to prevent road conditions deteriorating over the next 30 years to the extent that they are unacceptable to road users, restrict economic growth and may give rise to adverse environmental effects.

9. POSSIBLE RESPONSES TO THE PROBLEM

9.1 Do Nothing.

As the problem is in part one of traffic levels at peak times, one possibility would be to accept higher levels of congestion than have hitherto prevailed and let traffic behaviour adjust. Increased congestion might encourage drivers to make their journeys outside peak times, or dissuade them from undertaking casual journeys whose benefits were less than the additional costs involved, and to that extent could be useful in adjusting demand. But persistent congestion would have a real economic cost to freight and other business journeys, and to leisure travellers. It would also be unpopular.

9.2 Reallocate Traffic.

This would involve relieving congestion by reallocating traffic to less heavily used roads and times of day, by discouraging marginal journeys, and by encouraging other forms of travel.
The broad options are:

(i) controls on road use (9.3).

(ii) road pricing and other forms of charging (9.4 - 9.8)

(iii) greater use of public transport (that is transport for the general public, not necessarily provided by the public sector) 9.9

9.3 Manage Traffic.

Traffic management measures, including parking restrictions and the closure of certain roads to particular classes of vehicles, will continue. Such measures should be considered alongside new investment in roads as a cheaper option for relieving congestion, although with persistent traffic growth they may have limited long term effectiveness, except perhaps in some urban areas.

9.4 Charge for use of roads.

The Group has considered the possibility of changing the pattern of demand, particularly at peak periods, by pricing (including tolling) the use of existing congested roads. A sophisticated road pricing system involves charging directly for the use of roads. It can in principle allocate road resources more efficiently by charging users more precisely for the costs actually imposed by their journeys such as maintenance, congestion, accident and environmental costs. At present only the duty paid on fuel is directly related to each journey. Road pricing is potentially a more effective device for matching the benefits of journeys to the individual to their total cost. Road pricing might reduce demand at peak periods and the need for new investment. Whether or not it increases total revenue depends on whether it is associated with adjustments in existing taxes on motorists.

9.5 The Group has however recognised that there are serious practical difficulties in introducing pricing by electronic methods, including:

- the need to equip all vehicles with pricing devices
- the cost of installing pricing equipment in roads

Pricing of any kind also diverts some traffic to less suitable roads often belonging to other authorities, that the national road was intended to relieve.

9.6 However, the Group agreed that for the right package of new and associated existing roads a policy of pricing might encourage more cost effective use of the route such as by segregation of cars and encouraging heavy lorries to arrange their journeys outside peak periods and by discouraging some casual journeys altogether.

9.7 Comprehensive road pricing is still being considered by the Group but it is not as yet clear to what extent it could reduce the need for additional road provision in many areas, although it is likely to be of most value in the most congested areas.

9.8 Charging for roads would not necessarily have to take the form of a comprehensive system of road pricing. Limited sections of road could be tolled (perhaps only at certain times) in order to encourage traffic adjustments, or there could be supplementary licensing for particular zones. Charging provides revenue and so could ease the burden of the road programme on taxation, but this is a quite separate objective to that of reducing the need for investment by improving the pattern of road use.

9.9 Encourage use of public transport.

Public transport can be a more efficient mode of transport than private cars (in terms of costs per passenger mile, including congestion costs). A coherent strategy for dealing with increased demand for transport, of which increasing traffic levels are one manifestion, should therefore take into account public transport options (including rail and other non-road transport).

9.10 For inter-urban journeys, diversion to public transport appears unlikely to be significant even where new investment is made, largely because of the loss of convenience and the costs of transhipment. The potential contribution of public transport to reduce congestion is likely to be greater in urban areas, in London at least, there is evidence that public transport is itself overstretched. In such a situation costly new investment (such as in a new underground line or monorail) would be required. More work is being done on the situation in London for phase II of the review and no firm conclusions can yet be drawn about the nature of investment needed within the M25.

9.11 Build More Roads.

Construction or improvement of motorways and other trunk roads will therefore have to meet a great proportion of demand for inter-urban travel. Clearly a programme such as that set out in section 6 would be constrained by the Government's commitment to limiting the share of the national income pre-empted by the public sector and by the pressing claims of other expenditure programmes.

9.12 Alternative Sources of Revenue.

Increasing the contribution of road users to the cost of new roads by tolling or other forms of road pricing is a way of providing additional revenue. Charges on motorists, or utilising a proportion of "development gains" may also be used to re-imburse private borrowing for road schemes where it leads to more cost-effective provision of schemes which would otherwise be in the public sector programme or for innovative types of schemes which would fall outside the programme.

9.13 A satisfactory response to the problem of traffic growth is likely to involve elements of some or all of the options mentioned above. The group considers that all of them should be explored further and invites Ministers to agree that further work should be undertaken.

MANAGEMENT RESOURCES

10.1 The efficiency of trunk road construction has increased in recent years, with the contracting out of design and supervision to private firms and new initiatives such as the introduction in January 1985 of fee competition among consultants for major trunk road concessions, and (last year) of period contracts, with the tenderer being invited to nominate their own completion period. The search for increased efficiency is continuing with changes in the Role of the Engineer. Many parallel initiatives have been and are being taken to improve the efficiency of the Department's own organisation. Many decisions relating to individual schemes were at the beginning of 1987/88 delegated from headquarters to regional offices. The first Roads Business Plan was produced in March 1987. The system of Accountable Management in Regional Offices has demonstrated its value, and is to be augmented by a system of time measurement. Target times for the completion of each stage of a road scheme are being promulgated.

10.2 Current manpower levels can sustain little if any acceleration or enhancement of the road programme. Indeed, two Regional Offices have been able even to start the preparation process on only a very few of the new schemes announced in the 1987 White Paper. To a significant extent because of difficulties of recruitment. Overall, preparatory work on schemes now in the programme is not keeping pace with the current rate of completions.

10.3 Any road construction or improvement scheme makes demands on regional office manpower (in the preparation of briefs for consultants and selecting consultants) before any expenditure out of the Roads Vote is incurred, and thereafter the consultation and public inquiry stages make heavy demands on regional offices (despite the extensive use of consultants the political content of these stages is often high); it is only when they are satisfactorily concluded that heavy roads vote expenditure is incurred (on land acquisition and actual construction). This effect is naturally less for widenings, where much or all of the land is already owned by the Department, than for entirely new roads. Nevertheless, if a large increase in road provision is required, it will be necessary to provide funds for adequate manpower in Regional Offices, to ensure minimum delay in the progressing of schemes, several years before the impact on the Roads Vote is felt.

10.4 There have in recent years been developed regimes for other Departmental Functions - such as Driver Testing and Vehicle Inspection, which relate to resources they need directly to the volume of business, with built in controls of unit costs and incentives to efficiency, and so do not hold the programme itself back. Such regimes have hitherto been restricted to fee-earning businesses, where demand is external to the business. It would however be worth considering whether the principle of exemption from running costs control could be adopted and developed in a way which related the manpower allocated to the Regional Offices to the size, and progress, of their new construction programme. Unit cost controls and strong incentives to efficiency would be required. The aim would be to see how best running cost provision could be matched to the size of the roads programme which Ministers might agree; and we propose that further work should be done on this by DTp and Treasury.

11. CONCLUSIONS AND FURTHER WORK

11.1 The interim conclusions of the Group are therefore:

1) Revised traffic forecasts predict severe constraints on traffic flows by 2000, continuing to deteriorate to 2020.

2) The forecasts show that if existing policies continue, the current incremental approach to road provision will be inadequate to meet the needs of traffic to 2000.

3) Increased road provision is likely to represent value for money.

4) A satisfactory response to the demand need not necessarily consist only of conventional road building by the public sector. It might include also:

   i. Toleration of increased congestion

   ii. Traffic management

   iii. Road pricing to improve distribution of road use

   iv. Encouraging use of public transport

   v. More road building financed by tolls and where appropriate by private borrowing.

5) The contribution which the options in 4 above could make is unlikely to be sufficient to fully meet demand. To the extent that more roads have to be built by Government a necessary first step will be to direct funding to manpower in Department of Transport Regional Offices as major improvements in efficiency have already been made.

6) The Group has not so far explored adequately:

a) The situation in London
b) The assessment of actual benefits from road schemes, particularly accident savings
c) Burdens on the civil engineering industry
d) Procedures.

7) The Group believes that Ministers will wish the options in 4 to be assessed in more detail, and the subjects in 6 to be explored. We hope to be able to produce a final report by June.

ANNEX A

TERMS OF REFERENCE

(i) Examine the capacity of national and local (mainly PRN) roads, as the network exists and is currently planned.

(ii) Identify likely future traffic growth over the next 30 years, suitably disaggregated (eg. by region, type of road, type of traffic) and taking account of the impact of existing Government policies including new road investment, car taxation and transport subsidies.

(iii) Consider policies, including road pricing, to tackle issues so identified, taking account of economic, environmental and other costs and benefits and the timescale involved.

(iv) Consider the resources needed to meet policy options, and how they might be provided given constraints on overall spending.

(v) Examine the potential for greater private sector involvement in all aspects of road provision.

(vi) Consider the evaluation of past road schemes.

(vii) Examine the allocation of resources between new construction and maintenance.

MEMBERSHIP

J. Hannigan DTp (Chairman)
H. Blanks
A. Brown (to January 88)
H. Stevens (from January 88)
J. Rickard
P. Pickering
P. Smethurst
G. Holt (Mrs) (Secretary)
B. Gilmore HMT
M. Spackman

ANNEX B

TRAFFIC FORECASTS

Introduction

1. These revised traffic forecasts have been undertaken specifically for the Review of the Roads Programme. A comparison is made in this paper with the National Road Traffic Forecasts 1984 but it is not intended at this stage that these new forecasts will replace the NRTF. The new forecasts are necessary to identify the extent to which the road network can cope with future traffic growth. The methodology of the NRTF 1984 has been employed using new forecasts for the key parameters namely:

- growth of GDP and household incomes;
- changes in the retail price of petrol;
- other car operating costs;
- population and household size.

2. The new values of those parametres are more favourable to traffic growth than those used in NRTF 1984. The new forecasts are therefore higher than those in NRTF 1984, giving a 24 to 41% increase in traffic from 1986 to 2001 (15 to 33% in NRTF 1984) and 45 to 80% by 2021 (30 to 61%).

Car Traffic Forecasts

3. Car traffic is 81% of all motor traffic in terms of vehicle kms. Two models are used to forecast car ownership:

- a cross-section model of household incomes with a logistic growth trend in the proportion of the adult population licensed to drive cars (which reaches a maximum of 0.8);

- an extrapolatory model, in which time, GDP per head and motoring costs determine ownership which is constrained to certain saturation levels (see below). The motoring costs include fuel and other operating costs, and are adjusted for assumed changes in vehicle efficiency.

The results of the two models are averaged, the effect of which is an overall assumption that car ownership will reach saturation at about 0.6 vehicles per head.

4. These models are the same as those used in the NRTF 1984 (see section 12.1 of the Department's Traffic Appraisal Manual). When used with actual GDP and fuel price data since 1983, they have forecast the level of car traffic very well. The inclusion of other variables in the equations, such as the prices of cars, does not improve the explanatory power of the models. Public transport provision is not included in the modelling. It has been found to have no discernible influence on car ownership or use at the national level, although at a local level, public transport provision can have a small influence on car ownership (mainly through second cars in a household) and a larger influence on use of cars for travel to work. The car ownership and use models assume a continuation of recent trends in public transport provision nationally - general constancy in rail services, decline in bus services, and maintenance of real fares. Even if these were to change considerably, however, the effect on car traffic would be negligible. Car use in London is forecast (see para 19 below) not to increase at all; this is as much a question of road capacity as public transport provision.

5. The Treasury advise the use of higher rates of economic growth than those assumed in NRTF 1984. These reflect structural changes in the UK economy, higher productivity and improved competitiveness.

Annual Growth in GDP, %

	this review		used in NRTF 1984	
	low	high	low	high
to 1988	$2\frac{3}{8}$	$3\frac{5}{8}$	$1\frac{1}{2}$	3
1988-1991	$2\frac{1}{8}$	$3\frac{3}{8}$	1	$2\frac{1}{2}$
1991-1993	$1\frac{5}{8}$	$2\frac{7}{8}$	1	$2\frac{1}{2}$
1993-1996	$1\frac{5}{8}$	$2\frac{7}{8}$	1	2
1996 on	$1\frac{5}{8}$	$2\frac{7}{8}$	1	2

(These forecasts are shown in graph 1)

6. The Department of Energy has revised its forecasts of the pump price of petrol, which is likely to be lower than that used in NRTF 1984. This results from lower crude prices, following lower demand and reduced producer power over the market. These forecasts assume a constant real duty on fuel.

Annual Growth in retail price of petrol, %

	this review		NRTF 1984	
	low traffic growth	high traffic growth	low traffic growth	high traffic growth
to 1990	1.9	-0.4	2.6	1.1
1990 to 2000	2.6	1.0	2.6	1.1
2000 to 2010	0.3	0.4	2.6	1.1
2010 on	0.3	0.4	0	0

(These forecasts are shown in graph 2)

7. Projected improvements in vehicle efficiency have been revised in line with these lower increases in petrol prices. The high petrol price forecast is combined with vehicle efficiency improvements of 1% per annum to 2000, after which efficiency is assumed to remain constant. For the low petrol price forecast it is assumed that no long term changes will occur in vehicle efficiency. These revised projections are lower than those used for the NRTF 1984, which employed a range of 0.8% to 1.5% per annum to 2000, falling to 1% per annum (for both scenarios) to 2010, and remaining constant thereafter.

8. Other operating costs (including vehicle excise duty) have been assumed to be constant in real terms. Population projections have been revised in line with the latest (December 1986) OPCS projections, but these have negligible effect. Assumptions about household size are the same as in NRTF 1984.

9. The car traffic forecasts are shown in graph 3. Overall, income growth and the passage of time are the dominant influences on the growth of car traffic. The elasticities of ownership and car use with respect to operating costs (including fuel) are very low. The growth in car traffic is somewhat less than GDP, especially in the longer term, on account of the effect of saturation, which dampens growth from the late 1990s onwards.

Freight Traffic Forecasts

10. Freight vehicle kms form 16 per cent of all motor vehicle kms. In this area, the most recent freight statistics are analysed to establish relationships and trends, to provide a basis for forecasting. The most important of these are the relationship between road tonne kms and GDP, the proportion of the total transport task in various sizes of vehicle, average length of haul, and average vehicle load, both overall and for various major commodity groups. The relationships are

expressed in terms of elasticity, which measures the extent to which one variable (eg road tonne kms) changes as the result of change in another (eg GDP), equal proportional change being given as unity.

11. Road is the dominant mode for internal freight transport. Its share of all domestic tonne kms has been stable, 56-60%, since 1977, and its share of the tonne kms of non-bulk goods has also been stable, (86-88%) since 1976([1]). It therefore appears reasonable to forecast on the basis of trends in road freight per se, without allowance for transfer to or from other modes. Average length of haul by road has been relatively stable, at close to 70 km, since 1977. Although this has not been the case for every commodity, there is no clear trend overall and a constant average length of haul of the 1986 level is forecast. This means that trends in tonne and vehicle kms can form the basis of the goods vehicle traffic forecasts.

12. Until the mid 1970s, the elasticity of road tonne kms with GDP had been in decline, from the 1.9 of the 1960s to 0.7. The relationship between the two variables was erratic in the late 1970s, but since the bottom of the recession in 1981, the elasticity has been a strong 1.2. It is assumed that this high figure will not be sustained, but will fall back to 1.0 in years to 1988, and then decline gradually, to 0.75 in 2000 and 0.60 in 2020. These are higher figures than in NRTF 1984, where elasticity started at 0.7 and fell to 0.5 by 2005. See graph 4.

13. Large vehicles of over 25 tonnes gross (OGV2 in COBA terms) handled 75% of all tonne kms in 1986. The tonne kms they move (excluding the effect of the 38 tonner) and the kms they travel have been growing at a considerably faster rate than GDP (elasticities of 1.6 and 1.3 respectively since 1981). The saving in OGV2 kms from the introduction of the 38 tonner reached 5% by 1986, and appears likely to reach a maximum of about 9%. The elasticity of the kms of OGV2 with GDP (before completion of adjustment to the 38 tonner) is forecast to be 1.1 in 1988, falling to 0.9 in 1998 and 0.7 by 2020. The kms resulting from application of these elasticities have been reduced to allow for completion of the adjustment to the 38 tonner. See Graph 5.

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(1) About 9% of all tonne kms move by rail, 28% by water and 6% by pipeline. Non-bulk goods are all those other than oil, petroleum products, coal and coke. Of the tonne kms of these products, 8% move by rail and 4% by water.

14. Vehicles of from 3½ to 25 tonnes gross (OGV1) handled 25% of road tonne kms in 1986. Their kms and tonne kms had been falling through the 1970s, as traffic transferred to the OGV2s, but their role, predominately shorter distance delivery, now seems to be more settled, and the elasticity of their kms with GDP since the recession has been 0.5, with a slight decrease in the average load carried (from 2.56 tonnes in 1981 to 2.26 tonnes in 1986). It is assumed that in future they will take the tonne kms not moved by OGV2s, with the same average load as in 1986. This implies a continuation of the recent mileage elasticity of 0.5, and further reduction in their share of goods vehicles kms and tonne kms, over time, to about 20 per cent of tonne kms by 2020. See graph 6 for OGV1 traffic. Graph 7 shows the forecast split in the total task between OGV1 and OGV2.

15. The distance run by the remaining goods vehicles, the Light Goods (LGVs) of under 30 cwt unladen or 3½ tonnes gross, has been growing much faster than GDP (an elasticity of 1.9 over the last decade, 1.2 since 1981). This elasticity would appear to be associated with the growth in service industries which are major users of those vehicles. As continuation of the trend towards service industries appears likely, an elasticity of 1.0 has been assumed throughout the period. See graph 8.

Buses and Coaches

16. The kms travelled by large buses and coaches has been about 3 million pa since 1976, and now represent 1% of all motor vehicle kms. It is assumed that this level will be unchanged in the future, any reduction in the distance run by large urban buses being balanced by growth in long distance and charter work.

The Forecasts

17. The following shows the new forecasts for 2001 and 2021 with 1986 as 100. The figures in brackets are the NRTF 1984 forecasts, also with 1986 as 100. More detail is given in graphs 3, 5, 6, 7 and 8.

	2001		2021	
	Low	High	Low	High
Cars	124	141	143	173
	(117)	(136)	(133)	(167)
LGV	128	150	170	246
	(113)	(131)	(128)	(150)
OGV1(a)	118	131	143	183
	(92)	(103)	(86)	(103)
OGV2	123	144	154	210
	(115)	(128)	(129)	(150)
PSV	100	100	100	100
	(100)	(100)	(100)	(100)
All traffic	124	141	145	180
(excluding 2 wheelers)	(115)	(133)	(130)	(161)
GDP	128	150	170	246
	(119)	(141)	(145)	(209)

Footnote: (a) In traffic censuses, some light vans with single rear wheels (LGV) are miscounted as small OGV1, for which the correct definition is dual rear wheels. As the review is to use census figures as base, the OGV1 forecasts are on a Census basis, and include some of the more rapid growth in LGVs than in OGV1, properly defined.

Regional Growth

18. Estimates of regional traffic growth are available for the period 1983-86. Although this is a short period and observed trends are likely to be subject to considerable uncertainty, it is possible to draw some conclusions.

19. The difference in growth rates between regions has been greater than was expected. The data available suggest that England may be divided into three areas:

- East Midlands, Eastern and South Eastern (DTp) regions have had traffic growth rates about 2% pa higher than the national average;

- the remaining (DTp) regions (Northern, Yorks and Humberside, North West, West Midlands and South West) have had growth rates about 1% pa lower than the natioanl average;

- London, where there has been no growth at all.

20. These three areas have also experienced similar differences in the rates of change during the period 1983-86 of other indicators, including population growth, car ownership, growth in employment and proportion unemployed.

21. These observations have been taken into account in forecasting for this Review. Separate growth rates have been calculated for the two areas outside London, based on the assumption that differences in growth will continue until 1996. The differences have been assumed to decline from the observed values to nil during this period. After 1996, national growth is assumed to apply in both areas.

22. For outer London, it has been assumed that car traffic growth rates will be half of the national average values. National growth rates have been assumed to apply for LGV traffic and HGV traffic levels are assumed to remain static in the long term. For inner London, it has been assumed that traffic levels for all classes of traffic will remain static in the long term. These assumptions are based on examination of the growth in flows across cordons on the London boundary and enclosing inner and central London. They take account of the increasingly severe congestion occurring in London, and of the observed levels and growth rates of car ownership, which are lower than comparable values elsewhere.

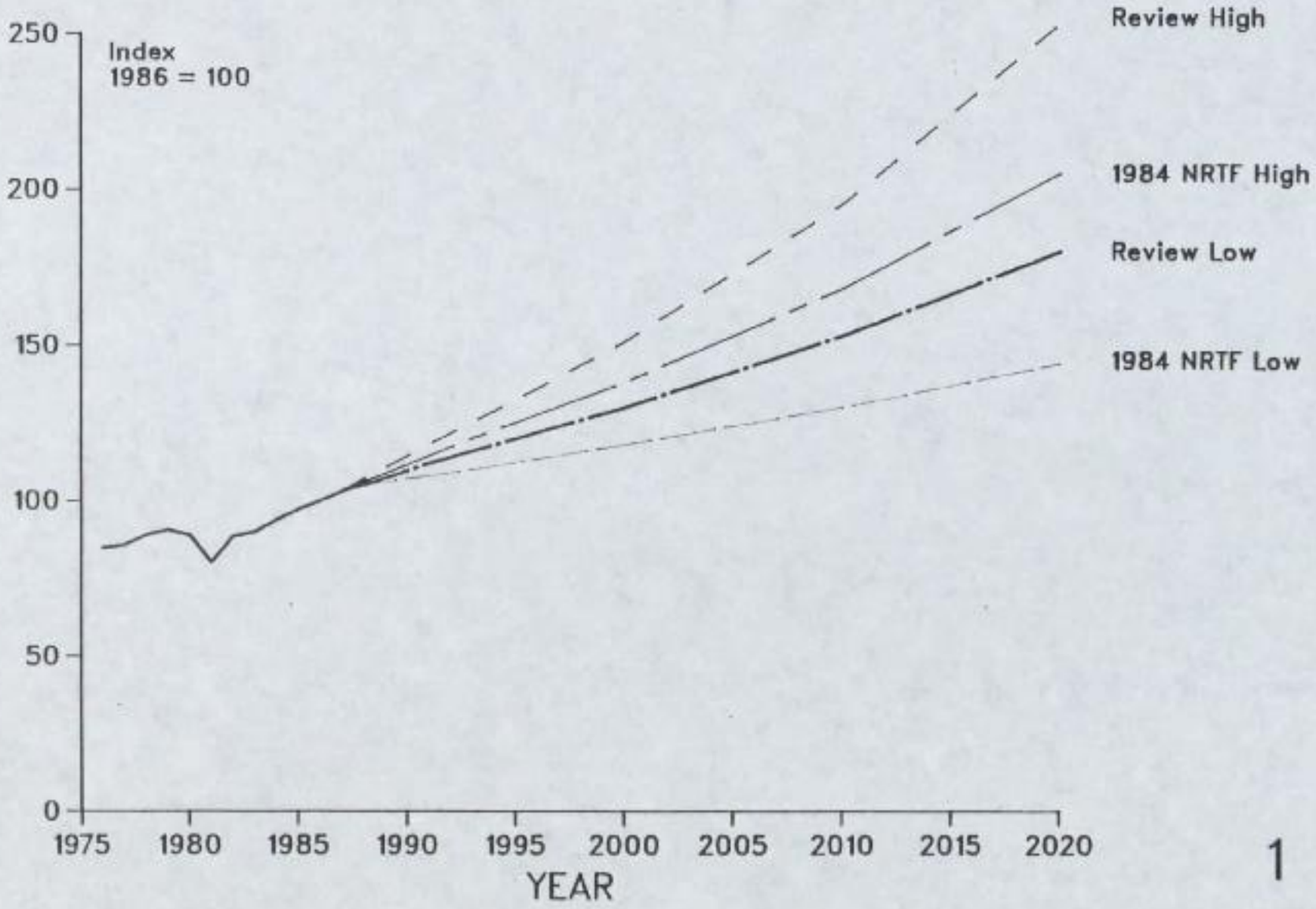
Forecasts for Specific Categories of Road

23. Between 1966 and 1983, when most of the motorway network was opened, the growth in the flow on motorways largely paralleled that on other trunk and principal roads. There was massive reassignment to the motorways as they opened, but this was followed by steady growth at the trunk and principal road rate.

24. Since 1983, the rate of growth in motorway flow has been considerably higher than on other trunk and principal roads. This is illustrated in graph 9. Much of this higher growth on motorways can be accounted for by the opening of the busiest motorway, the M25. Nevertheless, the same effect has been observed, although to a lesser extent, on some other long established motorways beyond the influence on the M25, including some in the "low growth" regions. There could be many reasons for this, including increasing congestion of alternative routes, increased perception of the value of the motorway network as a whole, even structural change in the economy.

25. It is considered too early at this stage to decide that differential growth rates are required for motorways. It would in any case be difficult to decide on what basis they should be formulated. For the purposes of this Review, the same regional growth rates will be applied to all categories of trunk road in a region.

Real GDP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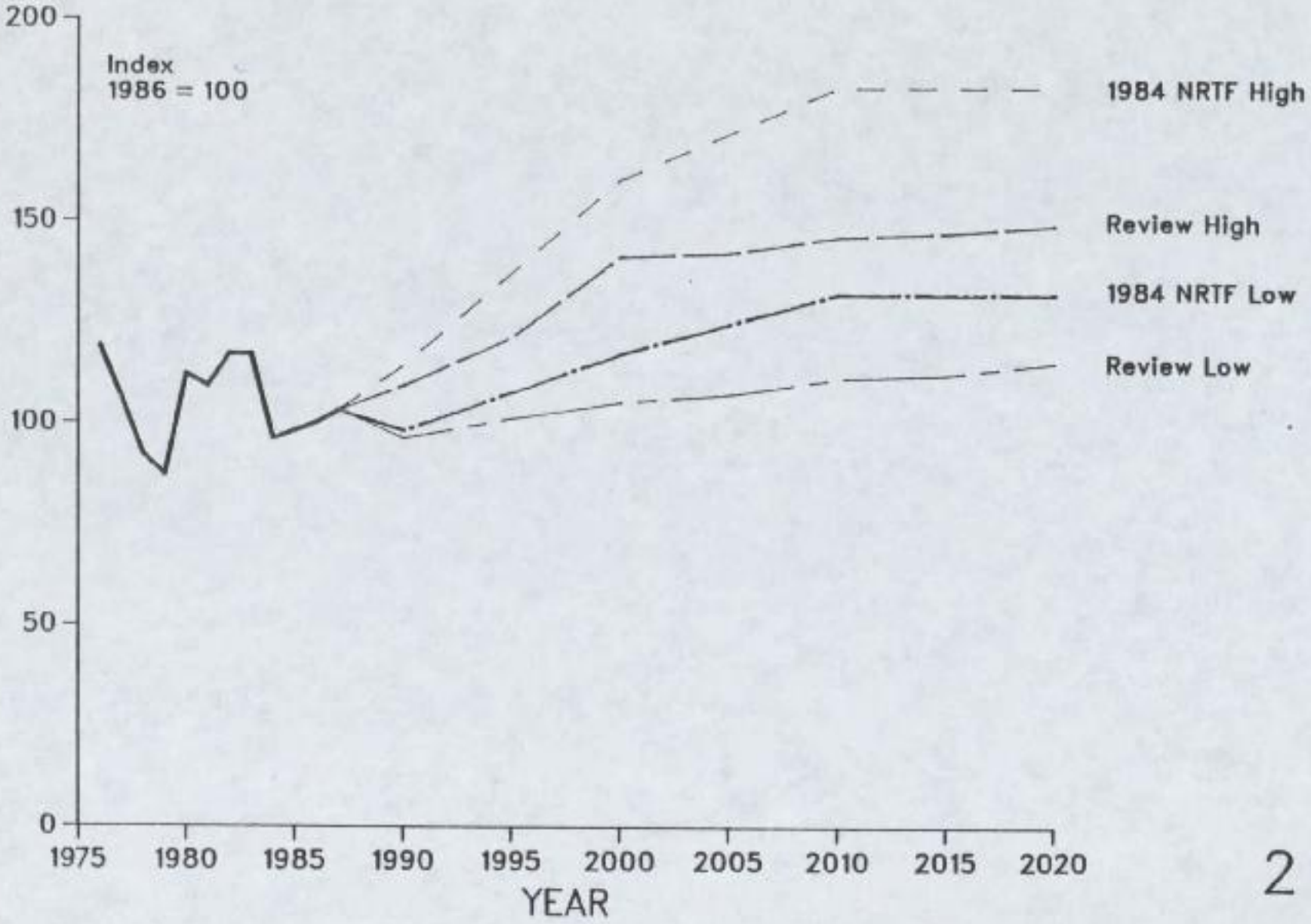
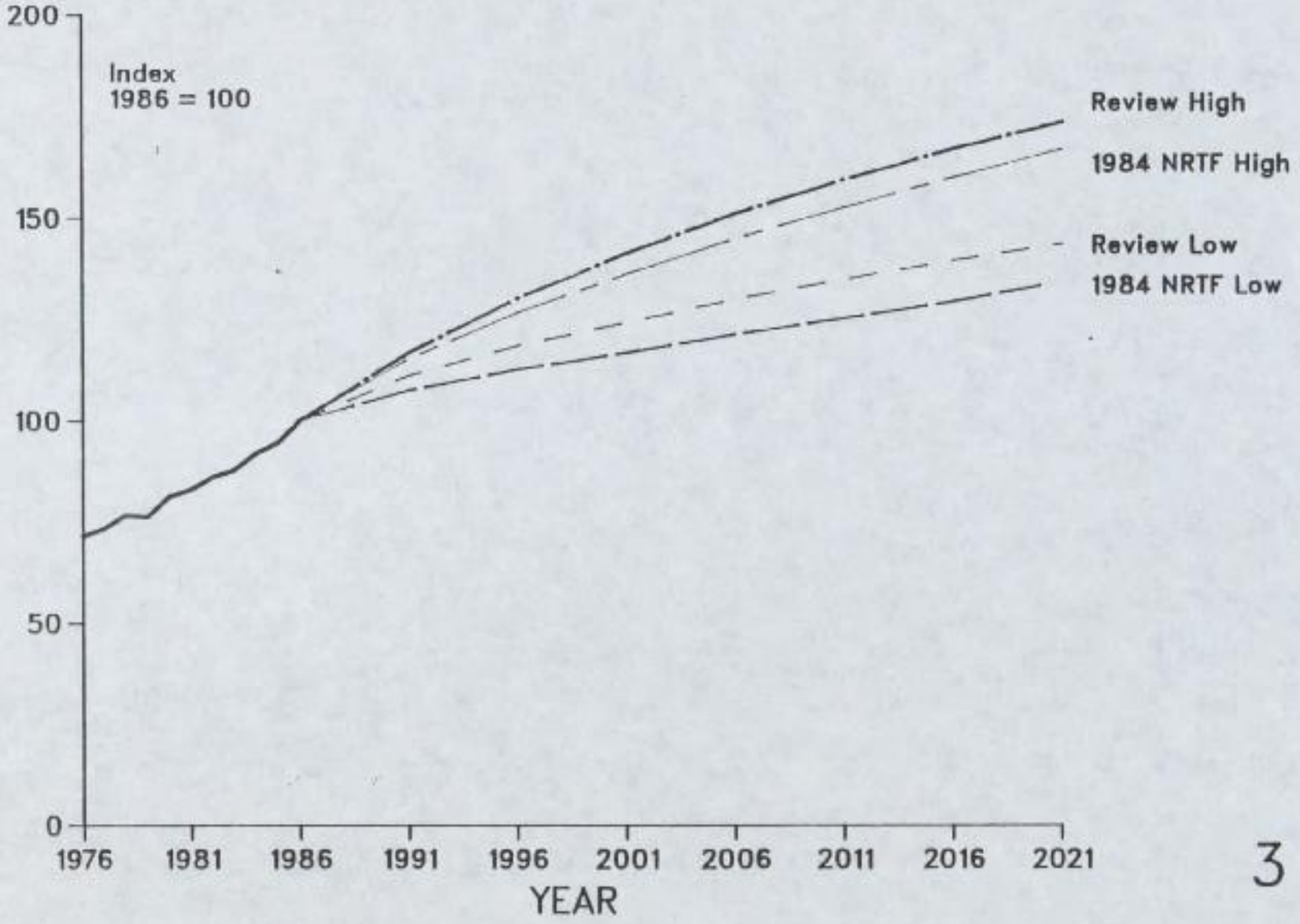
1984 NRTF Low

Real Petrol Price



Car Traffic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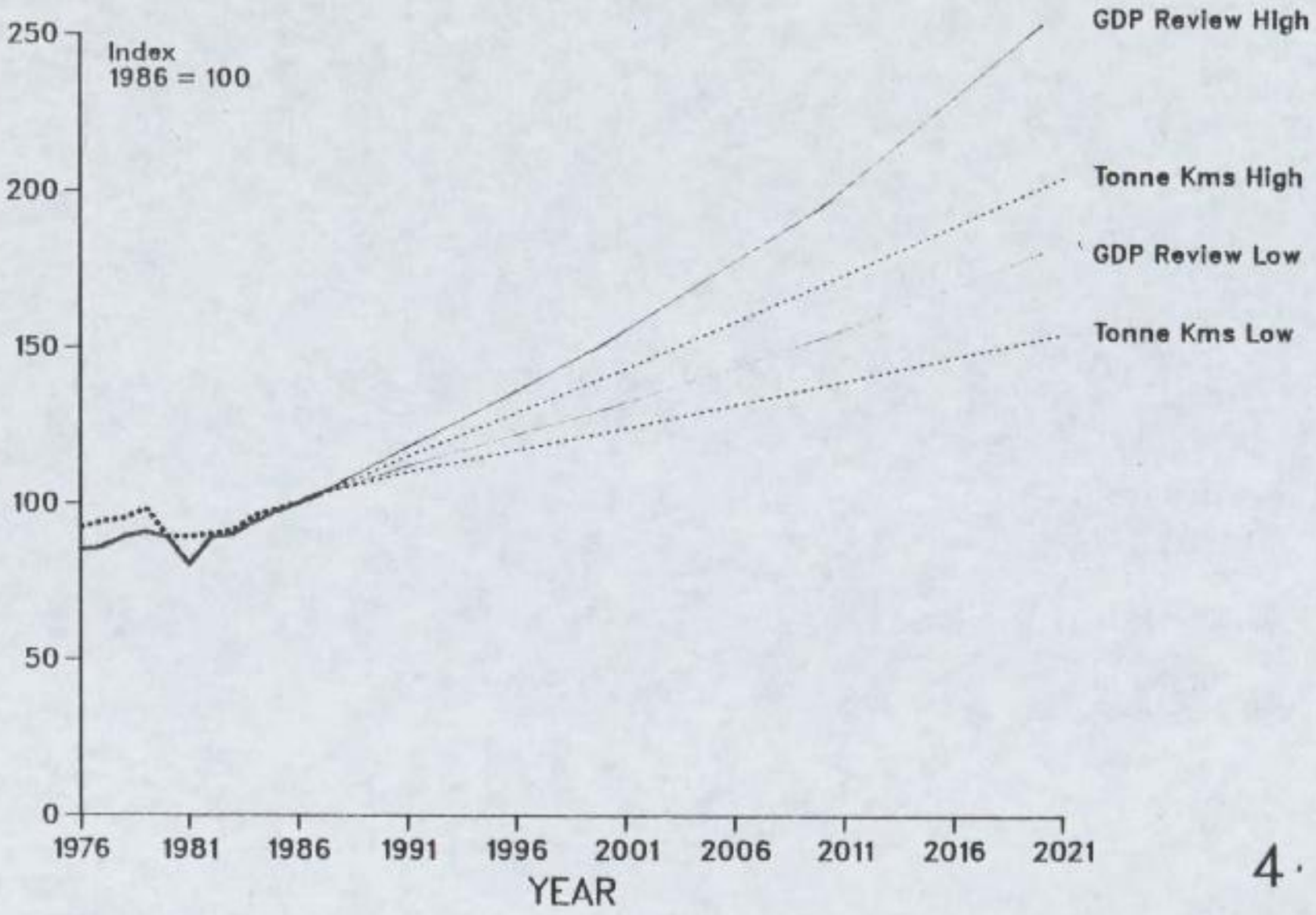
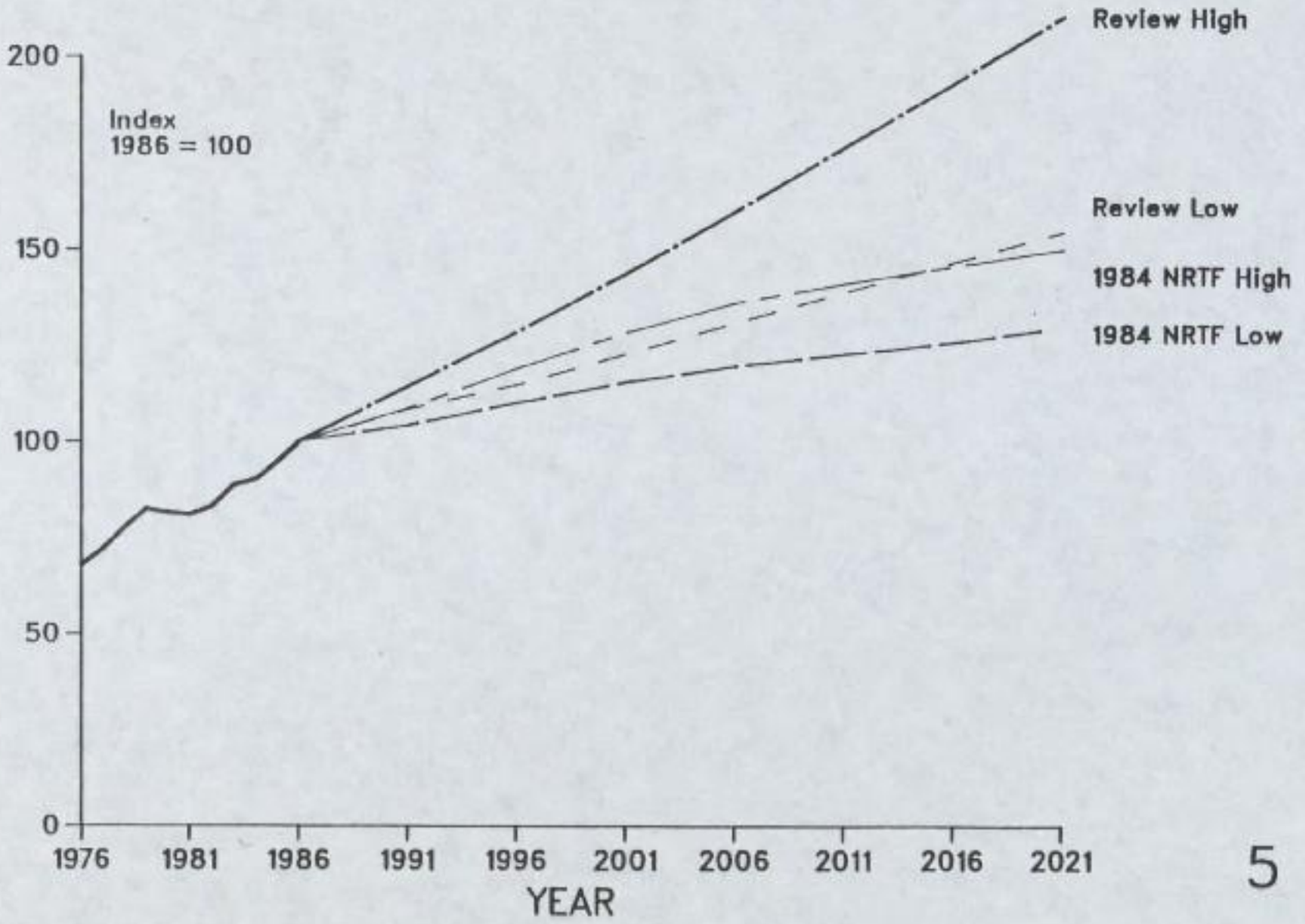
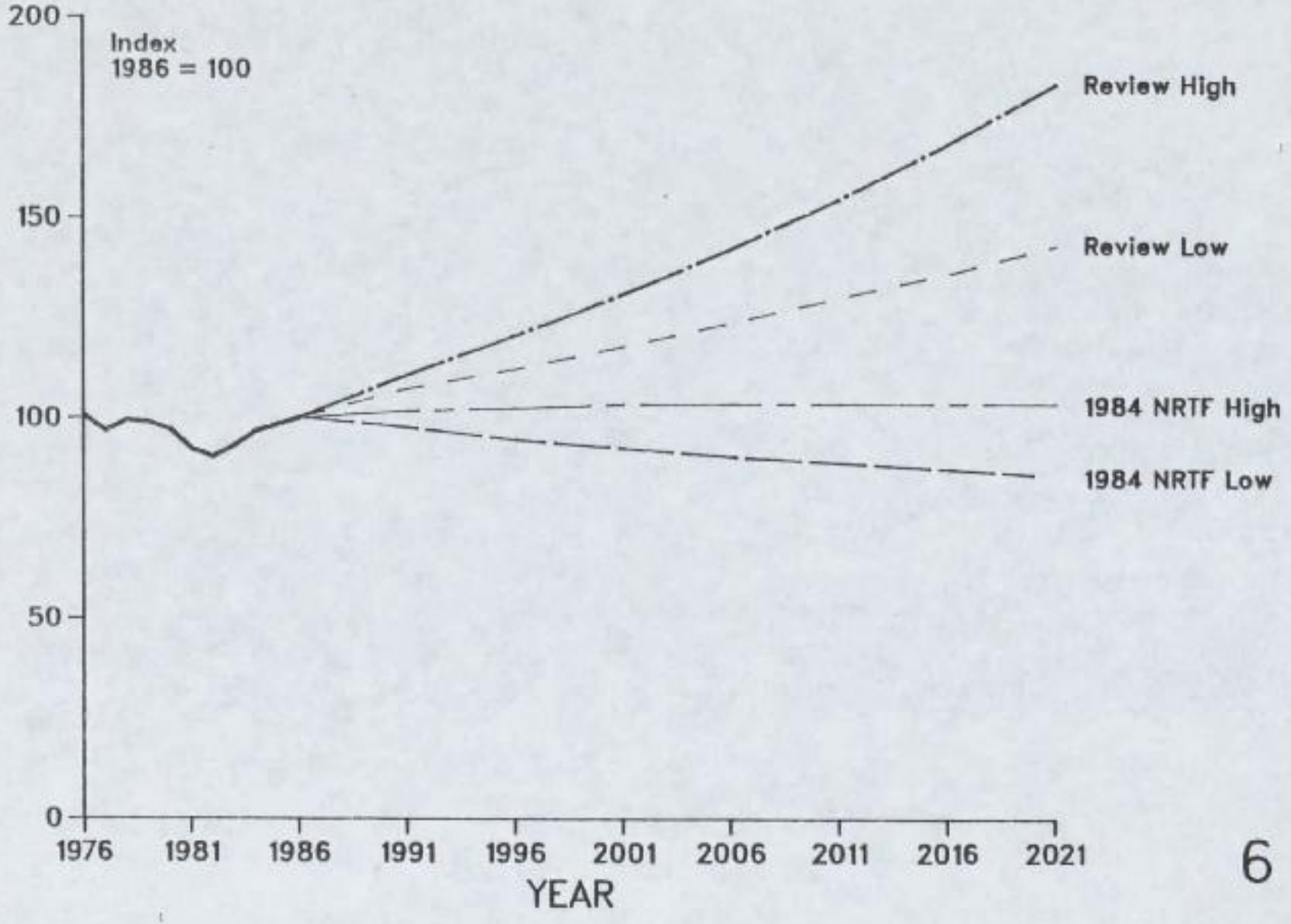
Road Tonne Kms and GDP



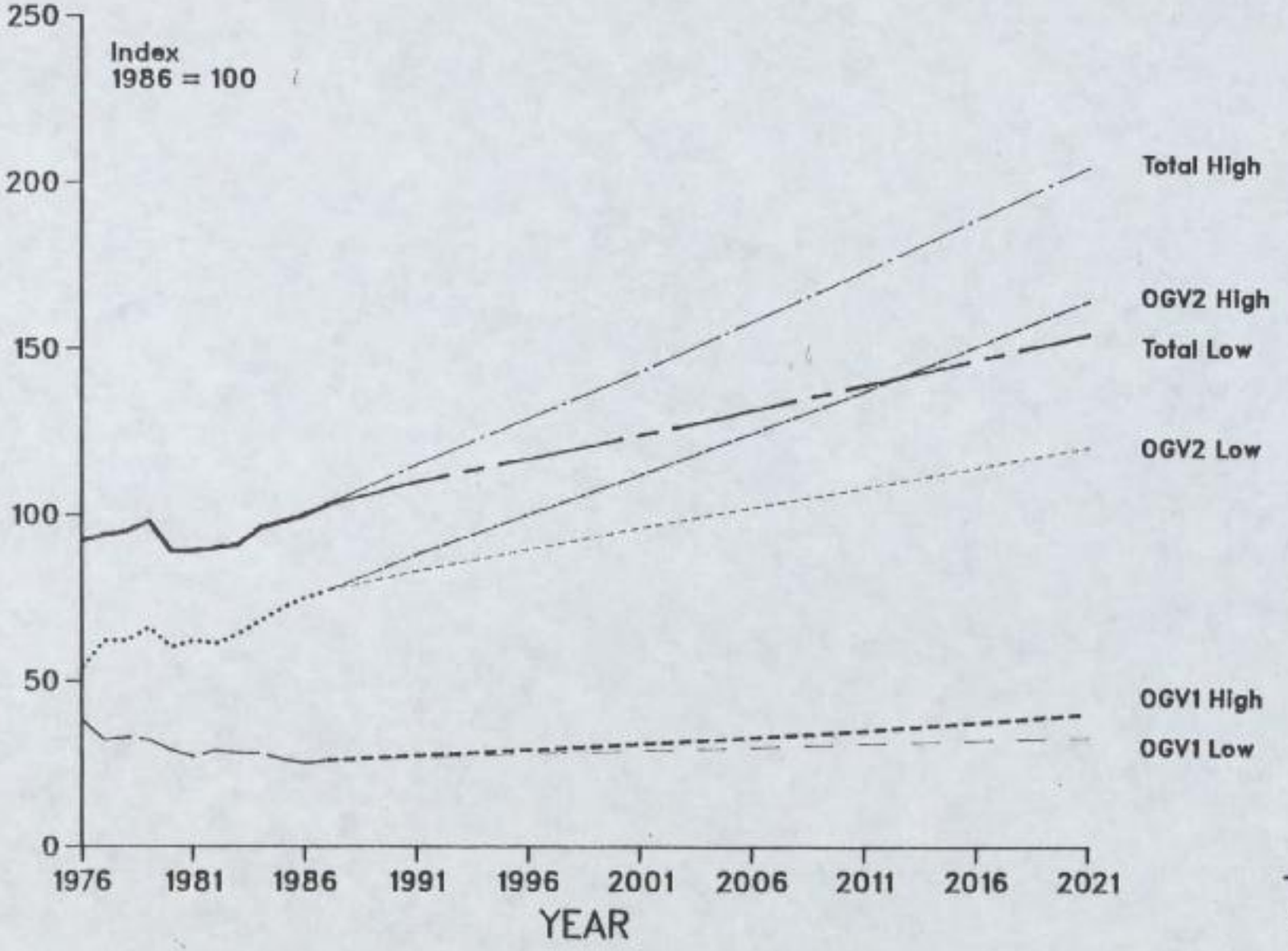
OGV2 Traffic



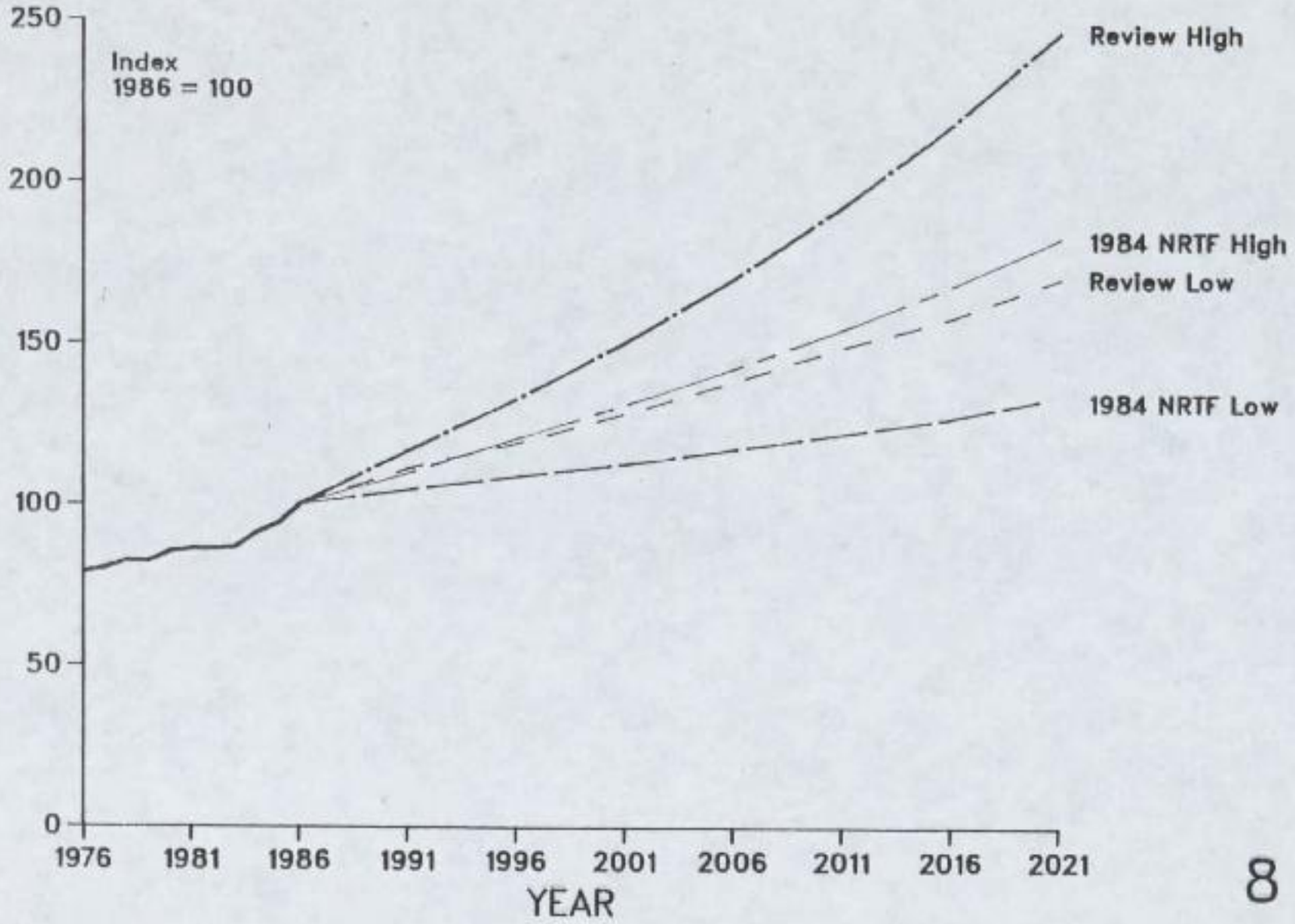
OGV1 Traffic



Road Tonne Kms



LGV Traffic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1984 NRTF High
Review Low
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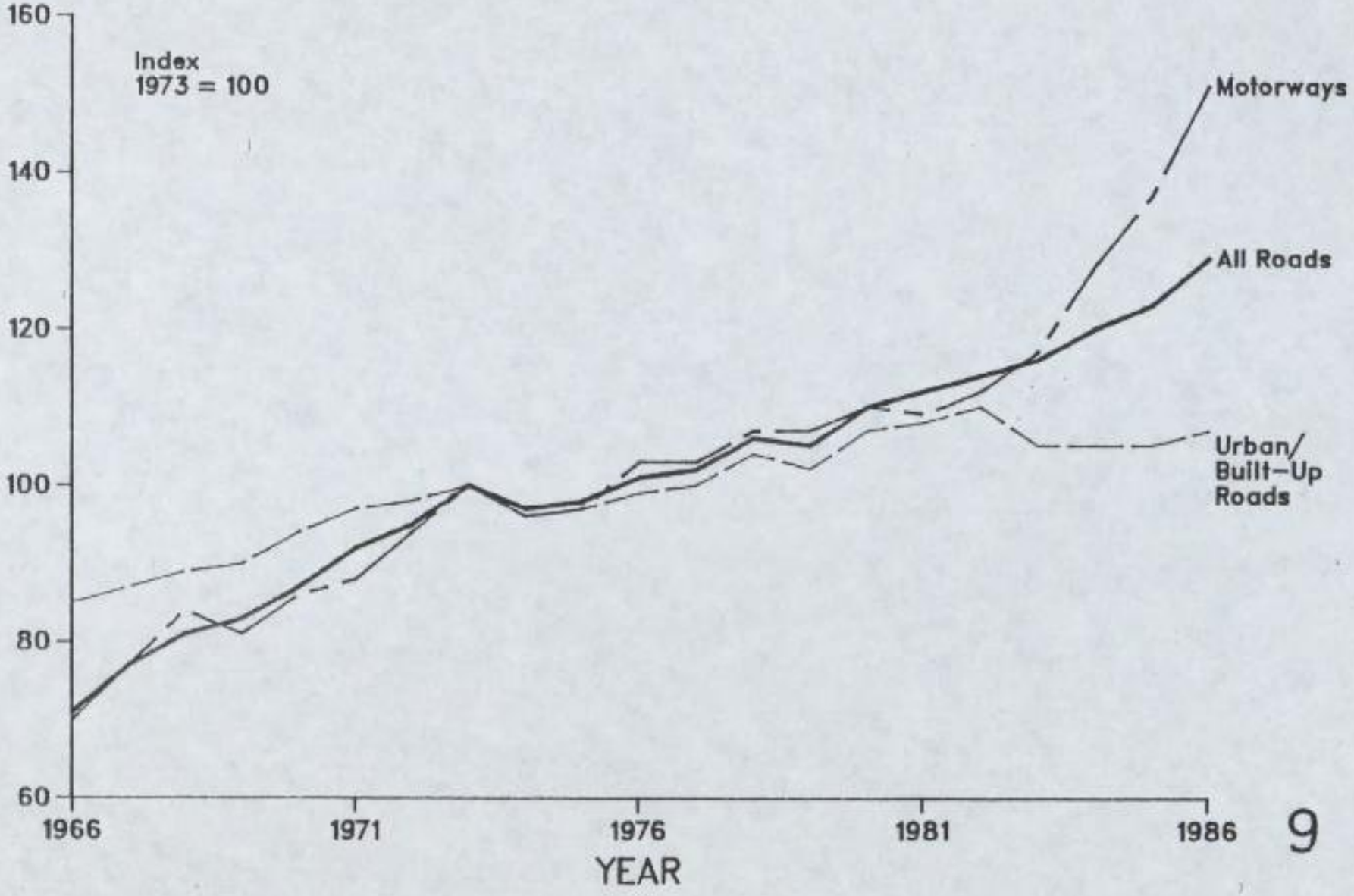
AADF Indices



ANNEX C

EVALUATION OF PAST ROAD SCHEMES

Back-Check of Traffic Forecasts used in Evaluations

Methodology/Accuracy

1. Forecast traffic flows expected as a result of a scheme are recorded at final Order Publication Report (OPR) stage. The actual traffic level is recorded one year after the scheme is completed, by 1 day 16 hour count.

2. In order to compare the forecast with outturn traffic flow both figures usually need to be adjusted to the same base. The forecast is factored to the year during which the actual count is taken by applying the national growth forecasts for traffic current when the forecasts were made. The 16 hour after count also has to be adjusted. Most counts are done automatically by registering the number of axles passing. Using standard factors, these axle counts then have to be converted to vehicle numbers. Manual vehicle counts or the factored axle counts for the 16 hour day have to be converted to the same units as the original forecasts eg. 12 hr average August day.

3. These adjustment procedures - essential to allow comparison - increase the uncertainty about both figures. Every traffic count is subject to measurement error and this is compounded by applying conversion factors which themselves lie within confidence limits. The traffic forecasts are derived from models which are necessarily simplified descriptions of complex situations, based on measurements which are subject to error. They are perforce factored by National Traffic Forecasts which may not apply locally. Given these limitations to both estimates being compared any divergence of less than + 20% lçannot be considered significant. If it lies within this range there is a significant chance that the forecast was closely accurate. In cases where there was a difference of more than 20% - ie. a significant difference, further information has been sought to try to establish the reasons for the difference.

Results

4. An analysis has been completed for all schemes assessed up to the end of March 1987 and records results for 38 of the 47 schemes which have been open for more than 1 year. For 2 schemes forecasts data is incomplete and analyses will not be possible. Results for remaining 7 schemes will be available in May 1988. The tables below give a detailed analysis of the results. Overall they are encouraging. For nearly a quarter of schemes, forecast flows were within 5% of the actual observed levels and for over half the schemes they were within 20% of the observed levels. For 86% of schemes forecast traffic levels were within + 40% of actual flows. Paragraph 5.2 of the report sets out the reasons for recorded differences of over 40%.

5. It is not easy to say what an error of 20% or more - ie. a significant difference, implies for variations in the value of time saving benefits or whether an over estimate of this size in the forecast for any particular scheme would have made the scheme negative. It depends on the reasons for the over estimate of traffic and on the characteristics of the particular scheme. If, for example, a 30% over estimate of traffic applied to the whole of the network then one would expect time savings, which typically account for about 90% of scheme benefits to be overstated by somewhat more than 30%. However, if the 30% over estimate arises because diversion from a near comparable alternative route has been lower than expected, then the contribution of this to the estimated benefits is quite small. An under estimate of traffic of 20%-40% in for the forecast would not be likely to affect the standard to which the scheme would have been built had a higher forecast in line with outturn flows been used.

Conclusion

6. More than half the back checks shows fully satisfactory results and voer 80% have significant differences of less than 20%. The comparisons reflect the considerable uncertainty involved both in traffic forecasting and in determining the actual level of average traffic flows on the ground. That said, no pattern has emerged which suggests that any particular method or type of scheme has given rise to systematic error in the forecasting of traffic. By May 1988, comparisons for a further 24 schemes should be available - bringing the total to 62. Only when we have a large number of schemes covered will we be able to draw conclusions which may be of value in improving our forecasting techniques.

COMPARISON OF FORECAST VERSUS OUTTURN TRAFFIC FLOWS

Scheme	National Forecast Used	Count Base	Forecast Flow Low	Forecast Flow High	Actual Count CL -95%	Actual Count CL +95%	% Diff[1,4] on Scheme	% Diff[1] on Scheme
A339 Basingstoke N BP St 2A	NRTF(80)	24hr AADT 86	32600	36500	31500	37500	+0	
A590 Levens Bridge Div	-	16hr 7 day August 1984	2400		1900	2900	+2	-15
A11 Attleborough BP	-	24hr 7 day August 1986	15600		15100	16700	-2	
A12 Gallows Corner GSJ	-	AM peak hr January 1986	2700		2200	3200	+2	-11
A17 Swineshead EP	-	16hr 7 day May 1986	4600	5200	4500	5000	+2	-13
A47 Wisbech - W Walton BP	H3/75	16hr 7 day September 1985	6600	6600	6100	7600	-4	+15
A30 Polstrong - St Erth	-	16hr 7 day August 1985	15300	15400	14500	16000	+4	-3
A19 Billingham Div	H3/75	16hr AAWT 1985	32900		28200	34400	+5	+1
A66 Stockton - Thornaby Div	H3/75	24hr AADT 1985	23300		19900	24300	+5	-22
A43 Bulwick BP	H3/75	16hr 7 day August 1987	5600	5700	5600	6800	-8	
A61 Chesterfield IRR	H3/75	24hr AAWT 1986	25700		22500	24900	+8	-16
A38 Derby Ring Road - Allestree	Int Memo	16hr 5 day August 1986	24000	24900	22400	32000	-10	-16
A31 Wimborne BP	-	16hr AADT 1981	6500		6600	8100	-11	-2
A45 Ipswich BP	NRTF(80)	16hr 7 day August 1986	15800	18300	15800	22900	-12	
A41 Newport BP	NRTF(80)	16hr 7 day August 1985	5700	6400	6300	7800	-14	-3
A38 Marsh Mills - Tamar Br[5]	H3/75	24hr 5 day August 1985	3130		19300	34600	+16	-
A66 Darlington BP	NRTF(80)	16hr 5 day September 1986	9100	10000	7300	9000	+17	-14
A51 Tarvin SW BP	Int Memo	16hr 7 day July 1984	5900	6700	5000	5600	+18	+20
A39 Marshgate Div	NRTF(80)	16hr 7 day August 1985	3200	3200	2400	3000	+19	
A41 Hilstock BP	Int Memo	16hr 7 day August 1986	5800		6400	7900	-19	
A45 Trimley GSJ	NRTF(80)	24hr 7 day November 1986	15700	16300	18900	20900	-20	
A1 Barnsdale Bar GSJ	-	24hr AADT 1986	2200	2300	2500	3100	-21	[illegible]
A69 Bardon Mills BP	NRTF(80)	12hr 7 day October 1986	6100	6600	4700	5700	+22	+11
A47 Gt Yarmouth W BP	NRTF(80)	24hr AAWT 1986	11300	12800	14200	17600	-24	+11
A45 St Neots BP	NRTF(80)	16hr AAWT 1986	7600	8500	9700	12000	-26	-45
A49 Brimfield BP	Int Memo	16hr 7 day August 1986	7000	8100	5600	6200	+26	
A590 Greenodd Div	H3/75	16hr 7 day September 1984	14300		9300	12900	+28	+41
M63 Stockport EW BP	NRTF(80)	16hr 7 day October 1984	20500	21900	24800	35900	-30	
A27 Langstone GSJ	-	12hr 5 day May 1986	14600		19000	23200	-31	-12
A564 Blyth Br-Uttoxeter	NRTF(80)	16hr 7 day August 1986	8700	9500	11100	15600	-32	-35
A69 Team Valley GSJ	H3/75	24hr 5 day November 1986	25200	25600	15000	23500	+32	
A31 Bere Regis BP	H3/75	16hr 7 day August 1985	6200		8400	11800	-38	

[illegible]-Actuals

Scheme	National Forecast Used	Count Base	Forecast Flow		Actual Count CL		% Diff[1,4] on Scheme	% Diff[2,4] off Scheme
			Low	High	-95%	+95%		
A40 Ross on Wye	-	16hr 7 day July 1985	6000	7200	3600	4400	+65	-28
A56 Accrington BP	NRTF(80)	16hr 7 day September 1986	21600	26300	11900	14700	+80	
M65 Whitebirk - Hyndburn	NRTF(80)	16hr 7 day September 1986	31100	42800	19100	21200	+83	
A66 Appleby BP	Red Book[3]	16hr 7 day August 1982	12000		5310	6500	+103	
M67 Denton Relief Road St 1	NRTF(80)	16hr 7 day October 1981	30400	31200	14200	15800	+105	+16

Notes

1. The percentage difference is the difference between the centre of the forecast minus the centre of the actual count divided by the centre of the actual count. (It should be recalled however that low and high forecasts are based on differing assumptions about the future and represent a sensible range possible outcomes. The central forecast is no more likely to occur than any other.)

2. The percentage for an off scheme road is calculated as in note 1, and is included for information where such data exists. [Information about off scheme traffic is of particular interest where a new road is built to relieve another route; it is on these other routes that the off scheme counts are taken.]

3. Red book is the Traffic Predictions for Rural Roads, 1968.

4. A positive percentage difference means that the forecast is greater than the actual flow.

5. This entry covers five schemes. So that for 38 schemes there are 37 comparisons made.

Number of Schemes for which the Forecast was within Percentage ranges of the Actual Flow

Percentage Range	Number over	Number under	Number sum	% age of total	Cumulative % age
0 - 10	8	3	11	29.7	29.7
10 - 20	4	6	10	27.0	56.7
20 - 30	3	4	7	18.9	75.7
30 - 40	1	3	4	10.8	86.5
40 - 50	0	0	0	0	86.5
50 - 60	0	0	0	0	86.5
60 - 70	1	0	1	2.7	89.2
70 - 80	1	0	1	2.7	91.9
80 - 90	1	0	1	2.7	94.6
90 - 100	0	0	0	0	94.6
100 - 110	2	0	2	5.4	100.0
	21	16	37	100.0	

2001 (LOW) STRESSED LINKS

MOTORWAYS

2021 (HIGH) STRESSED LINKS

MOTORWAYS

2001 (HIGH) STRESSED LINKS

MOTORWAYS

2021 (LOW) STRESSED LINKS

MOTORWAYS

ANNEX C

METHODS OF ROAD PRICING

1)Supplementary Licensing

C.1 This would, at its simplest, require vehicles moving within a certain area to display a specially purchased disc. It would be simple and easy to understand. But it would involve significant administration costs (eg. providing daily discs for visitors). There would be severe enforcement problems. A simple system would not distinguish between peak and off-peak periods or congested and uncongested routes or control the number of trips within the restricted area. With a more complex system, with discs for peak periods, administration and enforcement would become unmanageable. There would be problems of fairness for those who live in the licensing area or who need to drive in the city on business.

2) Cordon Pricing

C.2 Cordon pricing involves the placing of a cordon around an area of the city and imposing a charge on anyone who crosses that cordon into the restricted area. Enforcement should be straightforward as the charge could be collected on entry to the priced area. The cost could also be varied according to the time of day or type of vehicle and at different points of entry. It effectively exempts some local residents as they would not cross the cordon on many local trips, but there would still be hard cases. But it would be necessary to acquire land, and to construct and to man toll plazas on all of the many entry roads to the priced area. The GLC estimated that this would require some 600 staff even if some of the over 100 access routes were closed. This would clearly be very expensive in London. An electronic cordon monitoring system could overcome this but would pose its own problems of enforcement (see 3). There would be no control over the number of trips in the area once past the cordon.

3) Electronic Road Pricing (ERP)

C.3 ERP is a flexible, sophisticated electronic system used to charge the vehicle owner for travelling along specific roads at certain times of day. It can be a very sensitive and flexible system with different charges for each route at various times of day. It would not require toll plazas, but there would be high costs for the system (including £45 per vehicle in the area - some £90m) and for administering billing. Enforcement would be difficult as there would be problems of identifying vehicles with no electronic plates and of following up those who had plates but did not chose to pay the bill. It would also encourage people to drop out of the registration and licensing system altogether. There would be civil liberties arguments as people would object to the possibility of a record being kept of their movements. Drivers might refuse to pay on the grounds that their car had been stolen.

Comparison of licensing/pricing systems

C.4 The attractive simplicity of supplementary licensing and cordon pricing is also the major disadvantage of these systems in that they must be relatively blunt instruments. They cannot charge for the number of journeys within the controlled area by those who have paid for entry and no specific price can be placed on the use of particular routes. Supplementary licensing cannot realistically be applied in time bands and even with cordon pricing, where this is possible, there is nothing to stop early travellers continuing to travel within the priced area during the peak. There are therefore limits as to the extent to which costs can be tied to peak hours or to specific routes.

C.5 Electronic road pricing could provide a very precise system of

charging related to routes and times of day and therefore appears to be the most attractive system in terms of the objective of tailoring demand to supply. However, there are other problems specific to this system, most notably the civil liberties issue and the incentive not to register vehicles, which are not associated with the other methods of pricing. The costs of installing the ERP system would also be high, (though not as high as the costs of putting in toll booths for cordon pricing) while billing and enforcement would be a complex and costly exercise.

C.6 All of these systems would have a number of drawbacks.

a) Public acceptability

A price has, in the past, only been charged for new facilities such as estuarial crossings which give a significant added benefit. If Londoners are not offered anything in return for a new charge they are unlikely to find it acceptable. There would also be calls for many types of exemptions.

b) Effects on the local economy

If a charge is levied on a certain area of London there will clearly be effects on its economy although these cannot easily be quantified. These effects may be economically justified, but they would be unpopular. The charge will fall most heavily on businesses delivering goods and on those dependent on customers travelling by car, although there should also be benefits in savings of time with reduced congestion. Prices of goods in the priced areas are likely to rise, penalising local residents, unless exemptions are granted for commercial vehicles thereby largely defeating much of the object of the exercise.

c) Efficiency of prices

It is uncertain how high road prices would have to be to establish a better balance of supply and demand. One recent external estimate suggested a charge of £5 per day to enter central London

d) Need for Additional Roads

Any price will deter people from crossing the priced area, but there will be an increased number of orbital movements bypassing the area. In London it is the orbital routes which suffer the worst congestion and where expenditure is already badly needed. A pricing system could only add to the pressure on these routes and increase the need for investment.

e) Need for Additional Public Transport

It is unlikely that many of the journeys which could potentially be deterred by pricing would as a result not be made at all. Some would look to public transport, thereby putting greater stress on bus, train and tube services in London. However, in these circumstances it might be profitable to provide extra public transport capacity.

008/4210

Treasury Chambers, Parliament Street, SW1P 3AG

Ms Jenny McCusker
Private Secretary to the
Secretary of State for Transport
Department of Transport
2 Marsham Street
London
SW1

17th June 1988

Dear Jenny,

ROADS EXPENDITURE 1988-89

The Chief Secretary and your Secretary of State discussed yesterday evening the drafting of the answer to the arranged PQ circulated with your Secretary of State's letter of 14 June. I attach the agreed revised draft, to be answered on Monday, 20 June. I would be grateful if you could ensure that answers to the oral PQ's down for that day are in line with this redraft.

You are of course aware of the difficulties that the timing and substance of this PQ posed for us. Please could you ensure that in future we are consulted about arranged PQ's of this sort before they are put down.

I am copying this letter to the Private Secretaries to the Prime Minister, John Wakeham, Tom King, Malcolm Rifkind, Peter Walker and David Wadington.

Yours ever,

ZOE EVEREST-PHILLIPS
Assistant Private Secretary

2524/7/17

Q. To ask the Secretary of State for Transport what is the effect of construction prices on his plans for road building and maintenance this year.

A. We are achieving a high level of activity in road building and maintenance. Our planned spending on capital items is over 30% more in real terms than in 1978-79. Spending on roads this year is at an all time record level of over £1 billion.

We are making more rapid progress with schemes than expected I have reviewed the scheduling of our work. All work currently in hand will continue. I shall continue to give high priority to safety schemes, though there will be implications for the phasing of major reconstruction works. My aim remains to start within the year all planned new construction schemes which are ready.

CONFIDENTIAL

DEPARTMENT OF TRANSPORT
2 MARSHAM STREET LONDON SW1P 3EB

My ref:

Your ref:

The Rt Hon John Major MP
Chief Secretary to the Treasury
HM Treasury
Treasury Chambers
Parliament Street
LONDON
SW1P 3AG

14 JUN 1988

NBPM
BRCC
15/6

Dear John,

ROADS EXPENDITURE 1988-89

There is now clear evidence that construction prices are rising again after holding steady for a long period. My letter of 25 May set out the consequences for the PES round of the outlook on prices. But the increases are also having an effect in the current year, for which provision was set lower in real terms than that for 1987-88 pending the outcome of a review by our officials of the needs of the road programme. I have reviewed the situation and am re-scheduling work to enable us to keep spending within budget while maintaining value for money.

The best estimate at present is that prices are rising by about 10% a year in cash terms. The upturn last year which followed a long period of decline in real terms seems to reflect both increasing costs of inputs, particularly labour, and some rebuilding of contractors' profit margins. I shall maintain our efforts to contain price increases and to maintain competition. We have warned the industry that we cannot allow excessive increases. In one recent case when bids seemed excessive, my Department ordered re-tendering. But we cannot expect the industry to continue to cut prices given the increase in demand for construction of all kinds which flows from our increasing national prosperity.

For the current year, I intend to continue all work currently in hand and to maintain new construction starts as far as possible. I aim to start within the year all schemes which are ready although some may be delayed. To achieve this, I shall have to defer for the time being letting further capital maintenance contracts. I have to give priority to new road building because it is already clear from the work that your officials and mine have done that the demand for roads which

our economic policies are generating far exceeds the increase in road capacity currently planned for England. So it is vital to maintain the momentum of the new construction programme without the disruption that a moratorium would entail.

Holding back essential rebuilding for any appreciable period of time is a false economy as the costs both to the Department and the public are higher if the structure of the road is allowed to fail. We have criticised the Labour government's failure to deal effectively with maintenance needs. It will be vital over the next year or so to make up the work lost so that we can meet our published target of eliminating the backlog by 1992.

I am monitoring the situation closely and shall be keeping our plans under review in the light of developments. I am making a low key announcement in a Written Answer tomorrow, I enclose a copy.

I am copying this letter to the Prime Minister, John Wakeham, Tom King, Malcolm Rifkind, Peter Walker and to David Waddington.

Yours,

Paul

PAUL CHANNON

Q To ask the Secretary of State for Transport what is the effect of construction prices on his plans for road building and maintenance this year.

A We are achieving a high level of activity in road building and maintenance helped by more rapid progress with some schemes than expected. Our planned spending on capital items is over 30% more in real terms than in 1978-79 and the total provision for road spending is over £1 billion for the first time.

Construction prices have been rising since last year following a long period during which they fell in real terms. I have therefore reviewed the scheduling of our work. All work currently in hand will continue. My aim remains to start within the year all planned new construction schemes which are ready. I shall continue to give high priority to safety schemes.

For the time being, since we have been able to make faster than expected progress with this work in recent years, I intend to defer in general the letting of new contracts for major reconstruction of motorways and other trunk roads.

RLé

DA

10 DOWNING STREET

LONDON SW1A 2AA

From the Principal Private Secretary

9 May 1988

Dear Kate,

SPEEDING UP OF PUBLIC INQUIRY PROCEDURES FOR ROAD SCHEMES

You will have seen the Secretary of State for Transport's recent report to the Prime Minister on this subject and a copy of my letter to the Secretary of State's Private Secretary which set out the Prime Minister's comments on the paper attached to the Secretary of State's minute. You will see that the Prime Minister has asked for a report at the next Value for Money Seminar on the target setting exercise which is referred to in paragraph 8 of the paper attached to the Secretary of State's minute. I think that it would be as well if the Efficiency Unit could ensure that the Department are taking this target setting exercise seriously so that they can make a good report to the Seminar when that is held in a few years' time!

Yours ever,

Nigel Wicks

(N.L. WICKS)

Miss Kate Jenkins,
Efficiency Unit.

EA

FLe DA

10 DOWNING STREET

LONDON SW1A 2AA

From the Principal Private Secretary

9 May 1988

Dear Roy,

SPEEDING UP OF PUBLIC INQUIRY PROCEDURES FOR ROAD SCHEMES

The Prime Minister has seen your Secretary of State's (undated) minute to which was attached a paper on the action planned to accelerate public inquiry procedures for road schemes.

The Prime Minister was grateful for this report. She has noted in particular the statement in paragraph 8 of the paper that it takes on average thirteen years or so from the entry of a road scheme into the programme to the opening of the road to traffic; and that the Department's regional offices have been set targets with the aim of reducing this time-span. The Prime Minister will expect a full report on the results of this target setting exercise at the Department's next Value for Money Seminar.

I am copying this letter to Deborah Lamb (Department of the Environment), Trevor Woolley (Cabinet Office) and to Sir Robin Ibbs.

Yours ever,
Nigel Wicks

(N.L. WICKS)

Roy Griffins, Esq.,
Department of Transport.

CONFIDENTIAL

Prime Minister

SPEEDING UP OF PUBLIC INQUIRY PROCEDURES FOR ROAD SCHEMES

1. When we discussed Value for Money in my Department in December, I agreed to look further into the scope for reducing planning delays in road schemes (in consultation with the Secretary of State for the Environment); and to let you have a joint report.

2. I am keen to speed up the procedures for building new roads whilst keeping the right of individuals to have a fair hearing of their objections. The attached report looks at the possibilities of shortening both the inquiries and the other stages.

3. As regards public inquiries, Nicholas Ridley is close to introducing new procedure rules for inquiries into planning cases. He and I think that we should see how effective these changes are in reducing delay before starting on new and more fundamental changes. I shall be completing new procedure rules for highway inquiries later in the year.

4. I have, however, decided to introduce targets to reduce the time taken in the early stages of road schemes. Paragraphs 8 to 10 of the note explain the action taken. I shall continue to look for every possible opportunity to speed up road scheme progress.

5. A copy of this minute goes to Nicholas Ridley, to Sir Robin Butler and Sir Robin Ibbs.

PAUL CHANNON

CONFIDENTIAL

C

ACCELERATION OF PUBLIC INQUIRY PROCEDURES FOR ROAD SCHEMES

Background

1. Trunk roads are authorised by orders under the Highways Act 1980 which imposes procedural requirements similar to those of the planning legislation, including in certain circumstances the holding of public inquiries to hear objections. There is one practical difference: for roads the Secretary of State is not only responsible (jointly with the Environment Secretary) for the eventual decision; he is also promoter of the proposals. That makes for some differences in detail, but generally DTp and DOE work closely to keep the relevant procedures on similar lines.

2. Most public inquiries last only a few days and are relatively uncontentious, though the exceptions, like the East London River Crossing and Stansted, raise acutely the question whether a simpler and quicker process would serve the purpose.

Speeding up inquiry procedures

3. The procedures for inquiry into major projects were considered interdepartmentally in 1986-87 and H Committee discussed the matter on 2 October 1985 and 19 May 1986. The conclusion reached was that any alternative to the present public inquiry procedure was only likely to be quicker at the risk of impairing significantly the right of people affected by the proposals to make representations about specific and general effects of them. So it was agreed that the right approach was to make the procedures as efficient and disciplined as possible without diminishing objectors' rights.

4. H Committee's conclusions were incorporated into a draft revision of the Inquiries Procedure Rules for cases being decided under the Town and Country Planning Acts. These detailed proposals were published for comment in December 1986 as part of the Government's response (Cm. 43) to the Fifth Report of the Environment Committee, Session 1985-86, on Planning Appeals, Call-in and Major Inquiries. The response made it clear that the same

general approach would be followed in revised Rules for road inquiries but with some adaptations to allow for the special position of the Secretary of State for Transport as noted in paragraph 1 above.

5. The Lord Chancellor has already laid on behalf of the Department of Energy new rules which apply the new arrangements to proposals for electricity generating stations and overhead power lines. He will very shortly be laying the final version of the DOE's new rules for planning cases. The final version of the new rules for road inquiries should be laid later this year.

6. The revised sets of rules should bring a great deal more discipline into inquiry procedures; ensure that time is not wasted, particularly in the preparatory stages; and ensure that the inquiry lasts no longer than absolutely necessary, principally by identifying beforehand the matters on which the inquiry should concentrate. We shall be monitoring the effectiveness of the new rules in reducing delay.

7. More generous compensation arrangements being considered following the discussion of EA Committee on 10 March (EA(88)4th meeting) could also help to cut the time taken by certain inquiries, though inquiries into schemes raising contentious environmental issues are always likely to be long.

Other measures to cut delays

8. Road inquiries should benefit as much as others from these new requirements. But other changes will also pay dividends. Even the handful of very protracted road inquiries account for only a relatively small proportion - at most about a sixth - of the 13 years or so which it takes on average from the entry of a road scheme into the programme to its opening to traffic. So the Department has also reviewed the scope for shortening the stages before the public inquiry: design of the scheme; examination of alternative solutions; and preparation of the proposals to put before the inquiry. The review was carried out by an independent consultant, who made a number of recommendations.

9. Some schemes get off to a very slow start, because it proves difficult to devise satisfactory practical and economical ways of carrying them out in a way acceptable to the public. A recent survey of more than a hundred road schemes showed that on average more than half the time taken in planning and building them was spent in preparing initial proposals for public consultation and considering the responses from that in order to decide on and announce a preferred route. The Department's regional offices have now been set targets for these stages which should ensure that in future the public are consulted on possible solutions within 3 years of the schemes being added to the programme, and that the preferred route is chosen not later than 12 months after that consultation - cutting this part of the procedures by about 50%.

10. The regional offices will monitor and report on progress against these targets, explaining the reasons for failures to meet them. The Department will then decide whether to retain the schemes, take special measures or, in the last resort, drop them from the programme.

C/F to Keep

fle

JAZAXE

10 DOWNING STREET

LONDON SW1A 2AA

From the Private Secretary

27 January 1988

POTHOLES

Well I tried. If I may quote from Jenny McCusker's letter:-

> "You asked for a short report on the quality of repairs both temporary and permanent; with suggestions for improvements.
>
> Briefly, this problem was looked at by the Horne Report which reviewed the workings of the Public Utilities Street Works Act 1950. The Report recommended that temporary reinstatements should wherever possible cease: the utilities should generally carry out permanent reinstatement straightaway. In July 1986 the Government welcomed the Report giving a commitment to introduce legislation at a suitable opportunity.
>
> Achievement of better and quicker reinstatement would be widely welcomed. Saving for the utilities of the order of £20m could be achieved and the proposals would allow a reduction in local authority manpower. Both utilities, and local authorities would welcome early legislation.
>
> The Department's bid for a Bill in the current Session was unsuccessful. Given the continuing competition for legislative time, we did not include it in our bid for 1988/9. However, the Secretary of State would be happy to add it if the Prime Minister so wished. Work on the Bill is well advanced and this would be a short, non-controversial Bill suitable for Lords' introduction."

I am also enclosing the detailed note they provided. Now if you hadn't needed so much time for such mundane issues as education reform, community charge, etc, we might have been able to get something important done.

(P. A. BEARPARK)

David Norgrove, Esq. 21 Haddington

DEPARTMENT OF TRANSPORT
2 MARSHAM STREET LONDON SWIP 3EB

My ref:

Your ref: C/PSO/594/88

P A Bearpark Esq
Private Secretary
10 Downing Street
LONDON

26 JAN 1988

Dear Andy

Thank you for sending us the Costain proposals, under cover of your letter of 18 January. We have recently received a telephone call from Mr Costain to let the Secretary of State know that they are working further on the engineering practicalities of the schemes. They intend to submit revised proposals in two to three months time.

My Secretary of State welcomes innovative ideas (and these clearly fall in that category). We shall examine the schemes more thoroughly when they have been revised. In the meantime you may be interested in the enclosed short briefing notes on each of their three proposals.

Yours

Jenny McCusker

JENNY McCUSKER
Private Secretary

COSTAIN PROPOSALS

CAPITAL CROSSWAY

The proposal is for a dual 4 lane road tunnel from M4 at Chiswick to Blackwall Tunnel with a 3 lane service tunnel and a 4 track rail tunnel access to 15,000 space car parks at Vauxhall and Borough and new M23 at Wandsworth: there would be no access to central London. The cost would be £1100M financed by tolls (for example £15 for a car including parking).

Comments

The proposal is an interesting and potentially valuable idea which would relieve M25 of East-West traffic, provide good access to Docklands from the west, and cater for some inner London orbital traffic, without adding to traffic on roads in central London.

Success would depend initially on how many drivers would be prepared to pay the toll and even more the combined toll and parking charge which accounts for two thirds of the projected income. There is little experience to go on.

There is no indication of the proposed siting of the new car parks - the cost of £10,000 per space suggests multi-storey - or what public transport is envisaged to the West End and City.

Dual 4 lane standard is unnecessarily high for the estimated traffic and no case is made for the rail tunnels. It would be difficult to fit all these tunnels into the Thames, especially under the bridges. The cost estimates are on the low side. Hence, it would be more practical to start with dual 2 lane tunnels and add further tunnels if there were enough demand and they were feasible.

A tunnel in the river to relieve Parliament Square would probably not leave enough room for the full project, but a more modest schemes would probably be possible.

CAPITAL CROSSWAY contd.

It is an interesting and imaginative proposal. However the reference to a new motorway linking the tunnel to M23 will cause concern in Wandsworth - we have had some difficulty in allaying fears of Wandsworth Council that WEIR and the assessment studies could lead to plans to extent M23 to the river. Also if the project went ahead, it would increase pressure on the North Circular and A13.

NETWORK NEPTUNE

The proposal is for a new high speed (200 mph) rail link between the Channel Tunnel and London (and the West Coast Main Line), Huntingdon (and the East Coast Mail Line) and Reading (and lines to the South Midlands, Wales and South West). The development would become the property of a new independent railway company and would be funded entirely from the private sector. Capital cost £2,500 million; operating costs £120 million per annum; revenues £500 million per annum.

Comments

This does not look a realistic project as it stands. It seems to assume the capture of a significant slice of BR's freight and passenger traffic, although it assumes significantly higher passenger fares; it fails to appreciate that fare levels would need to be agreed with SNCF and SNCB also (who would not accept such high fare levels); and would require freight services to fund up to half the cost of the new infrastructure (freight does not need to travel at 200 mph or pay for such an infrastructure). BR are already looking at new high speed lines. Private funding is of interest but would seem to make most sense if allied to BR's plans - perhaps to accelerate developments or to pay for particular routings or facilities.

CAPITAL EXPRESSWAY

The proposal is for an upperdeck on the M25, with junctions only to other motorways (M1, M40 etc) remunerated from tolls. The new motorway would be funded entirely from the private sector, and its promoters would also purchase the existing M25 from the Department and charge tolls on it. Tolls for a car of £1 are envisaged. The visual and noise intrusion of the upper deck are recognised as a problem, and would be minimised.

Comments

Using the same land as the M25 is an ingenious way of minimising land acquisition problems but the environmental impact would make the necessary legislation very difficult. Costains admit that upgrading of the North and South Circular roads, and improved access to the M23, would be needed to maximise use of the new orbital. The toll seems low, and no doubt many travellers would be prepared to pay if it is assure a smooth passage, but how carefully Costains have done their costing is unknown.

Please GR?

DEPARTMENT OF TRANSPORT
2 MARSHAM STREET LONDON SW1P 3EB

My ref:

Your ref:

25 JAN 1988

P A Bearpark Esq
Private Secretary
10 Downing Street
LONDON
SW1A 2AA

Prime Minister 2.

I will explain the position to David.

Dear Andy

POTHOLES

Your letter of 29 December 1987 to Deborah Lamb about the Prime Minister's concern with the standard of repairs on London roads has been passed to this Department.

You asked for a short report on the quality of repairs both temporary and permanent; with suggestions for improvements.

Briefly, this problem was looked at by the Horne Report which reviewed the workings of the Public Utilities Street Works Act 1950. The Report recommended that temporary reinstatements should wherever possible cease: the utilities should generally carry out permanent reinstatment straightaway. In July 1986 the Government welcomed the Report giving a commitment to introduce legislation at a suitable opportunity.

Achievement of better and quicker reinstatement would be widely welcomed. Saving for the utilities of the order of £20m could be achieved and the proposals would allow a reduction in local authority manpower. Both utilities, and local authorities would welcome early legislation.

The Department's bid for a Bill in the current Session was unsuccessful. Given the continuing competition for legislative time, we did not include it in our bid for 1988/9. However, the Secretary of State would be happy to add it if the Prime Minister so wished. Work on the Bill is well advanced and this would be a short, non-controversial Bill suitable for Lords' introduction.

The enclosed note sets out the position in more detail.

Yours

Jenny McCusker

JENNY McCUSKER
Private Secretary

POTHOLES

1. Deteriorating road conditions in London and elsewhere reflect underspending on maintenance by local authorities. Excavations by public utilities are an important factor. It was concern over the large number of openings and the poor quality of subsequent reinstatement which led the Department to commission Professor Horne and his colleagues to carry out an independent review of the Public Utilities Street Works Act 1950 (PUSWA). PUSWA governs the activities in the highway of the utilities and their relationship with highway authorities. It allows highway authorities to elect to carry out the permanent reinstatement themselves, following a temporary reinstatement by the utility. The Horne report concluded that this division of responsibilities was a prime cause of the poor quality of many reinstatements. Its principal recommendation was that full responsibility for the whole reinstatement should be placed on the utility. This, together with related measures recommended by the report will require new legislation.

2. The Horne report has received widespread support from the utilities, the local authority associations, contractors and road user interests. The Government response, published in July 1986, accepted the great majority of its recommendations and announced our intention to introduce legislation at a suitable opportunity. A few technical points remain to be settled but these are in hand and need not hold up drafting. Instructions are otherwise ready now.

3. Highway authorities have been encouraged since 1974 to enter into a form of voluntary agreement with the utilities known as the Model Agreement and Specifications. But the Horne report noted that the extent to which highway authorities had entered into these voluntary agreements had been disappointing. It found that most urban authorities (including 31 of the 33 London Boroughs) still elect to carry out the permanent reinstatement on all their roads. This means that the utility carries out a temporary reinstatement and is responsible for that until the highway authority carries out the permanent reinstatement. There is no time limit, and many cases take as much as 2 or 3 years. Sometimes the highway authority eventually even accepts the temporary reinstatement as a permanent one.

4. Implementation of the Horne report's principal recommendation could greatly improve the situation. Utilities, would have to complete a permanent reinstatement as early as possible and certainly within 6 months. This would be backed up by a series of measures to ensure that the utility does a good job, including national specifications, a 2 or 3 year guarantee, improved training of workmen and monitoring and default powers for highway authorities.

5. Implementation of the report offers the prospect of:

- better reinstatements, particularly through tackling the problem of temporary reinstatements;

- lower costs and improved efficiency for the utilities because in many cases the job will be done in one visit instead of two, they will be working to one standard specification instead of a myriad of local specifications,

and they will not be faced with charges (some rather high) from local authorities for permanent reinstatements;

- a reduction in local authority manpower; many authorities give the permanent reinstatement work to their direct labour organisations, but we shall be transferring this to the private sector in the form of either the privatised utilities or their contractors; we shall allow local authority DLOs to compete for tenders, but do not expect them to win nearly as much work as they carry out at present.

BRICK PAVED ROADS

6. Many existing specifications require special attention to be paid to the restoration of special surfaces and colours, such as brick paved roads. This will be covered in the new specifications. Problems such as the use of asphalt might well be because it was meant only to be a temporary reinstatement; alternatively, a local specification might have overlooked this point, or the work might be in contravention of the local specification.

TRENDS IN ROAD CONDITIONS

7. The National Road Maintenance Condition Survey, started in 1977, suggested that in the early years there was some improvement in road condition in London, but that since 1980 there has been a steady deterioration. A similar trend applies to England as a whole.

8. In response to this trend, the public expenditure provision for local road maintenance was increased by 15% for 1986-87 and a

further 13% for 1987-88. The provision should now be about sufficient to halt the decline in condition, but not to secure a positive improvement. However, authorities failed to spend up to the provision last year and seem likely to do so again this year.

file

TRANSPORT
Projects

29/1

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

18 January 1988

I enclose details of three Costain proposals concerning transport projects in the South East. The Prime Minister is aware of these, and I know that she would be grateful for a short note on them.

R26/1

(P. A. BEARPARK)

Miss Jenny McCusker,
Department of Transport.

004/4211

CONFIDENTIAL

Treasury Chambers, Parliament Street, SW1P 3AG

The Rt Hon Paul Channon MP
Secretary of State for Transport
Department of Transport
2 Marsham Street
London
SW1P 3EB

NBPM
ARLG
6/1

Dear Paul,

6th January 1988

attached. will respond if required — yes please, for the with other cable pp P

PRIVATELY FINANCED ROADS

Thank you for your letter of 18 December.

My concerns about your original proposal to make a speech about the private financing of roads arose from the fact that it was so general, and so open-ended. The draft you put forward also appeared to imply that private finance was a good idea because it by-passed public expenditure constraints. That approach was all too likely to lead to proposals, more or less ingenious, for building your own roads programme on worse terms for the taxpayer. That in turn would distract attention from the more difficult but more rewarding questions which you want to explore about what the private sector might be interested to do on its own account.

I would not object in any way to exploratory soundings of particular private sector groups about their degree of enthusiasm for privately financed tolled roads, as a contribution to the work of the Review of the Road Programme. Any such soundings would need to be addressed to relatively specific questions about the distinctive contribution which new private sector initiatives could make, on the basis of our agreed policy on private finance. It would need to be made clear to the private sector groups that private finance should not be seen as a way of avoiding public expenditure controls; that it must be justified on grounds of cost-effectiveness, stemming from new ideas or general better management; and that there is no presumption that it will increase total spending on roads.

On this understanding, I am content for our officials to consider more precisely what consultations of this sort would contribute to the Review of the Road Programme, and refer back to us with specific proposals.

I am copying this letter to the Prime Minister and David Young.

Yours Ever,

John

JOHN MAJOR

Transport: White Paper - Policy for Roads
PTS

POTHOLES
29/1

FILE
DA

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

29 December 1987

POTHOLES

The Prime Minister has commented recently that there has been a steady deterioration in London's roads over the last ten to fifteen years. Her perception of this problem is that it is due in large part to the poor standard of repair when roads are dug up by the statutory undertakings, by builders and so on. She appreciates that in some cases the problem is more apparent than real in that a temporary repair is made and then a permanent repair carried out when the earth has settled. This is something one can accept. But the real problem arises when a permanent shoddy repair is carried out. A different, but related problem, is that people who dig up the roads do not appear to be obliged to reinstate them in the original manner. For example a brick paved road can be dug up, and it would seem that the repair can then be made in asphalt.

I should be grateful if you could arrange for a short report on the above two areas, with some suggestions for improvements in the position.

(P.A. BEARPARK)

Miss Deborah Lamb,
Department of the Environment.

PRIME MINISTER

POTHOLES

May I, in my last minute to you, offer a jeu d'esprit?

As a cyclist I am very aware that over the last ten to fifteen years London's roads have steadily deteriorated. My own perception of the problem is that it is due in large part to the poor standard of repair when roads are dug up by the statutory undertakings, by builders and so on. In some cases, the problem is more apparent than real because a temporary repair is made and then a permanent repair carried out when the earth has settled. The temporary repair often deteriorates quickly. But that is something one can live with. The real problems arise when a permanent shoddy repair is carried out.

A somewhat different, but related problem, is that as I understand it people who dig up the road are not obliged to reinstate it in the original manner. So, for example, a brick paved road can be dug up and the repair then made in asphalt.

Agree to enquire into the facts in these two areas and to ask what can be done to improve matters?

DRN

Yes - delighted to do so!

DAVID NORGROVE

24 December 1987

VC4ATB

4

PRIME MINISTER

DLW
23/12

23 December 1987

3 folders attached

THREE AMAZING PROJECTS

In the context of Paul Channon's current efforts to involve the private sector in infrastructure investment, you might be interested in glancing during the Christmas break at the three attached projects. One is a suggestion by Costain that they could put a doubledeck on the M25 funded entirely by the private sector. Secondly, Costains suggest they could bore a 16 mile tunnel under the Thames from the M4 to Docklands with a few exit points in the centre of the City of London at which there would be car parks. Again this would be funded entirely by the private sector. Thirdly, this company suggests they could build a fast freight-rail from central Britain through the East of London down to the Channel Tunnel. Of the three projects the first two seem more viable economically from the private sector point of view.

JOHN WYBREW

HARTLEY BOOTH

I assume these are being followed up by Paul Channon?

MS

CONFIDENTIAL

DEPARTMENT OF TRANSPORT
2 MARSHAM STREET LONDON SW1P 3EB

01-212 3434

The Rt Hon John Major MP
Chief Secretary to the Treasury
HM Treasury
Treasury Chambers
Parliament Street
LONDON
SW1P 3AG

18 DEC 1987

NBRN

Dear John.

PRIVATELY FINANCED ROADS

Thank you for your letter of 30 November in response to the proposals I had sent Nigel Lawson on 18 November. I have also seen David Young's letter of 3 December expressing support for my proposals and for trailing the ideas as I suggested.

I was disappointed that you however felt the ideas contained in the paper should not be trailed publicly, either in a speech or elsewhere. Your view was that this would prejudge the outcome of the Joint Review of the Road Programme which I suggested to you in the course of our discussions on public expenditure.

Rather than prejudicing the outcome of the Review, I believe that exploratory soundings among private sector groups on their degree of enthusiasm for the ideas in my paper should make a useful contribution to our thinking in the Review. The Review will of course, as you suggested, be looking at the scope for charging tolls on some of the new roads which I believe will be needed by the turn of the century, and how they could ease the problem of financing those roads. If we have some indication of the extent to which we could sensibly expect the private sector to take on the provision of roads on this sort of basis, it will improve our understanding and allow specific ideas for useful additions to the road network to emerge.

Any soundings of this sort will not come as a surprise to the industry. In our Roads White Paper Command 125-1, published in April, we said:

> "The Government is keen to encourage initiatives by the private sector for adding to the level of transport infrastructure whenever this is the most cost effective way of providing the facilities concerned.... [The Dartford Crossing] initiative demonstrates that infrastructure provision need not be a matter for the Government alone. Exciting new opportunities now exist for the private sector to come forward with proposals for other projects."

CONFIDENTIAL

You also sounded a warning that private finance should not be assumed to be additional to public finance for roads, rather than a substitute for it. Of course I am not surprised that you should say that, and I acknowledged the point you make in my paper, saying that we would have to discuss that matter in relation to particular schemes on their individual merits. However, I felt it only fair to add that taxpayers will not take kindly to the idea of paying tolls on ordinary roads unless they can see - like those who pay at bridges - that they are getting some benefit they would not otherwise have had. We cannot evade the problem if we decide to charge tolls for some new roads, so we shall have to address this question at some time. But I am sure you would agree that it is not something we can expect to settle satisfactorily before we know what sort of projects we shall actually be considering. That could only be clarified by the kind of soundings I am anxious to initiate.

All I am asking at this stage is to start talking - not take decisions. Perhaps our officials could consider more precisely what form such consultations might take.

I am copying this letter to the Prime Minister and David Young.

Yours

Paul

PAUL CHANNON

Transport

Roads Policy

PT3

004/3294

CONFIDENTIAL

Treasury Chambers, Parliament Street, SW1P 3AG

The Rt Hon Paul Channon MP
Secretary of State for Transport
Department of Transport
2 Marsham Street
London
SW1P 3EB

30 November 1987

Dear Paul,

PRIVATELY FINANCED ROADS

Thank you for your letter of 18 November to Nigel Lawson, enclosing a paper on privately financed roads.

Your paper raises some interesting ideas but I would not be at all happy for them to be trailed publicly, in a speech or elsewhere, until they had been thoroughly explored by the recently set up Review of the Road Programme. Any premature publicity is likely to prejudice the outcome of the Review.

There are a number of issues in the paper which need to be examined carefully. I am all in favour of obtaining the gains in efficiency, innovation and responsiveness from private sector involvement, to which you refer in your minute to the Prime Minister, where these are likely to achieve better value for money for taxpayers and road users. And I accept that private finance is preferable to public finance where it is more cost effective. At the same time, however, private finance does not of itself create additional resources, and hence does not release public finance for roads which could not otherwise be afforded. If additional road investment is needed, the case for it has to be considered against other public expenditure priorities.

CONFIDENTIAL

I recognise that the main thrust of your paper is to put the case for tolled roads, and I agree that there is much to be said for them. Tolls, however, could be used to recover the cost of publicly financed roads as much as privately financed ones. I am sure that the Review should consider this possibility.

Thus your proposals would have important implications both for the road programme and for the planning and control of public expenditure generally. These need to be explored, and understandings reached between us, before views are sought from outside. Otherwise we risk setting off the whole debate on the wrong footing.

I am copying this letter to the Prime Minister and David Young.

Yours Ever,

John

JOHN MAJOR

CONFIDENTIAL

CCBG

DEPARTMENT OF TRANSPORT
2 MARSHAM STREET LONDON SW1P 3EB
01-212 3434

David Norgrove Esq
Private Secretary
10 Downing Street
LONDON SW1

Prime Minister 4

DLS
20/11.

18 NOV 1987

Dear David

PRIVATELY FINANCED ROADS

My Secretary of State was grateful for your reply of 20 October, and has now sent the paper to the Chancellor of the Exchequer and the Secretary of State for Trade and Industry under cover of a letter of which I am attaching a copy.

We did consider extending the paper to cover further private sector initiatives in public transport, as the Prime Minister suggested. We have made considerable progress already in this area and are currently examining the scope for new steps. This will take a little time and Mr Channon would prefer to initiate a discussion of privately financed roads in parallel with that work. The issues are, after all, rather different since public transport already collects fares, while tolls on major roads would be a completely new departure.

You also mentioned David Howell's study in 1982. That was an investigation into shadow tolling - ie the Government paying for a privately financed road through a levy per vehicle, instead of the driver of the vehicle, who would not be charged directly. That is only public expenditure in another form, as our paper recognised. The study demonstrated convincingly that if we were to involve private finance as additional, or as an alternative to public expenditure, the road user would have to be charged directly - as we propose to do at Dartford. Moreover it is fundamental to the present proposals that the private sector would bear the risks as well as earning the rewards. When sounded about shadow tolling, the industry was reluctant to enter into arrangements unless its revenue was underpinned by a guarantee of a minimum payment, even if traffic fell below that figure. So what my Secretary of State is now suggesting is considerably different from Mr Howell's work.

Yours sincerely
Jenny McCusker

JENNY McCUSKER
Private Secretary

CONFIDENTIAL

DEPARTMENT OF TRANSPORT
2 MARSHAM STREET LONDON SW1P 3EB

01-212 3434

The Rt Hon Nigel Lawson MP
Chancellor of the Exchequer
HM Treasury
Treasury Chambers
Parliament Street
LONDON
SW1P 3AG

18 NOV 1987

Dear Nigel -

PRIVATELY FINANCED ROADS

We have already made good progress in involving the private sector more fully in various forms of transport - bus services, the privatisation of BA, BAA, ABP and the NFC and we are looking to see whether further initiatives of this kind are possible. At the same time, I have asked my officials whether we could build on the example of the Dartford Bridge to stimulate the private sector to contribute in similar ways to the provision of road infrastructure.

The Channel Tunnel and Dartford have shown that there is no shortage of capital for enterprises of this kind, and I believe that given the right lead by us, the private sector could identify opportunities by which they could help to relieve the problems of road congestion which loom before us.

Car ownership is increasing rapidly, and traffic could easily increase by 50% by the end of the century. John Major knows of my concern that our trunk road programme - and the resources we provide for local authority roads - may not cope adequately with this growth. He has agreed that our Departments should review this problem jointly, and has specifically asked that the potential for private sector initiatives should be explored.

I do not wish to prejudge the question of how they should be regarded in relation to public expenditure: we should clearly look at each proposal on its merits if we decided to pursue it. But private finance will almost inevitably have to be recouped by tolls, or something akin to them. To charge them on major roads (as distinct from river crossings) would be a new departure in this country. We should certainly find readier acceptance if we could show that by paying tolls, road users are able to enjoy improvements which otherwise might not have been available to them.

I attach a paper summarising the ideas I would like to develop. I should like, as a next step if you agree, to trail the ideas in a speech to test general reactions and to attempt to get industry to think about them and produce some suggestions for possible projects. I have already shown the paper to the Prime Minister who was content for me to pursue them.

I am sending copies of this letter to the Prime Minister and David Young. If you or he thinks that any preparatory work by our officials is needed before I proceed further, perhaps David Young would indicate whom from his Department he would wish to be involved.

Yours,

Paul

PAUL CHANNON

CONFIDENTIAL

Prime Minister

PRIVATELY FINANCED ROADS

1. I am examining ways of increasing the role of the private sector in the transport field. Following the Dartford example, I believe there are real and exciting possibilities for allowing the private sector to develop road projects over and above the existing road programme. There is an open-ended set of opportunities which should bring gains in efficiency, innovation and responsiveness. We have an enterprising private sector and we know there is no lack of capital. All the ingredients are there to make a success of this idea.

2. Car ownership is increasing rapidly and traffic is likely to grow by 50% by the turn of the century. Already we have more cost effective schemes in prospect - with benefits almost double costs on average - than we can finance within the existing programme. I cannot see any sensible extrapolation of our existing plans coping with this rate of growth. And the political pressures for the Government to commit public funds to roads will inevitably grow.

3. But private finance will, in most cases, mean direct toll payments by road users. So it will only be politically attractive if we can show that road users will be paying for projects in addition to the public sector programme: not paying for public expenditure savings. In the long term there could be public expenditure reductions, as well as increased provision. But that would not be clear for some time.

4. I attach a paper summarising the ideas I would like to examine more closely. If you find these ideas attractive, I would propose to circulate the paper to Nigel Lawson and David Young. During discussions I might trail these ideas in a speech to test general reactions and to attempt to get industry involved. I would also have confidencial talks with the industry.

P.C

PAUL CHANNON

9 October 1987

PRIVATELY FINANCED ROADS

Historical

Historically, transport development such as the turnpike roads, canals and railways were the result of the profit-seeking activities of the private sector. In this century, Britain (unlike some other countries) has seen little involvement of the private sector in financing comparable infrastructure developments, until the present government-inspired Channel Tunnel and Third Dartford Crossing Schemes.

The Need for Roads

Department of Transport forecasts indicate that traffic by the year 2000 will be between 22 and 48% above the 1986 levels. In the last three years traffic has grown at a rate which suggests that the higher of these figures is by no means an over estimate. It is generally recognised throughout the world that an expanding economy means growing traffic, and that the infrastructure needs to keep pace with it. In the latest review of the road programme in England, published as CM125, my predecessor added 82 schemes with a total estimated works cost of about £700 million. At current rates of spending on actual construction, that would be about two years' worth of projects, replacing those completed since the last review.

But the road construction and improvement programme at about its present level in real terms will not necessarily ensure that we will have a network adequate to cope with traffic in the next century. Already parts of the system are under pressure - the M6 near Birmingham, the M1 near London, and the M25 a year after its completion are familiar examples; at the turn of the century roads are likely to be congested for much more of their length, and for much longer periods of the day, than they are at present. The democratic process of consultation and public inquiries makes this provision of road improvements inherently a slow business however hard we try to speed up the various stages. So if these future problems are to be averted action will have to be put in hand now.

However, we are committed to the restraint of public expenditure and in face of many competing claims, it will not be possible to finance within the public sector all the new road infrastructure required to meet demand. It should, however, be possible to build on the success of the Dartford initiative and to enlist private sector resources to provide some new roads without imposing an additional burden on public expenditure.

Private Sector Finance

Involving the private entrepreneur more should bring increased efficiency and perhaps new and innovative solutions to transport problems. In this country, in this century, except for the new Dartford project, the private sector has been confined to the design, construction and maintenance of roads as contractor to Departments or other highway authorities. Productive efficiency gains have been sought by competitive tendering and by introducing incentive schemes into contracts. This has realised some, but not all, of the potential.

A fully private sector project would have to earn its own revenue (probably, but not necessarily, from some form of toll, since associated developments - for instance, shopping or leisure centres - are a promising alternative source of finance). Some other countries (for instance Belgium) have adopted a system of shadow tolls, in which the private company constructing the road is remunerated by payment from the government related to the number of vehicles using the road, rather than directly by the drivers of those vehicles. Since the government pays the bill, the construction of a road financed in this way would be a disguised form of public expenditure. Moreover, efforts to interest the construction industry in this in the early 1980s foundered on their insistence on a guaranteed minimum level of payment, irrespective of the level of traffic: they were not prepared to take the commercial risk of the operation.

In this country direct payment by the road user, in the form of tolls, has been confined (apart from some short stretches of minor roads) to estuarial crossings (where tolls are easy to collect because there are only two access points and where tolling does not simply divert traffic). We should certainly explore the private sector's willingness to provide the second Severn Crossing as they are the Dartford Bridge.

Experience in many other countries (the United States of America, France, Italy etc) shows, however, that direct payment need not be so restricted. There has already been a good deal of interest from one construction group in providing a tolled tunnel in docklands under Limehouse Basin.

However, countries which charge tolls on the whole, or a significant part of their motorway network, have done so from the moment the roads concerned were built. I know of none where tolls have been imposed on motorways which had hitherto been free, and I think it would be politically difficult to attempt to charge them on our existing network. The motoring and freight lobbies already complain that taxes on road transport are more than three times what we spend on the provision and upkeep of roads. Tolling the system would be administratively expensive because of the large number of access points. Electronic equipment is already being developed which can replace manual collection. But it requires special equipment in the vehicle and the cost of that, in addition to the tolls, could deter less frequent users, who would return to less suitable alternative routes.

The most promising opportunities for roads financed by user payment, therefore, apart from estuarial crossings, would be entirely new roads which offered sufficient benefits in terms of freedom from congestion to make the user feel it was worth a payment compared with any alternative - for example roads which relieved the already congested M25 or other conurbations such as Birmingham or Manchester. In the M25 type of case it might be necessary to toll an existing stretch (say the SW quadrant) to discourage diversion and improve the financing of the relief road. New roads restricted to car and light van traffic only - an innovation for this country - could be attractive candidates, because they would cost less to build and maintain than roads designed for heavy lorries, and their construction might be less contentious publicly if they were not to be used by heavy lorries. In more sparsely populated areas, another option would be separate long-haul heavy lorry tracts (where lorry trailers could be joined into multiples as is practised in Australia and the US).

The key question, of course, is whether enough people would be willing to pay the level of tolls necessary to provide an adequate return on the private investment. Our standard model for cost benefit analysis of road improvements does not fully answer that question. Private entrepreneurs may be able to identify projects where they believe the demand for a high degree of certainty about journey times, and willingness to pay a premium for it, would be sufficient to remunerate their investment.

What I am proposing is a new departure, designed to stimulate the innovative skills of the private sector to seek out opportunities. I expect that the private sector would look keenly for places where major new developments and new roads would complement each other in a way that is profitable overall. Roads unlock the development potential of sites, and those who build new industrial areas, leisure centres, shopping complexes and housing projects might well finance the roads that make them practicable. Such development would create substantial traffic problems for the adjacent sections of motorway, particularly the M25 which is already very heavily loaded. So developers might be persuaded, or indeed required, to pay for major improvements to the motorway itself to cope with the extra burden of traffic created by their development as well as the natural growth which would occur anyway.

In the longer term, as the gains from new privately financed roads are recognised, it might be possible to secure private finance to complete gaps and build new links in the motorway system, particularly where high-cost solutions are imposed by local considerations, (eg if we met another case, like the M3 at Winchester, where we may have to provide a long and expensive tunnel to meet environmental opposition).

Legal and Practical Issues

Although as much as possible would be left to the private entrepreneur, government involvement would remain necessary, because the construction of a new road alters the environment fundamentally over its entire length, which can be great, and requires powers of compulsory purchase.

Compulsory purchase by a private entrepreneur would be politically sensitive, although BAA's retention of that power after privatisation offers a precedent. A number of these matters, as well as the right to levy tolls, would need authorisation, by primary legislation. Hybrid or Private Bill procedure or a version of it might be necessary for each case unless a new procedure - perhaps by statutory instrument - were established under a new enabling Bill.

The Next Steps

Despite the problems, I believe we could tap the enthusiasm of the private sector stimulated by the Dartford project to enable some projects of high cost, but high value to the road user, to be provided economically without recourse to public expenditure. That would free part of our limited public sector funds to provide other needed road improvements which would not be suitable for private finance. In effect, it would represent an element of gearing.

In a matter which depends crucially upon the private sector and the attitude it takes, the amount of progress which can be made solely within government is limited. I propose to take confidential soundings of some major constructors and institutions. If these prove constructive and if colleagues agree that the possibilities should be explored further, I propose to prepare a brief green paper setting out the government's ideas in as open-ended a way as possible, to explore more widely whether private financial and construction institutions are interested and to gauge the reaction of motorists as well as the degree of political opposition. Well presented, the ideas would be exciting and stimulating. I would aim to produce such a paper and circulate it for agreement with a view to publication by the end of the year.

Transport Road Policy PT3

10 DOWNING STREET

LONDON SW1A 2AA

From the Private Secretary

20 October 1987

Dear Roy,

PRIVATELY FINANCED ROADS

The Prime Minister has seen your Secretary of State's minute and paper of 9 October about ideas for private finance for roads which he wishes to discuss with the Chancellor of the Exchequer and the Secretary of State for Trade and Industry. The Prime Minister is content that these discussions should go ahead. Your Secretary of State will of course wish to take account of the progress of the discussions in deciding when and how to trail the ideas in a speech.

The Prime Minister believes that it would be useful to broaden the study to include ways of bringing private finance into other forms of transport, as well as roads. The forecast that traffic might grow by between 22 and 48 per cent by the end of the century may turn out to be an under-estimate provided the UK maintains a satisfactory rate of growth. There are likely to remain major constraints on the ability to build new roads, particularly in urban areas. The scope for private enterprise to provide new transport capacity, particularly in urban areas, would be well worth studying and in London it needs to be looked at in conjunction with the future of London buses and the London Underground.

I should, however, add that the Prime Minister recalls that a similar study was carried out while David Howell was Secretary of State for Transport, with little result.

Yours,

David.

DAVID NORGROVE

Roy Griffins, Esq.,
Department of Transport

A

PRIME MINISTER

13 October 1987

PRIVATELY FINANCED ROADS

The plain fact is that the demand for additional road capacity continues to outstrip supply. Successive forecasts of road usage have consistently been exceeded by the actual growth of traffic. The 82 new road schemes recently added to the Roads Programme at an estimated cost of some £700 million may sound impressive, but not when set against the projected 50% increase of road traffic between now and 2000. The already overcrowded M25 could be carrying twice its planned maximum volume of traffic by that time.

Our prosperous car-owning democracy has an insatiable appetite for the freedom and independence of the open road. In 1985 cars, taxis and motorcycles accounted for 83% of all passenger transport in Great Britain compared to less than 55% in 1961. Nearly two-thirds of households have a car or van available for private motoring. Almost 20% of households have the use of two or more cars.

Until recently transport planners envisaged that the demand for additional road capacity from our static population would more or less level off. The wave of motorway construction over the last 30 years was seen as a one-off exercise in modernising our roads to cater for the needs of the car-owning public. Thereafter the Roads Programme would comprise largely maintenance with modest capital improvements to bypass the more congested towns and remove bottlenecks.

But average road usage is not a constant. Give people more leisure, more disposable income and the opportunity to travel rapidly and independently in a private car, and they will seize the opportunity. Offer businessmen the considerable cost savings available from running their 38

ton trucks on the motorways, and they will locate their businesses near motorways and use them to the full.

At best successive Ministers of Transport have been muddling through, struggling to meet the steadily rising demand for efficient modern roads with insufficient resources. Recognising the widening gap between foreseen demand and supply, Paul Channon suggests that we look afresh at the scope for harnessing the enterprise and resources of the private sector to identify novel, toll- collecting schemes over and above the established Roads Programme - the modern turnpikes. This is certainly an appealing proposition now that the entrepreneurial spirit has been reawakened.

But isn't it about time that the Government stopped to consider where the prosperous car-owning democracy is taking us? In a relatively small island, rich with heritage and a beautiful countryside, where, if at all, should we be setting the limits to the freedom of the road?

Should we accept that the freedom and independence afforded by roads and road vehicles is one of the most valued features of modern life? Should we continue to accept the obligation to cater for this demand by providing more road capacity and more parking space - where possible supplementing the publicly-funded Roads Programme with private toll-collecting schemes? If so, are we prepared to accept the need to construct a significant number of new motorways? After all, Britain's motorway network extending for about 1,750 miles (over an area of 89,000 square miles) is pretty modest compared with the 3,700 mile networks in France (213,000 square miles) and Italy (130,000), or the 5,000 mile system in West Germany (96,000).

With less pressure on the countryside for agricultural use, the issues are more environmental than economic. If the

environmental case prevails, we will have to find new ways of curbing the demand for road usage. It is hardly acceptable to let ever growing traffic congestion act as the brake on road usage. Electronic logging of road usage is close to becoming a potential reality. Could the price mechanism have a useful role to play in reducing peak demand and relieving traffic congestion?

While there is scope to construct more motorways across the open countryside, our major towns - particularly London - pose far more intractable problems. No-one now seriously contemplates driving major new motorways through congested urban areas. All they do is to contribute to ever greater snarl ups and parking problems in the town centres.

Like it or not, we are approaching the limits of the freedom of the road in our major town centres. Labour's answer is to increase the provision of subsidised public transport and discourage the car. Too often this has been the recipe for second-rate services unresponsive to the needs of the public. We must look for novel ways to marry the aspirations of the prosperous car-owning democracy with the provision of convenient, efficient access to town centres freed from all but essential traffic. For example, how about a huge park-and-ride facility near Heathrow. Car users approaching London via the A3, the M3, the M4, or the M40 could park at a high-speed underground terminal offering a two-stop shuttle service to Heathrow or, say, Central London.

Arguably, it is in this area - the interface between the trunk-road-using motorist and decongested city centres - that the ingenuity and initiative of private enterprise has most to offer by way of novel solutions. And, of course, 'people movers' fulfilling this function directly generate cash and therefore lend themselves to private enterprise. The trick is to harness the enterprise and initiative of the

private sector whilst retaining a sensible degree of co-ordination and coherence.

Conclusion

In addressing the limited question of the scope for more privately-financed roads, Paul Channon prompts us to take a timely look at the wider issue of how we can prevent Joe Public's dream of a smart car and the freedom of the open road becoming a nightmare. On the one hand there is the prospect of chronic traffic congestion, while on the other the horrific spectre of the South of England becoming a soulless, Los Angeles-style megalopolis.

We suggest that you welcome Paul Channon's initiative but propose that it should be tackled in a much broader context and looked at in conjunction with the deregulation and privatisation of London Buses, the privatisation of the London Underground and the scope for private enterprise to provide efficient new urban transport schemes geared to the needs of the out-of-town motorist.

JOHN WYBREW

PRIME MINISTER

Policy Unit's comments on Mr. Channon's minute on Privately Financed Roads are at flag A.

Content - that Mr. Channon should proceed with his discussions? Yes - but it is the second study. David Howell did one so no further need

- in the context of the Policy Unit comments on the broader issue of deregulation and privatisation?

AAB

PAB
13 October 1987

CONFIDENTIAL

Prime Minister

PRIVATELY FINANCED ROADS

1. I am examining ways of increasing the role of the private sector in the transport field. Following the Dartford example, I believe there are real and exciting possibilities for allowing the private sector to develop road projects over and above the existing road programme. There is an open-ended set of opportunities which should bring gains in efficiency, innovation and responsiveness. We have an enterprising private sector and we know there is no lack of capital. All the ingredients are there to make a success of this idea.

2. Car ownership is increasing rapidly and traffic is likely to grow by 50% by the turn of the century. Already we have more cost effective schemes in prospect - with benefits almost double costs on average - than we can finance within the existing programme. I cannot see any sensible extrapolation of our existing plans coping with this rate of growth. And the political pressures for the Government to commit public funds to roads will inevitably grow.

3. But private finance will, in most cases, mean direct toll payments by road users. So it will only be politically attractive if we can show that road users will be paying for projects in addition to the public sector programme: not paying for public expenditure savings. In the long term there could be public expenditure reductions as well as increased provision. But that would not be clear for some time.

4. I attach a paper summarising the ideas I would like to examine more closely. If you find these ideas attractive, I would propose to circulate the paper to Nigel Lawson and David Young. During discussions I might trail these ideas in a speech to test general reactions and to attempt to get industry involved. I would also have confidential talks with the industry.

P.C.

PAUL CHANNON

9 October 1987

PRIVATELY FINANCED ROADS

Historical

Historically, transport development such as the turnpike roads, canals and railways were the result of the profit-seeking activities of the private sector. In this century, Britain (unlike some other countries) has seen little involvement of the private sector in financing comparable infrastructure developments, until the present government-inspired Channel Tunnel and Third Dartford Crossing Schemes.

The Need for Roads

Department of Transport forecasts indicate that traffic by the year 2000 will be between 22 and 48% above the 1986 levels. In the last three years traffic has grown at a rate which suggests that the higher of these figures is by no means an over estimate. It is generally recognised throughout the world that an expanding economy means growing traffic, and that the infrastructure needs to keep pace with it. In the latest review of the road programme in England, published as CM125, my predecessor added 82 schemes with a total estimated works cost of about £700 million. At current rates of spending on actual construction, that would be about two years' worth of projects, replacing those completed since the last review.

But the road construction and improvement programme at about its present level in real terms will not necessarily ensure that we will have a network adequate to cope with traffic in the next century. Already parts of the system are under pressure - the M6 near Birmingham, the M1 near London, and the M25 a year after its completion are familiar examples; at the turn of the century roads are likely to be congested for much more of their length, and for much longer periods of the day, than they are at present. The democratic process of consultation and public inquiries makes this provision of road improvements inherently a slow business however hard we try to speed up the various stages. So if these future problems are to be averted action will have to be put in hand now.

However, we are committed to the restraint of public expenditure and in face of many competing claims, it will not be possible to finance within the public sector all the new road infrastructure required to meet demand. It should, however, be possible to build on the success of the Dartford initiative and to enlist private sector resources to provide some new roads without imposing an additional burden on public expenditure.

Private Sector Finance

Involving the private entrepreneur more should bring increased efficiency and perhaps new and innovative solutions to transport problems. In this country, in this century, except for the new Dartford project, the private sector has been confined to the design, construction and maintenance of roads as contractor to Departments or other highway authorities. Productive efficiency gains have been sought by competitive tendering and by introducing incentive schemes into contracts. This has realised some, but not all, of the potential.

A fully private sector project would have to earn its own revenue (probably, but not necessarily, from some form of toll, since associated developments - for instance, shopping or leisure centres - are a promising alternative source of finance). Some other countries (for instance Belgium) have adopted a system of shadow tolls, in which the private company constructing the road is remunerated by payment from the government related to the number of vehicles using the road, rather than directly by the drivers of those vehicles. Since the government pays the bill, the construction of a road financed in this way would be a disguised form of public expenditure. Moreover, efforts to interest the construction industry in this in the early 1980s foundered on their insistence on a guaranteed minimum level of payment, irrespective of the level of traffic: they were not prepared to take the commercial risk of the operation.

In this country direct payment by the road user, in the form of tolls, has been confined (apart from some short stretches of minor roads) to estuarial crossings (where tolls are easy to collect because there are only two access points and where tolling does not simply divert traffic). We should certainly explore the private sector's willingness to provide the second Severn Crossing as they are the Dartford Bridge.

perience in many other countries (the United States of America, France, Italy etc) shows, however, that direct payment need not be so restricted. There has already been a good deal of interest from one construction group in providing a tolled tunnel in docklands under Limehouse Basin.

However, countries which charge tolls on the whole, or a significant part of their motorway network, have done so from the moment the roads concerned were built. I know of none where tolls have been imposed on motorways which had hitherto been free, and I think it would be politically difficult to attempt to charge them on our existing network. The motoring and freight lobbies already complain that taxes on road transport are more than three times what we spend on the provision and upkeep of roads. Tolling the system would be administratively expensive because of the large number of access points. Electronic equipment is already being developed which can replace manual collection. But it requires special equipment in the vehicle and the cost of that, in addition to the tolls, could deter less frequent users, who would return to less suitable alternative routes.

The most promising opportunities for roads financed by user payment, therefore, apart from estuarial crossings, would be entirely new roads which offered sufficient benefits in terms of freedom from congestion to make the user feel it was worth a payment compared with any alternative - for example roads which relieved the already congested M25 or other conurbations such as Birmingham or Manchester. In the M25 type of case it might be necessary to toll an existing stretch (say the SW quadrant) to discourage diversion and improve the financing of the relief road. New roads restricted to car and light van traffic only - an innovation for this country - could be attractive candidates, because they would cost less to build and maintain than roads designed for heavy lorries, and their construction might be less contentious publicly if they were not to be used by heavy lorries. In more sparsely populated areas, another option would be separate long-haul heavy lorry tracts (where lorry trailers could be joined into multiples as is practised in Australia and the US).

The key question, of course, is whether enough people would be willing to pay the level of tolls necessary to provide an adequate return on the private investment. Our standard model for cost benefit analysis of road improvements does not fully answer that question. Private entrepreneurs may be able to identify projects where they believe the demand for a high degree of certainty about journey times, and willingness to pay a premium for it, would be sufficient to remunerate their investment.

What I am proposing is a new departure, designed to stimulate the innovative skills of the private sector to seek out opportunities. I expect that the private sector would look keenly for places where major new developments and new roads would complement each other in a way that is profitable overall. Roads unlock the development potential of sites, and those who build new industrial areas, leisure centres, shopping complexes and housing projects might well finance the roads that make them practicable. Such development would create substantial traffic problems for the adjacent sections of motorway, particularly the M25 which is already very heavily loaded. So developers might be persuaded, or indeed required, to pay for major improvements to the motorway itself to cope with the extra burden of traffic created by their development as well as the natural growth which would occur anyway.

In the longer term, as the gains from new privately financed roads are recognised, it might be possible to secure private finance to complete gaps and build new links in the motorway system, particularly where high-cost solutions are imposed by local considerations, (eg if we met another case, like the M3 at Winchester, where we may have to provide a long and expensive tunnel to meet environmental opposition).

Legal and Practical Issues

Although as much as possible would be left to the private entrepreneur, government involvement would remain necessary, because the construction of a new road alters the environment fundamentally over its entire length, which can be great, and requires powers of compulsory purchase.

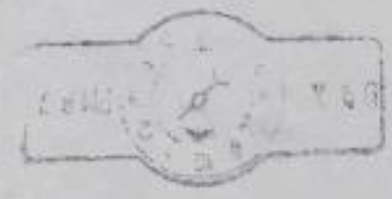
Compulsory purchase by a private entrepreneur would be politically sensitive, although BAA's retention of that power after privatisation offers a precedent. A number of these matters, as well as the right to levy tolls, would need authorisation, by primary legislation. Hybrid or Private Bill procedure or a version of it might be necessary for each case unless a new procedure - perhaps by statutory instrument - were established under a new enabling Bill.

The Next Steps

Despite the problems, I believe we could tap the enthusiasm of the private sector stimulated by the Dartford project to enable some projects of high cost, but high value to the road user, to be provided economically without recourse to public expenditure. That would free part of our limited public sector funds to provide other needed road improvements which would not be suitable for private finance. In effect, it would represent an element of gearing.

In a matter which depends crucially upon the private sector and the attitude it takes, the amount of progress which can be made solely within government is limited. I propose to take confidential soundings of some major constructors and institutions. If these prove constructive and if colleagues agree that the possibilities should be explored further, I propose to prepare a brief green paper setting out the government's ideas in as open-ended a way as possible, to explore more widely whether private financial and construction institutions are interested and to gauge the reaction of motorists as well as the degree of political opposition. Well presented, the ideas would be exciting and stimulating. I would aim to produce such a paper and circulate it for agreement with a view to publication by the end of the year.

TRANSPORT Roads PB



GR?
10

DEPARTMENT OF TRANSPORT
2 MARSHAM STREET LONDON SW1P 3EB
01-212 4581

SIR ALAN BAILEY KCB
PERMANENT SECRETARY

1 Mr Ingham
2 CF pse.

N L Wicks Esq CBE
Principal Private Secretary
10 Downing Street
LONDON
SW1A 2AA

29 September 1987

Dear Nigel,

Thank you for your letter of 10 September about the A595 Egremont Bypass.

The Department is firmly committed to build this new road as soon as possible. We expect to publish statutory orders early in October. After that, progress will depend on the strength of objections to the orders and the necessity for public inquiries. The scheme is in the published national trunk road programme (Cm 125), to start work between April 1989 and March 1991.

I am copying to Peter Gregson.

Yours,

Alan

ALAN BAILEY

HJP

DEPARTMENT OF TRANSPORT
2 MARSHAM STREET LONDON SW1P 3EB

01-212 3434

28 APR 1987

David Norgrove Esq
Private Secretary
10 Downing Street
LONDON
SW1

Dear David ~~PS~~ 1. PEA

2 pa.

in folder attached

IN FOLDER AT BACK OF FILE

I enclose a copy of the White Paper, "Policy for Roads in England: 1987" that my Secretary of State is publishing today. Volume One updates Government policy for roads in England and gives an account of the Department's management of the motorway and trunk road network and our intentions for the future. Volume Two concentrates on the national motorway and trunk road construction and improvement programme, reporting on scheme progress since publication of "National Roads England 1985" and sets out the results of my Secretary of State's recent review of the forward programme.

I am copying this letter to private secretaries to Members of the Cabinet, Murdo Maclean (Chief Whip's Office) and Trevor Woolley (Cabinet Office).

Yours sincerely

Jenny McCusker

JENNY McCUSKER
Private Secretary

CCBG

DEPARTMENT OF TRADE AND INDUSTRY
1-19 VICTORIA STREET
LONDON SW1H 0ET
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(Switchboard) 01-215 7877

Secretary of State for Trade and Industry

CONFIDENTIAL

10 April 1987

The Rt Hon John Moore MP
Secretary of State for Transport
Department of Transport
2 Marsham Street
LONDON
SW1P 3EB

Dear John.

NBPM.

ROADS WHITE PAPER

Thank you for copying to me your minute of 3 April to the Prime Minister.

As you say, the White Paper should be generally welcome. I am pleased to see that the importance of roads to industry is recognized and I certainly agree about the economic benefits of road improvements. It is important to appreciate, in considering these schemes, that improvements may be justified where there are sufficient potential economic benefits to be gained. This point is relevant to the Section in the White Paper on the economic contribution of roads.

While I am content for the White Paper to be published as drafted, I should be grateful if our officials could consider, with other Departments as necessary, how best to take account of the potential as well as the proven benefits of road schemes.

I am copying this letter to other members of E(A) and to Sir Robert Armstrong.

Yours ever,

PAUL CHANNON

JF4ATQ

TRANSPORT: Roads policy : Pt 3

Can someone say what's gone wrong here?

? see below

Sent to DES in error.

From the Secretary of State
With the Private Secretary's Compliments

Alison Kennedy
10/4/87

DEPARTMENT OF EDUCATION AND SCIENCE

ELIZABETH HOUSE YORK ROAD LONDON SE1 7PH

TELEPHONE 01-934 9000

File

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

9 April 1987

NB
Letter sent to E(LA) by mistake.
DHSS, and HO told to destroy their copy.
DES returned theirs.
All E(A) members have now received their copy.
SSL 10/4

Dear Richard,

The Prime Minister has seen your Secretary of State's minute of 3 April to which was attached a draft White Paper about Roads in England. She is content, subject to the views of colleagues, that this should be published during the last week of April.

I am copying this letter to the Private Secretaries to the members of E(A) and to Trevor Woolley (Cabinet Office).

Yours,
David.

D R NORGROVE

Richard Allan, Esq.
Department of Transport

003/2769

CONFIDENTIAL

Treasury Chambers, Parliament Street, SW1P 3AG

The Rt Hon John Moore MP
Secretary of State for Transport
Department of Transport
2 Marsham Street
London
SW1P 3EB

9th April 1987

Dear John,

WHITE PAPER ON ROADS

I have seen a copy of your minute of 3 April to the Prime Minister enclosing a draft White Paper on roads. I thought that the draft was a good positive statement of the Government's achievements and intentions in this area and I am content for you to publish it.

I understand that the revised road programme set out in volume two of the White Paper is broadly consistent with a continuation of public expenditure on roads at existing levels, though the actual cost of the programme will depend on a number of factors. My agreement to the publication of the White Paper does not of course imply my acceptance of any additional bid for roads that you might make in the future, nor does it mean that I foreclose the option of proposing a reduction of expenditure in roads if I judge that to be necessary in terms of overall public expenditure control.

I am copying this letter to the Prime Minister, other members of E(A) and Sir Robert Armstrong.

Yours ever,

John

JOHN MacGREGOR

CONFIDENTIAL

Prime Minister 2

To be aware.

DCR
9/4.

PRIME MINISTER

Every two years we review the trunk road programme, and publish a list of new improvement schemes, including in particular bypasses, which we are adding to the programme for construction in due course. The latest review has now been completed, and more than 80 schemes are to be added. I think this announcement of further improvements to the country's road infrastructure will be generally welcomed, though inevitably a few people will complain. In 1983 the publication was as part of a White Paper which dealt more generally with roads policy as well as with specific schemes; in 1985, however, the results of the review were published by themselves, as a departmental publication.

I have decided that a White Paper, summing up the objectives of the road programme, and setting it in the context of our concern for the environment, safety and the provision of services to road users, would be appropriate this year. I am proposing two separate volumes, the first covering general policy and the second the road programme. I attach texts; I intend that there should be an appropriate illustration on the cover of each volume. I hope that publication will be possible during the last week of April.

I should be grateful for colleagues' agreement by 9 April to the publication of this White Paper.

I am copying this minute to the other members of E(A) and to Sir Robert Armstrong.

R.A. Allan.
(Private Secretary)

for JOHN MOORE
3 April 1987

(approved by the Secretary of State & signed in his absence).

CONFIDENTIAL

CONTENTS

DRAFT

POLICY FOR ROADS IN ENGLAND: 1987

VOLUME ONE

FOREWORD

My responsibility as Secretary of State for Transport is to make sure that people and goods can move about the country as economically and safely as possible. For this, there must be a good, safe and well maintained road network.

This White Paper gives an account of the Government's stewardship of a great national asset. It describes our policies, answers many of the questions people ask about what we are doing and why, and sets out our intentions for the future. Safety, the environment, technical developments - all are covered.

Volume II covers in detail the national road programme, bringing things up-to-date since the publication of National Roads England 1985, and including maps which show all the improvements to the motorway and trunk road network that are now in the programme. I believe it is a balanced and forward looking plan contributing to the future prosperity of this country, and the quality of all our lives.

INTRODUCTION

1.1 'Policy for Roads in England': 1983 (Cmnd. 9059) published in September 1983 set out and explained the Government's policies for roads and discussed some of the problems, and then described in detail the programme of new construction and improvement for motorways and trunk roads which the Government planned to carry out, including the results of the 1983 review of the roads programme. In order to meet changes in traffic need and to roll forward the construction programme the roads programme was reviewed again in 1985, and was published separately in a new format including maps. This White Paper is in two volumes. Volume one sets out the Government's policy for both trunk and local roads. Volume two contains results of the 1987 review of the trunk road programme.

1.2 Road transport is only one of the modes of transport which are the responsibility of the Secretary of State for Transport (along with rail, sea and air). It is the most important in moving people (over 90% of passenger miles) and goods (60% of tonne miles) within Great Britain. Today, car ownership is no longer restricted to a minority of households. Nearly 50% of the adult population can drive. Roads serve every sector of the community. The economic, social and personal well-being of people - as producers, as consumers, as travellers - depends very heavily on an up-to-date road transport system. To operate efficiently, road transport needs the right roads and the right conditions. The quality of life of private motorists and bus or coach users is improved by the greater safety and reduced journey times and congestion that better roads provide. The quality of life of people living in towns and villages is improved by by-passes. By offering a combination of speed, convenience and flexibility, freight carriage by lorry plays a vital role in cutting costs and increasing efficiency for industry and commerce. Railways, ports and airports can function efficiently only if they have good road links with the places they serve. The business of providing the right roads and creating the right conditions is one of the most basic of all service industries.

1.3 It is sometimes argued that new roads should not be built and existing roads should not be improved, but traffic should be diverted to the railways. Wherever there is a prima facie case that public transport could render new roads unnecessary, the Government examines it carefully, as it is doing in the London Assessment studies; but it would be wrong, counter productive and economically damaging to deprive people and businesses of choice. Similarly, the Government's general policy towards freight transport is that each mode should carry the traffic for which it is best suited; this can best be achieved by ensuring that there is competition between modes.

1.4 At the beginning of the last Parliament the Government set out its objectiv for the road system, and has pursued them steadily since then. 'Policy for Roads in England: 1983' described the Government's priorities - helping economic development, improving the environment, making roads safer and preserving existing investment. These principles have governed the motorway and trunk road construction and maintenance programmes and assistance for local authority roads through Transport Supplementary Grant and block grant. The rapid rate of traffic growth means that development and improvement of the motorway and trunk road network will need to continue in parallel with that of the local authority network for the foreseeable future. Central and local government recognise that they have a shared interest in providing a network of roads for long distance traffic in which local roads complement central government's trunk roads and motorways. Local authorities participate in two distinct ways: by constructing, improving and maintaining their own local roads; and by maintaining and, in some cases, constructing roads as agents of the Department of Transport. The Regional Offices of the Department of Transport have a good working relationship at all levels with the agent authorities.

1.5 Good progress has been made since publication of 'Policy for Roads in England: 1983'. 108 schemes have been completed. Nearly 350 miles of new and improved motorway and all-purpose trunk road have been opened. Increased investment means that the momentum of the programxe can be maintained.

1.6 This White Paper is primarily about how action taken now can help meet future needs. The forecasts are of continually growing traffic: if we are not to fail in our duty we must provide a suitable road system. We must look after our environment. We must maintain our existing roads and bridges.

ACHIEVEMENTS AND DEVELOPMENTS

Achievements

2.1 Substantial achievements have been made in construction of new roads since the publication of 'Policy for Roads in England: 1983'. The M25 is complete. It has been one of the most ambitious and significant engineering projects undertaken in this country. Eleven sections - nearly 30% of its 117 miles - have been opened since 1983. It cost nearly £1,000 million and is bringing great benefits. Drivers travelling for business or pleasure can save time and trouble by avoiding central London. The country's producers and exporters have much easier access to the channel ports and London's airports. Others benefit too; it provides relief to

many communities from the miseries and dangers of heavy traffic in and around London.

2.2 Great care has been taken to fit the M25 into the landscape as unobtrusively as possible, using screening embankments, cuttings and short tunnel sections. More than 2 million trees will have been planted by the end of 1987 to screen it and to help it merge better with its surroundings. More services for motorists are coming. Trial automatic fog detectors and warning systems will be installed to help drivers on fog prone sections. Work is in hand to improve the most congested sector of the M25 in the South West, where it has been most successful. Detailed plans for adding a fourth lane between Junctions 11 and 13 are being drawn up, so that the motorway can be widened with the minimum of delay to users. A full M25 review will start in the autumn.

2.3 The M25 is not the only motorway development to have come to fruition since 1983. The M54 linking Telford to the M6 has been completed and opened to traffic and the gap in the A1(M) at Hatfield has been filled. Other motorway schemes, especially on M42 and M63, are well under way. In total 108 motorway and trunk road schemes in England have been completed, an investment of nearly 1.5 billion; 39 of these were bypasses.

2.4 The objectives of building roads continue to be

i. to assist economic growth by reducing transport costs;

ii. to improve the environment by removing through traffic (especially lorries) from unsuitable roads in towns and villages; and

iii. to enhance road safety.

Most national schemes serve all these objectives in varying proportions and in meeting them care is given to the need to protect the countryside. The priority given to schemes takes account of all three objectives and does not depend solely on relative rates of economic return.

2.5 There is no absolute yardstick for measuring the need for any road scheme. The test used is first, whether a scheme achieves relevant objectives and, secondly, whether in achieving its objectives the overall balance of advantage over the disadvantages of the scheme is sufficient to justify building it. The approach has remained broadly the same since 'Policy for Roads: England 1980'

(Cmnd 7908). There have been certain changes of emphasis since then. 'Policy for Roads: England 1980' was produced following a period when resources for road construction had been cut. Since then the funds allocated to the trunk road programme have been substantially increased, largely because of the importance attached to roads in aiding economic growth and increasing the competitiveness of industry through reduced transport costs. The additional resources, plus the progress made in completing schemes since 1980, have enabled the programme to give more emphasis to schemes which are intended to meet future needs in a timely fashion rather than just tackling problems when they have already arisen and are obvious to all.

2.6 The capacity of the system must change to meet the traffic forecast. The road programme is kept under regular review. As schemes are completed, others are begun. Most major road schemes take over 13 years from entering the programme to being opened for traffic (though many, of course, take much less). There are many stages to go through - studies, public consultation, announcement of preferred route, public inquiry, making of line and compulsory purchase orders, letting of contracts, and actual building. There are always schemes at different stages. Every two years a review is held of the whole trunk road network and desirable extensions and improvements are identified and published as additions to the programme. Schemes which, after study, no longer appear viable on economic or environmental grounds are removed from the programme. The previous review was in 1985, when 51 schemes costing 311 million were added to the programme. Since that publication 55 schemes have been completed including 23 bypasses, and a further 50 schemes are currently under construction. Volume II of this White Paper embodies the results of the latest review and adds 82 more schemes of which 21 are bypasses, while deleting 4 which the recent review has identified as unlikely to start in the forseeable future.

2.7 The size and shape of the trunk road network must also adapt to meet changing traffic patterns and needs. In 1986 a review of the trunk road network identified a number of trunk roads which no longer carried the volume and type of traffic which justified retaining that status, and local roads which were carrying inappropriate volumes of through traffic. Negotiations have been opened with local authorities to agree the trunking or de-trunking of some of these roads.

2.8 The Government is keen to encourage initiatives by the private sector for adding to the level of transport infrastructure whenever this is the most cost effective way of providing the facilities concerned. One important development now in

prospect is a new four lane bridge across the Thames for southbound traffic from Thurrock to Dartford. This is a priority scheme which it is proposed should be built with private capital. A hybrid Bill to authorise this has been presented to Parliament. Subject to its approval by Parliament, Dartford River Crossing Limited, a consortium led by Trafalgar House, will build the bridge, manage the existing tunnels and operate the combined facilities; it will recover its cost through tolls to be increased in line with the Retail Price Index and will eventually return the asset to the Secretary of State free of charge and debt. The bridge will then become toll free.

2.9 This initiative demonstrates that infrastructure provision need not be a matter for Government alone. Exciting new opportunities now exist for the private sector to come forward with proposals for other projects. The Government is also eager to co-operate with developers in improving road accesses leading to new developments, and encourages local highway authorities to do the same where this can be done safely.

Maintenance

2.10 Existing roads need to be properly maintained. The highway maintenance programme has expanded dramatically in recent years in order to overcome the backlog of work from the 1970's. Renewal of the older parts of the motorway network is the top priority. The rate of motorway renewal has been doubled from the equivalent of 40 route miles in 1979/80 to 80 miles in 1986/87. Spending on the capital maintenance of national roads has increased from 43 million in 1979/80 to an estimated 179 million in 1986/87, an increase of 152% in real terms. The aim is to keep up the present level of renewals and spending and to eliminate the backlog on both motorways and all-purpose trunk roads by 1992. The results of the 1986 National Road Maintenance Condition Survey (NRMCS) show that the condition of all-purpose trunk roads was similar to that in 1985. This halting of the previous decline in condition may reflect the increased expenditure on maintenance of these roads.

2.11 The Department's techniques and practices for structural maintenance have been considered by an independent Review and a range of improvements are in hand. Routine maintenance is undertaken in accordance with a Code of Practice which aims to provide uniform, safe standards across the national road network without costly over-provision.

Local Roads

2.12 The motorways and trunk roads which are directly the responsibility of the Secretary of State for Transport carry 30 per cent of all road traffic in England and nearly 40 per cent of heavy goods traffic. They are only 4 per cent by length of the road network. The rest are the responsibility of County, Metropolitan District and London Borough Councils. Most of these roads serve purely local needs but some are major routes carrying significant amounts of longer distance through traffic. These roads are of more than local importance and complement the national network. In recognition that their importance extends beyond a particular authority's area, since 1985/86 the Government has concentrated Transport Supplementary Grant (TSG) to support capital expenditure on these roads.

2.13 Many local authority roads carrying long distance through traffic are on the Primary Route Network. Others are in areas where a bypass or relief road is needed to relieve a community, a major shopping centre or a tourist area of the effects of through traffic. Some will be roads on which traffic flows are similar to those on Primary Route Network roads - such as designated roads in London and other important urban roads, and links to the motorways or Primary Route Network itself. Expenditure on all these roads is considered for TSG, the purpose of which is to encourage local authorities to build or improve through routes that might not otherwise have high priority, in terms of purely local considerations, in the authorities' roads programmes.

PRIMARY ROUTE NETWORK - UPDATING AND INVESTMENT REVIEW

The Primary Route Network combines trunk and principal local authority roads to complement the motorway network in providing the best routes for longer distance traffic. It comprises about 11,250 miles in England, made up of all the trunk roads other than motorways with about 6,250 miles of major local roads. It is distinguished by green-backed direction signs. The network is the joint responsibility of the Department of Transport and the local highway authorities and is determined by the Secretary of State in consultation with the authorities.

The Primary Route Network is now over 20 years old. During that time, traffic patterns have changed substantially, as a result particularly of the development of the motorway system. A comprehensive review of the network outside London was carried out in 1984. Following consultation with local

authority associations, a revised network was announced last year. It is being implemented jointly by local authorities and the Department over the period to 1990. The work of re-signing is being planned to avoid disruption.

The network will be kept under continuous review in future in the light of the continuing development of the motorway and trunk road systems.

In association with the re-signing exercise, local authorities have also co-operated with the Department in assessing for the first time a broad indication of the possible investment requirement for roads outside London, looking forward to 2001 in the light of current traffic forecasts. Consideration of how the network may develop, including the future shape of the Primary Route Network, provides a useful framework within which central government and local authorities can consider future spending plans and priorities.

2.14 Transport Supplementary Grant is paid as a block grant, currently at a rate of 50%, on the amount of a local authority's estimated expenditure which is accepted for grant. In deciding how much of an authority's expenditure to accept for TSG, the Secretary of State looks at the extent to which the expenditure would provide value for money in terms of the benefits to traffic, to the community, to industry and commerce, and in improvements in road safety and the environment. The total amount of TSG available is of necessity limited. Not all requests for grant can be met. There is an element of competition for grant among authorities' programmes. This helps to ensure that TSG support is concentrated on the schemes that offer the greatest benefit.

2.15 Once a major scheme (one costing £1m or more) has been accepted for TSG, expenditure on the scheme will continue to be accepted for grant in future years, so long as the authority continues to make progress with it. This commitment gives local authorities confidence to take their roads programmes forward. Capital allocations are made covering both expenditure accepted for TSG and capital improvements to roads that do not qualify for TSG. They provide "spending power" within the local authority capital controls system and borrowing approval for total costs net of TSG. Financing costs for spending in line with the allocations are taken into account in calculating Rate Support Grant entitlements.

2.16 Local authorities spend over £1 billion on maintaining local roads every year, helping to keep them safe for motor traffic, cyclists and pedestrians. Provision has been made for substantial successive increases in this expenditure -

15% in 1986-87 and 13% in 1987-88 - reflecting the importance the Government attaches to the need for local authority roads to be kept in satisfactory condition. These exceptional increases should enable authorities to reverse the decline in road conditions revealed by the National Road Maintenance Condition Survey. Individual local authorities are responsible for the condition of their local roads. It is for them to determine the priority they attach to local road maintenance and the level of expenditure on it.

Efficiency

2.17 The size of the road construction and maintenance programme makes it important to achieve maximum efficiency and effectiveness. The total programme represents a considerable and complex management task. In the front line of the drive for efficiency are the nine regional offices of the Department of Transport. In accordance with the Government's Financial Management Initiative, more decisions are to betaken in regional offices without having to be referred to headquarters or to the Treasury. A wide range of performance indicators is being developed.

2.18 In order to manage the increasing workload more efficiently a distributed computer processing system connected by a high speed dedicated communications network is being installed throughout the Department of Transport Headquarters and Regional Office buildings. The system should be fully operational by the end of 1989. A computerised database, which will store both physical and dynamic information about the motorway and trunk road network, is currently being developed. This project is due to be completed by 1990 and will enable more effective development and maintenance of the nation's major highway network.

2.19 Most major national road schemes costing more than £1 million are now designed and supervised by private consultants; a few major ones, and most schemes under £1 million, by local authorities. The greater use of consultants is bringing important benefits to the programme and to the firms, many of whom have more than 50% of their total work overseas. Department of Transport commissions provide a strong base and a source of experience at home to strengthen the consultants' attack on foreign markets and their contribution to the national economy. In return the Government gets the benefit of their world-wide experience, purchasing appropriate skills where and when they are needed to meet the changing programme and the requirements of individual schemes.

2.20 Design and supervision costs represent about 15 per cent of construction costs. It is important to achieve savings wherever possible and sensible. Before 1985 one suitable firm was selected for appointment and received a standard scale fee. Now three suitable firms are invited to bid on the basis that the commission will be placed with the lowest bidder. Results to date suggest that savings of about 15% may be achievable over the life of a commission. Further, the Government is considering changes in the role of the Consulting Engineer. These would transfer to the Department of Transport certain powers and responsibilities relating to financial and technical management of the contract which the Consulting Engineers currently exercise independently.

2.21 Efforts to control and reduce construction costs are being continued. Since 1985, bids have been invited on a firm price basis for contracts of up to two years duration. Previously contracts of over one year's duration were subject to a price fluctuation formula. This new approach helps to stabilise prices. In addition there may be novel ways of bringing the contractors' own skills and expertise to bear for the benefit of the taxpayer. In a new experiment it is hoped to reduce construction times by allowing contractors to maximise the efficiency of their operations by nominating the period over which they will complete the contract when they submit their tender. First indications are promising. In a second experiment, the contractor will be able to contribute to the design of the structural elements of the work, using his own design skill and construction techniques.

2.22 Pre-construction procedures are kept under continuous review in order to reduce the time taken and increase effectiveness where this can be done without infringing the rights of those who are or might be affected. A major report by the civil Engineering Economic Development Committee raised a number of important proposals. After careful consideration, the Government accepted some of these, particularly the speeding up of internal procedures with increased delegations from the Treasury and within the Department of Transport. In July of last year a roads expert, Mr J A Gaffney, was engaged to examine the scope for speeding up internal procedures. His report is being studied and plans for changes will be produced shortly. Possible changes to public consultation recommended by the Economic Development Committee and by the Standing Advisory Committee on Trunk Road Assessment are under consideration.

2.23 Much has already been done to reduce delays at roadworks by careful programming of works, encouragement of longer hours of working, and improved signing and layouts for contra-flow schemes. Above all, the use of "lane rental"

contracts for maintenance giving contractors a financial incentive to finish renewal schemes as quickly as possible has led to spectacular advancements in completion dates. In 1985/86 lane rental contracts were completed on average 38% faster than normally expected, saving 500 days of delays worth over £8 million to the nation at no extra cost to the taxpayer. Given the success of these experiments the intention is now to use lane rental contracts for most major schemes on heavily trafficked motorways and all-purpose trunk roads.

2.24 A method of assessing the surface and structural condition of the road currently being developed should greatly reduce the need for lane closures and traffic restrictions in comparison with other, slower, survey methods. This is the High Speed Road Monitor, a machine which travels at normal traffic speeds and uses lasers to take key measurements of the road surface. Routine surveys using this machine may begin in 1988.

2.25 Since April 1986 motorway maintenance in Greater Manchester and South and West Yorkshire has been managed by engineering consultants. The consultants were selected by fee competition, saving 10-15% compared with what would have been paid to a local authority agent. This is initially for a period of five years. Decisions will be taken in the light of this experience on whether to extend this practice.

2.26 New materials and updated road design techniques mean a better return from the investment in new roads which will last longer before they need repair. New stronger designs for bituminous roads were introduced in January 1986 and work is currently under way on a new design standard for road pavement construction including bituminous and concrete materials and combinations of the two. The new designs take account not only of construction costs but also of maintenance costs and traffic delay costs caused by road repair works. The new standard for selecting the type of carriageway layout "Traffic Flow and Carriageway Width Assessment" published in April 1986, should lead to better value for money, reduced accidents and better driving conditions. The lower accident rate of recent dual carriageway designs in comparison with the alternative of single carriageway roads will mean that more schemes are assessed as potential dual carriageways. In addition the new standard will minimise the disruption to traffic caused by the major roadworks which all roads eventually require if they are to be kept in good repair.

2.27 Similarly greater emphasis is being placed on the design of bridges for durability. New developments in technology and the use of structures such as

reinforced earth for retaining walls and corrugated buried metal structures, can show considerable savings over conventional construction.

2.28 Further efficiency gains will arise from use of the MOVA system for signalled inter-sections developed by TRRL. This system not only requires fewer traffic detectors to be installed in the carriageway than at present but also reduces delays in peak periods by 20% and in off-peak periods by 30%.

Utility Works

2.29 Most roadworks, especially in urban areas, are carried out by public utilities. These are liable to have a disrupting effect on traffic and cause delay and inconvenience; there has been pressure for more efficient control over such works and better quality of reinstatement. November 1985 saw the publication of the report of a committee chaired by Professor Michael Horne which concluded that the present division of responsibility for reinstatements between the utility and the highway authority was unsatisfactory and that as a result reinstatements were often left in a temporary state for an unduly long time. The report recommended that this problem should be solved by placing the full responsibility for reinstatements on the utilities themselves and setting clear standards of performance to which they would be required to work. The report also recommended that the coordination of works should be improved through the development of a computerised notice and register system for streetworks. The Government response to the report, published in July 1986, accepted these and the great majority of the other recommendations. The Government is now working with the utilities and local authorities on the implementation of the report, and intends to introduce the legislation required at a suitable opportunity.

Bridges

2.30 There are about 7000 bridges and 3500 other structures on motorways and trunk roads in England. These structures, which are vital links in the national road network, receive regular inspection and maintenance to ensure that they remain fit to carry current traffic with adequate margins of safety. In 1986/87 £34 million was allocated to bridge maintenance for work which included repainting of steel bridges, repair and replacement of deteriorated concrete, replacement of bearings and expansion joints, and the repair of parapets.

2.31 The widespread use of de-icing salts to keep roads open in winter has caused problems for concrete bridges. The chloride contaminates the concrete which can

result in serious corrosion of the steel reinforcement. A major programme of work is being carried out on the Midland Links Viaducts on M6 to deal with the problem there. A relatively small number of bridges mainly in the Midlands and Southwest are also affected by the reaction of alkali-silica in the concrete aggregate in certain conditions. The extent of both of these problems is being investigated by means of a national condition survey of 200 concrete bridges. The results will be available towards the end of 1987.

2.32 Bridges are generally built to the latest design standards and specifications.Because they are long life structures the standards and specifications are sometimes superseded by more stringent standards during the life of the structures. It then becomes necessary to consider whether any retrospective action should be carried out. For instance the new Bridge Assessment Code published in 1984 is intended for the older short span bridges and will be applied to the 2000 or so on trunk roads in a programme of assessment and strengthening lasting several years. The implications of applying the code to the older bridges owned by local authorities and other public bodies have been investigated by means of a sample survey. The increased volume of heavy goods traffic over the past 10-15 years has resulted in a new loading specification for long span bridges. About 150 of these will also need to be assessed and strengthened if necessary.

Severn Crossing

2.33 The programme of strengthening works foreshadowed in 'Policy for Roads in England: 1983' was announced in February 1984 together with the Government's intention to commission consultants to carry out a study for a second crossing. The strengthening programme is now well under way. The first two contracts, for the provision of improved access and for strengthening the Aust Viaduct at the eastern end of the Crossing, are complete. A third contract for the supply of new hangers for the Suspension Bridge is in progress. The fourth contract has just been awarded for the major strengthening works. A fifth contract for protection works to some of the river piers against possible shipping collision will be awarded later this year. These last two contracts are due for completion in spring 1989. Following the strengthening, the entire Crossing will be completely resurfaced in 1989/90, for the first time since it was opened to traffic in 1966.

2.34 The Consultants studying a Second Severn Crossing reported in July 1986 and immediately thereafter the Government announced its decision, subject to the approval of Parliament, to provide a second link as soon as it is needed. The

proposal is for a bridge at the English Stones, with connections to M4 on both banks and an additional southerly link to M5, to be provided by the mid 1990s. There will be wide consultations and discussions with all environmental, ecological, planning and other interests that might be affected by the scheme, and the detailed development of the scheme will fully reflect these.

2.35 The strengthening of the existing Severn Crossing and the preparations for a Second Crossing confirm the Government's determination to maintain adequate and reliable road links between South Wales and the rest of Britain.

CONTRIBUTION TOWARDS ECONOMIC PROSPERITY

3.1 Successive governments have realised that a modern and efficient economy needs a modern and efficient road system. Exporters must have easy access to ports and airports. It is easier to encourage economic development in parts of the country with exceptionally high unemployment if access to and from them by road is improved and adequate. Development of tourism is an important source of employment generation and is helped by good access, particularly to some of the remoter parts of the country. Tripartite discussions with the Confederation of British Industry and the Trade Union Congress have confirmed that roads remain as important as ever for their members. The Government is committed to reducing the burdens upon industry, and better roads reduce one great burden. Better roads also make life easier for those who earn their living driving buses, coaches, lorries, vans and cars.

3.2 Regeneration of existing urban areas is of major importance to the social and economic well-being of our great cities. Major changes in patterns of economic activity have called for bold new measures by the Government to tackle urban decay. The Government has taken a wide range of initiatives aimed at encouraging the private sector to invest in the renewal of the inner cities, to undertake new development and to create new activity and new job opportunities: these include the setting up of five new Urban Development Corporations, following on the success of the London Docklands and Merseyside Development Corporations, the introduction of Urban Development Grant and the new Urban Regeneration Grant. Central and Local Government spending on roads helps to make these initiatives effective.

3.3 In judging where road improvements are needed cost benefit methods are employed to estimate the economic return on any new road project. When alternative routes are possible the economic return on each of them is compared. Economic

return is not everything. It is sometimes desirable to build roads when the economic returns are not sufficient to justify the scheme but where there are substantial environmental benefits to be gained. In fact, a healthily positive net present value has been obtained from the roads programme in recent years.

ECONOMIC ASSESSMENT

COBA and QUADRO are the standard programs for estimating the net benefit from motorway and trunk road schemes. These appraisal programs have continually been improved and updated. COBA estimates the benefits to motorists over 30 years from reducing journey times, cutting the number of accidents and their severity and reducing the operating costs of vehicles. It compares these benefits in monetary terms with the construction costs of the scheme. The program QUADRO estimates the costs to traffic resulting from lane closures during maintenance works. These programs are now used to help decide which routes are likely to give best value for money and what standard of road is most appropriate in economic terms.

There are wider environmental considerations which need to be taken into account, though they cannot be quantified and valued. In general, using COBA, schemes are expected to show a positive net present value equivalent to a real rate of return on the investment of more than 7%. About 10% of schemes in the current National Road Programme have returns below this and for these justification depends upon demonstrating that they provide environmental relief. On average the motorway and trunk road programme now provides traffic benefits discounted over 30 years of some £1.50 for every £1 spent on construction. This is broadly equivalent to a rate of return of 12%.

Effect of New Values of Time and Life

A major research study into the value people put on the time they spend travelling has produced evidence that people are willing to pay more than previously assumed to reduce the amount of their own time spent travelling. Substantial increases have been made to the value of time savings on non-working journeys (including journeys to and from work) used in the economic appraisal of transport policy, projects and operations. The Government believes that the weight attached to road safety compared with that given to mobility and time savings should not

be reduced as a result of this change. The estimated cost of accidents - and particularly death and injury - has therefore been increased so as to maintain the proportion of benefits from trunk road schemes accounted for by accident reductions. These changes will not necessarily mean that more roads will be built but with the proposed increase in non-working time, the cost benefit ratio of the overall trunk road programme is likely to rise to 1.9:1 and the economic return to 15%. They will mean that non-working time savings are more fully reflected in the appraisal of road schemes and public transport investments. They also underline our strong commitment to maintain and improve safety.

3.4 The Government encourages local authorities planning road schemes to calculate the economic return on them in a similar way as part of its general encouragement to follow all aspects of government practice in appraising and presenting the cases for schemes.

3.5 Publication in October 1986 of the Standing Committee on Trunk Road Assessment report on urban road appraisal represented a further step in the development of methods of assessing road schemes. At the Government's request the Committee provided independent advice on the need for changes to trunk road appraisal techniques to make them more appropriate for the full range of road planning and transport issues in urban areas. Most of the Committee's recommendations have been accepted by the Government and will be implemented as soon as guidance can be issued. Other recommendations which need further consideration or development are being studied.

SAFETY

4.1 Enhancement of road safety is one of the prime aims of the road programme. Britain's safety record is one of the best in the world. While the number of vehicles on our roads has more than doubled and the total distance travelled by all vehicles has more than tripled over the last 25 years, the total incidence of both deaths and serious injuries has fallen steadily, though accident rates for cyclists have improved least. The overall casualty figure remains at over 300,000 per year, of which almost 30,000 are cyclists and 60,000 are pedestrians. Each individual faces a one in ten chance of being seriously injured, or even killed, in a road accident. These figures and the level of risk are unacceptable to families and to society and to the economy. Road accidents are estimated to cost the community over £2,800 million a year, quite apart from the personal tragedy to those involved or to their families and friends.

4.2 The development of the motorway and trunk road system has provided a network of safer roads. Higher speed, longer distance and heavy traffic is removed from unsuitable routes. A comparison of the accident rates for different types of road shows the benefit of higher quality roads. The following table shows that motorways have overall a better safety record than other types of road.

Involvement-rates for personal injury road accidents
(Great Britain, 1985)

	Vehicles involved per 100 million vehicle-kilometres
Motorways	
Fatal	1.3
Fatal or serious	6.5
All severities	25
Class A roads	
Fatal	3.1
Fatal or serious	35
All severities	136
Class B roads	
Fatal	3.0
Fatal or serious	50
All severities	183
Other roads	
Fatal	2.7
Fatal or serious	55
All severities	227
Average for all roads	
Fatal	2.8
Fatal or serious	37
All severities	147

However, the severity of accidents which do occur on such roads underlines the need for all drivers to exercise caution and take road conditions fully into account when driving. A recent study of some recently completed road improvement schemes (mostly typical bypasses of small towns) has shown that personal injury

accidents in the area of the schemes has fallen by about 25 per cent. Over the same period, accidents elsewhere fell by only 2 per cent.

4.3 Following a study of accidents on dual carriageways, new criteria for the provision of central reserve safety fences on trunk roads were announced in December 1986. The study showed that safety fences would be cost effective on most trunk roads. A programme for their installation on existing roads is being drawn up. Safety fences will now be provided on all new dual carriageway trunk roads. The predicted benefit from this investment is a reduction in road accident casualties of over 1,000 per annum.

4.4 A road safety review has recently been conducted. Its conclusions will be reported separately to Parliament. Those which are directly relevant to the roads programme are dealt with here. The review has confirmed a number of factors which play an important role in casualty reduction. One of these is the effective development of a network of high quality roads. Another is the importance of taking safety fully into account in dealing with traffic movement in urban areas, where the vast majority of casualties occur (95 per cent of pedestrian casualties are in built-up areas). Removing through traffic improves safety as well as the quality of life.

SAFER CYCLING

Most cycling is done on local roads and it is not possible to conceive of separate cycle tracks in most of our congested urban areas. Even where cycle tracks are provided, the cyclist still has to face traffic at road junctions and roundabouts, and must always take account of the needs of pedestrians.

The Government is publishing the results of research into engineering techniques which help cyclists avoid conflict with pedestrians and motor vehicles. Fourteen leaflets published in 1986 described projects undertaken with highway authorities, including special cycle traffic lights, crossings of busy roads, and subways shared with pedestrians. Two Local Transport Notes were also published in 1986 covering technical and legal aspects of cycle provision. Further Notes are planned.

A major series of technical seminars for local authorities on cycling matters is taking place at each of the Department of Transport's Regional Offices. These are designed to promote the better understanding of technical and legal issues for the benefit of local authority councillors and highway engineers.

The programme will continue and new ideas are welcomed. In most cases monitoring will be undertaken by the Transport and Road Research Laboratory and the results published.

4.5 Much traditional road safety effort has been directed towards activities such as publicity, education, training, testing and licensing where results in terms of reduction in casualties are difficult to prove. One conclusion from the review is that for the immediate future increasing effort could best be devoted to activities with proved benefits in the reduction of casualties, including in particular, vehicle and highway engineering. The Transport and Road Research Laboratory, which already includes in its road safety research programme further work on the causes of accidents and effective means of eliminating them, is setting up a long term study of road user behaviour. At present action will concentrate on the use of existing methods and in particular on developing effective ways of encouraging safer behaviour by road users indirectly via the road or the vehicle. Of these, road engineering is a central element. It is estimated that each £20 million spent each year by highway authorities on low cost engineering works could reduce casualties nationally by 2-3,000 a year.

4.6 Schemes for the treatment of "casualty sites" are extremely good value for money in terms of accident reduction. The management of a co-ordinated programme of such schemes is an increasingly important part of the armoury of road safety measures available to highway authorities. Regional offices have a programme of such schemes for the trunk road network. In recognition of the special circumstances of London's roads, and as a contribution to European Road Safety Year, a comprehensive system of appraisal and remedial works was set up to identify and mitigate accident problems at sites on the new extended trunk road network in London.Similar systems are being developed in all regions. A new manual on Accident Investigation and Prevention (AIP) work was produced in 1986. It has been drawn to the attention of all highway authority Chairmen. The manual will be supplemented by simplified technical information and training. The Transport and Road Research Laboratory is developing new techniques to reduce accidents which are not concentrated at points but scattered over residential areas. The aim is to reduce casualties within the area by about 10 per cent a year.

ACCIDENT INVESTIGATION AND PREVENTION (AIP)

AIP is directed at low-cost remedial measures to reduce road accidents at problem sites. Some examples include: the provision of signs and road markings;

replacement of priority junctions with roundabouts or traffic lights; and improvement of road surfaces for increased skid resistance.

AIP techniques are the most cost-efficient means of accident reduction known. Most schemes pay for themselves in less than two years, many within twelve months. If all local authorities apply the techniques rigorously, 200-300 lives could be saved and 15000 injuries prevented every year.

BEFORE: 12 accidents resulting in injuries in 36 months

Cost of scheme
Approx £70,000
(1985 prices)

PHOTO A

APTER: No accidents in 36 months

PHOTO B

AIP schemes are implemented by local authorities, normally through small AIP teams. The Department in conjection with ROSPA has published an AI manual for specialists, and provides finance for courses run by ROSPA.

ENVIRONMENT

5.1 New roads have wide ranging consequences for the environment. Bypasses relieve towns and villages of heavy through traffic, and reduce noise and pollution. On the other hand the effects of roads and traffic can be felt where they did not exist before. A range of techniques has been developed to mitigate environmental intrusion from road schemes. Improving the environment by removing through traffic from unsuitable roads, and minimising the impact of road schemes on the environment, are major concerns. Wherever possible roads are kept away from protected areas such as Areas of Outstanding Natural Beauty and Sites of Special Scientific Interest, and when there is a risk that a proposed scheme will affect such an area it is examined with particular care to establish that a new road is needed and that the route has been chosen to do as little damage to the environment as practicable. In national parks the Government is committed to ensuring that no new trunk route will be constructed or an existing road upgraded unless there is a compelling need which cannot be met by any reasonable

alternative means. Special attention is also paid to the effects of new roads on inalienable land owned by the National Trust.

5.2 Traffic speeds and volumes in residential areas must be contained at acceptable levels. Growing numbers of motor vehicles - particularly private cars and light vans - add considerably to the pressure on kerb space in urban areas. Residential areas built before widespread vehicle ownership face particular problems. A symptom has been the increasing practice of pavement parking. This may appear to aid free passage of through traffic and emergency vehicles, but it causes damage to pavements and inconvenience especially to elderly and disabled people and people with young children. Ways are being examined by which local authorities - with their extensive local knowledge and responsibilities - can take steps to improve traffic and parking conditions in residential areas.

5.3 Bypasses are a major part of the trunk road construction programme. Among major towns recently relieved of through traffic are Accrington, Ipswich, Chelmsford and Chesterfield. A bypass of Newcastle is under construction. For the future 173 schemes are programmed, including new bypasses for Bedford, Leicester, Coventry and Norwich.

5.4 The Government is committed to minimising environmental intrusion in the choice of basic location and detailed alignment of road schemes. Where, exceptionally, it is impossible to avoid sensitive areas it may be possible to incorporate special environmental measures. For instance, sections of the A12 Hackney to M11 link will be put in a tunnel to mitigate the impact on the communities of Wanstead and Waltham Forest; the M40 extension has been re-routed around, instead of across, Ot Moor; it is proposed to introduce a tunnel at Plumstead in the East London River Crossing scheme and plans for the A69 Newcastle Western Bypass have been modified to avoid the visual intrusion of an embankment and flyover by putting the road under the Metro and British Rail lines. Such special measures can add substantially to costs, and can only be adopted if they are genuinely justified by the exceptional circumstances of each case and the environmental benefits which they bring.

5.5 Attention is paid to sensitive landscape treatment in order to reconcile the line of a road with the pattern of the area through which it passes. While a road is being designed to the required standard, much can be done by choice of alignment sympathetic to natural contours, by shaping earthworks, building banks to screen traffic, separating carriageways, and by the choice of designs, materials and colours of structures. All this can be, and is, reinforced by the

planting of trees and shrubs - each year over 1 million are planted alongside trunk roads and motorways, making the Department of Transport the largest provider of amenity planting. Earth mounds planted with trees can also reduce noise levels.

5.6 The Government is now building the Okehampton bypass following the southern route chosen and maintained because of its environmental superiority despite the need to pass through the fringe of Dartmoor National Park. The southern route was supported by the Landscape Advisory Committee and by the Inspector who carried out the public inquiry. It follows the route of the existing railway and, unlike northern alternatives, fits the natural contours of the land, will be largely concealed from view with earth banks and extensive tree planting compatible with the present wooded slopes, and will cause very little severance or disturbance to existing activites. In a separate scheme to the east of Okehampton Bypass the Department is moving the A30 trunk road to the north so that it will no longer separate about 920 acres of the park from its main body.

5.7 Special measures have been taken to help wildlife. There are signs to warn motorists, tunnels for badgers and toads, and measures to assist certain birds to nest. Motorway verges cover over 18,000 acres and are virtually free from human interference. They are important breeding and feeding grounds for a wide variety of wildlife.

5.8 Because the actual construction of roads is now quicker than it used to be, more sites may need some form of archaeological investigation before work starts. A transfer of £100,000 a year from the Department of Transport to English Heritage has been agreed. English Heritage establish their own priorities and assess claims. As far as possible, interested parties are kept informed of developments on schemes affecting archaeological sites. Where appropriate, suitable arrangements can be made for early access to sites to allow archaeological exploration; the cost of any unavoidable disruption to the construction programme is borne by the Department.

5.9 There is extensive informal and formal consultation with a wide range of bodies outside government including English Heritage, the Countryside Commission and the Nature Conservancy Council and with the public on road scheme proposals. The independent Landscape Advisory Committee advises on the impact of road schemes on the landscape which the road would traverse, as well as the more general environmental implications of possible routes, and the Royal Fine Art Commission advises on the design of major bridges and other structures within a route. Modifications to schemes to meet public perception of environmental needs start at

an early stage. Later, at public inquiries, groups and individuals can make known their views on the developed proposal. Their comments are reflected in the report of the independent inspector. In reaching their joint decision on a scheme, the Secretaries of State for Transport and the Environment take full account of the inspector's report, including any modifications which he suggests to the original proposals.

MODIFICATIONS TO ROAD PLANS

Plans are modified throughout the process of preparation in response to suggestions from local, environmental and other interests both informally and in the formal public consultation and inquiry processes. Examples of recent changes made following consultation and inquiry are:

M40 Oxford-Birmingham, Banbury Bypass - following comments at inquiry the levels of the motorway and the Kineton Depot railway were reversed to reduce the visual impact on the villege of Northend. Further south the line was adjusted in accordance with the Inspector's recommendations to preserve the amenities of Chesterton Golf Club.

M40 Oxford-Birmingham, Waterstock-Wendlebury section - following public inquiry, a new route has been proposed to avoid the environmentally sensitive areas of Ot Moor and Bernwood Forest.

A5 Telford-Shrewsbury - as a result of consultation the line has been lowered to protect properties in the Bay Hill area south of Shrewsbury.

A6 Barton-le-Clay Bypass - the inquiry Inspector's recommendation to modify the proposed route so that it no longer encroaches on a Site of Special Scientific Interest has been accepted, subject to consultation with the owner of the land affected by the modified route.

A12 Hackney Wick to Mill Link Road - following a first public inquiry, a flyover has been replaced by a 177 yard tunnel to reduce the environmental impact on local communities.

A17 Leadenham Bypass - after public consultation, the proposals for a relief road which would have severed a Conservation Area and affected a listed building were abandoned in favour of a full bypass.

A34 Newbury Bypass - the route has been modified since the preferred route announcement to reduce its effect on a Site of Special Scientific Interest - Snelsmore Common.

A40 Western Avenue, Gypsy Corner Improvement a proposed flyover was redesigned and considerably shortened following public consultation to reduce environmental impact and facilitate the removal of a one-way system through residential roads.

A69 Newcastle Western Bypass - after public inquiry it was agreed that the road would be built under rather than over the Metro and British Rail lines to avoid the visual impact of the embankment and flyover originally proposed.

A406 East London River Crossing - during the public inquiry the proposed route was modified by putting into tunnel a section previously on a viaduct to reduce the environmental intrusion.

A435 Norton and Lenchwick Bypass - following public consultation proposals have been published for further consultation taking the line of the road further away from the village of Norton.

A446 Birmingham Northern Relief Road - there has been extensive consultation on this important route and the line of the preferred route has been modified to take it further away from communities, an ancient monument and a sports ground.

5.10 A major research programme into lorry nuisance was set up following the report of the Armitage Inquiry, and a technique is now being developed for assessing the priority for bypassing each community exposed to severe lorry nuisance. It is being applied experimentally in four Regions. If proved to be useful, it will be used nationally where appropriate for trunk roads and made available to local authorities.

5.11 A parallel Lorry Management Study has been set up in conjunction with three County Councils and the Civic Trust. This has identified a range of low-cost measures which may relieve lorry nuisance and ease the problems of lorry operators in cases where a bypass is not a suitable solution. Selected measures will be applied to each of a range of sites and the improvements and costs investigated. It is hoped that a result of the study will be a guide to good practice for the use of Highway Authorities in reducing lorry nuisance.

5.12 There have been a number of changes in the 1980s which have made lorries more acceptable and less environmentally intrusive. The decision to raise the maximum weight of articulated vehicles from 32.5 to 38 tonnes in May 1983 has meant a reduction in the growth in numbers of articulated vehicles. By increasing the capacity of individual lorries without any increase in size fewer lorries are able to do the same transport job. There have also been significant improvements in vehicle design. For example sideguards and rear underrun protective devices are now fitted to all new lorries and trailers. New lorries of over 12 tonnes and existing heavy trailers are required to have spray reducing devices fitted. By 1990, the maximum noise of the heaviest types of lorry will have been reduced by 9 dB(A). Benefits have also been obtained from higher maintenance standards so that smoking vehicles are less common than they used to be. Vehicle design can still be improved. The standard of brakes for heavy goods vehicles has been improved by an increase of over 10% in service braking performance and anti-lock braking systems are now being considered. Looking further ahead there may be positive results from introducing new performance standards for new designs of suspension for lorries reducing the maintenance requirements of roads and bridges.

SERVICES TO ROAD USERS

6.1 Service to the road user does not end with the provision of a safe and comprehensive road system of the right quality and capacity. Highway authorities providing roads should look to meet a wider range of needs - those of cyclists and pedestrians as well as those of the lorry driver and the traveller by car or coach. The Government is actively promoting the provision of better crossing facilities for both pedestrians and cyclists. More is being done to assist the many road users who suffer some degree of disability or mobility handicap. With the help of the Disabled Persons Transport Advisory Comittee those opportunities will be further extended.

6.2 Travellers need to refuel and to break their journeys for rest and refreshment - a legal requirement for lorry and coach drivers. The Government directly ensures the provision of services to meet those needs on the motorway.Provision on other trunk roads is left to private initiative but the Government is concerned to encourage a proper range of facilities where they are lacking, and also to ensure appropriate signing and supply of information.

Services on Motorways

6.3 On motorways, a variety of services, including parking, refreshments, toilets, fuel and telephones, are provided at motorway service areas at fairly regular intervals. The provision of motorway service areas is essential for the safety, comfort and convenience of travellers, and they also benefit adjacent communities by ensuring that drivers do not have to turn off the motorway in search of services. There are forty in operation. Twenty more are planned, at strategic locations both to fill gaps in the existing network and to provide services on motorways which are being constructed. The planned programme will provide motorway service areas at approximately 30 mile intervals, giving travellers an adequate frequency of services together with the ability to choose between sites. Where existing sites are heavily used, the need for additional sites will be kept under review. Operators in many cases are willing to undertake modernisation and expansion of their sites to meet increased demand.

6.4 Sites for new motorway service areas are selected by the Department of Transport after advice from private consultants or other appropriate sources. The Department is also responsible for obtaining planning clearance for the proposal, and acquiring the land, and bids are then invited by competitive tender for a long lease in exchange for a premium payment. The successful tenderer will develop the multi-million pound project and operate the service area.

6.5 New motorway service areas should be attractively designed to encourage drivers to use them and have a break for rest. Careful landscape treatment and other measures help to blend the site into its surroundings and make it as unobtrusive as possible. The Department of Transport is landlord and ensures that the terms of the operators' lease are observed so that there is consistency of operation at all motorway service area. Operators of existing motorway service areas are being asked to upgrade services for the disabled.

Services on Trunk Roads

6.6 The Government's policy has been for private initiative to provide services and facilities to meet the travelling needs of trunk road users. The needs include parking, refreshments, toilets and fuel. The Government intervenes only when proposed developments seem likely to create safety and traffic flow problems or would unnecessarily duplicate existing facilities nearby.

6.7 There are no plans to disturb the reliance on the private sector. Accesses, particularly on fast stretches of trunk road, are potentially dangerous and their numbers should be restricted in the interests of safety and traffic flows. This points to the advantages of groupings of a more comprehensive range of services and facilities, including parking, refreshments, toilets and fuel at regular intervals along trunk roads. Such an approach would reduce the number of accesses required.

6.8 The Government, therefore, proposes to invite the local authority associations, the private sector and others concerned to join in discussions to devise a framework for realising this objective on existing and new trunk roads where facilities are inadequate.

Emergency Telephones on Trunk Roads

6.9 In the interests of road safety emergency telephones will be installed at selected locations on trunk roads. General provision throughout the road network is unnecessary since assistance in the event of breakdown or accident can usually be readily contacted. Site selection will therefore be made according to carefully drawn criteria, followed by a programme of installation.

6.10 The tax payer has invested many billions of pounds in establishing a national network of motorways and all-purpose trunk roads. Each year the tax payer invests more millions of pounds in improving the network and maintaining it. Motorists should be able to use it as efficiently and conveniently as possible, and to be able to find the route that best suits them, whether it is the shortest, the quickest or the most attractive. It is now over 20 years since the Anderson and Warboys reports laid down the principles of the present British system of directional signing on motorways and all-purpose roads. Since then the network has been extensively modernised and the density of traffic has greatly increased.

NEW DEVELOPMENTS IN TRAFFIC CONTROL AND COMMUNICATIONS

Since the early 1970s the Department of Transport has continued with its programme of providing matrix warning signals on motorways for the purpose of reducing accidents.

On M25 a new computer based signals and telephone system is being installed which will be associated with television coverage of the motorway at the more crucial

locations. Additionally, at the tunnels it will provide automatic traffic monitoring. Existing signalling systems are also being reviewed and on 80km of the M1 motorway in Bedfordshire, Buckinghamshire and Northamptonshire they are being enhanced by reducing the signal spacing to 1 km and associating them with automatic detection of queues and slow moving traffic. These improvements should give the police earlier warning of incidents, provide greater accuracy in the setting and removal of warning signals and assist the speedier dispatch of emergency services.

Evaluation of different fog detectors is in progress. Installation of a trial system will commence on M25 during 1988 at those sites which are considered to be fog prone. This trial will use the new signalling system to display the word FOG on the matrix warning system automatically when visibility falls below a pre-set distance.

Signs whose message can be varied electronically (variable message signs) are particularly useful in controlling and diverting traffic in the event of accidents or unavailability of road space for any reason. At present variable message signs are being used to signal emergency diversions on the approaches to the Severn Bridge and in conjunction with upgrading of the M63, west of Manchester. The possibility of wider use on the M25 is being studied.

6.11 A general review of direction signing was announced in April 1985 and publication of its results is expected this summer. The main points emerging from consultation are that though the basic principles of the current signing system are sound there is room for improvement. Lack of consistency and continuity of place names are frequent complaints. Many signs have not been replaced to current standards. There is a need to improve standards of maintenance, in particular ensuring that signs are not obscured by foliage in the summer. Signs on the approaches to junctions could be better sited. There is a clear demand for better signing to tourist attractions and services, particularly those in towns and villages which have been bypassed.

6.12 A number of new developments are already in hand as a result of the review. A new system of white on brown traffic signs for tourist attractions was introduced in April 1986. Since then most local authorities have been preparing comprehensive plans for tourist attraction signing in their areas. More signs are now beginning to appear on the roads. Interested organisations will be consulted on the other recommendations arising out of the review this summer.

6.13 The review is also looking at ways of improving signing to lorry services and lorry routes, achieving more consistency between maps and road signs, colour coding of direction signs, signing in London now that the M25 has been completed, and ways of distinguishing national roads from other types of road. The economic cost of delays to motorists caused by road construction and maintenance is great. Much would be avoidable if road users had better information about likely delays and ways to avoid and minimise them.

6.14 Great improvements are being made in the provision of information to road users on current and future roadworks as an aid to journey planning. Each year the Department of Transport distributes a million copies of a leaflet advising road users on how to obtain up to date travel information from television, national and local radio, and telephone lines. Special publicity is given to those major roadworks where road users are advised to use alternative routes to avoid severe delays. Advances in technology mean that signs can now be designed to provide variable messages as occassion demands. In the not too distant future it may be possible to provide information to motorists by communication systems within their own cars.

IN-CAR COMMUNICATION/NAVIGATION AIDS

A substantial amount of time and money is wasted every year when vehicles and drivers are stuck in traffic jams, take longer routes than are needed or get lost. The cost of delay due to traffic incidents and non-optimum route selection in Britain has been estimated to cost £100 million and £2400 million respectively per annum. Though some of this wastage cannot be eliminated, the Transport and Road Research Laboratory estimates that average journey times could be reduced by as much as 8 to 12 per cent by helping drivers find better routes. In London alone, there could be potential savings of well over £100 million each year from better route guidance.

Electronic route guidance is one exciting application of technology with greatpotential benefits. While it is not possible at present to buy an off-the-shelf in-car system to guide drivers to their destination experimental systems have been demonstrated. These systems rely on an electronic map stored in the vehicle and sensors that measure the direction and distance of travel. Research has also been carried out on a network based system in which a central computer determines the optimum route and communicates with vehicles via roadside beacons. Through information transmitted to the vehicle from equipment at the

roadside, the driver can be given route guidance based upon detailed and up-to-the-minute information of traffic conditions which affect that particular journey. A viable electronic route guidance system is now attainable. The Transport and Road Research Laboratory have demonstrated one potential system, and experiments have taken place in Japan and West Germany. Because the main gain would be likely to flow from the application of route guidance for a large urban area where there are millions of vehicles, London is the natural starting point in Britain.

A discussion document issued in September last year outlined the issues involved in pursuing electronic route guidance. The response to the discussion document was very encouraging and in April it was announced that the Autoguide system would be pursued further. An immediate step is to be the setting up of an on-street demonstration of Autoguide in London based on infra-red technology. This follows co-operative work with Germany within the framework of PROMETHEUS, the collaborative European research programme. The demonstration is being sponsored by the motoring organisations, London Buses, major UK electronics companies and transportation engineering consultants with the support of the highway authorities involved.

Routine traffic information broadcasts are provided by both the BBC and IBA companies. A well recognised difficulty with normal traffic information broadcasts is related to the ability of the driver to tune in to the station giving local traffic information. In an attempt to overcome this difficulty experimental fixed signs showing the local traffic station frequency have been installed on the M2 and M4.

LONDON ROADS

7.1 The M25 has now virtually removed from London roads through traffic which has no need to be there. The overwhelming proportion of London's traffic has business in London itself. Each weekday, London residents make over 8 million car journeys, 700,000 journeys by motor or pedal-cycle and around 7 million journeys on foot. Some 3¾ million goods journeys are made daily. Demand far outstrips the capacity of the road system in some parts of London. With continuing prosperity the demand for travel is continuing to grow strongly. Public transport must play a major part, especially for movement into and around Central London. Over 3½ million trips are made each day on the two commuter rail systems. Travel by underground has increased by 44 per cent since the Government took over responsibility for

London Regional Transport. Travel by Network South East has increased by [10 per cent] since [ ]. Over 2¼ million trips are made each day by bus; again up by 10 per cent since London Regional Transport was formed. The Government contributed nearly £500 million last year to sustain and improve these services. London's needs can be met only by a combination of efficient, attractive public transport and an efficient, safe road system.

7.2 The Secretary of State is responsible for 215 miles of trunk road in London. Although these are only 2½ per cent of the total mileage, they carry a quarter of London's traffic. Their function is to provide connections to the rest of the national road system and cater for necessary longer distance movements within London, especially for commercial and industrial traffic. The existing programme gives high priority to completing the comprehensive improvement of the North Circular road and A40 Western Avenue, and to improving access to East London in order to increase its attractiveness to industry and help the regeneration of Docklands. New schemes for further improvements to the A13 between Limehouse and Dagenham will be identified in a study to be completed shortly.

7.3 Some parts of London however suffer from heavy flows of long distance traffic on unsuitable roads, causing congestion, severance, accidents, noise and air pollution, and environmental damage. The London Assessment Studies are looking at the problems of four areas which suffer most. The reports on the first stage of the studies, which analyse the problems, were published in December 1986. Work on the second stage, to develop options for dealing with them, is to begin this summer, after consultation with the local authorities on the terms of reference.

7.4 These studies will look at a wide range of options to enable the road system to cater more effectively for necessary longer distance traffic in London, including public transport improvements, better traffic management, control and enforcement of parking, and junction improvements, as well as possible new construction where that can be achieved without serious environmental damage. These studies are not aimed at increasing traffic in London. The objectives will be to deal more efficiently with existing traffic, where possible to stop it from using unsuitable residential roads and shopping streets, and to enable other road users, including cyclists and pedestrians, to move more safely and freely.

7.5 The timescale for achieving major improvements in London is inevitably very long but where there are opportunities to deal with urgent problems it is important to make progress as quickly as possible. Following a parallel study of the feasibility of using the railway corridor between Shepherds Bush and the river

Thames, the Western Environmental Improvement Route has been added to the programme to provide relief for the Earls Court one way system and the surrounding area.

7.6 Following the Airports Policy White Paper (Cmnd 9542), which stressed the need to deal with congested road conditions around Heathrow and into London, another recent study has examined the possibilities of both new rail services and improved road links into central London. There will be full consultation on the alternatives after publication of the consultants' report. The Department is also considering how to improve access to Heathrow from other parts of London and the south east.

7.7 With the intensity of use of London's roads, good traffic control and management are especially important. The Department of Transport is managing London's urban traffic control system at the request of the London Boroughs. A record 300 schemes were carried out on behalf of London's highway authorities last year and signal maintenance costs are to be reduced by 15 per cent. Consultants have been commissioned to take a comprehensive look at the trunk road network in London, and to develop action plan for operational improvements and accident prevention to be carried out by the Department of Transport and its agents. The trunk roads are complemented by 330 miles of the most important through roads (designated roads) to form the strategic network in London. It is for the Boroughs to bring forward schemes to achieve similar benefits on their designated roads. The Department of Transport operates the procedures laid down in the Local Government Act 1985 to ensure these roads perform their strategic function. Designated road improvements are supported by Transport Supplementary Grant. A circular is to be issued incorporating statutory guidance to the Boroughs on the exercise of their traffic powers in order to ensure a consistent framework for the development of traffic management in London and to encourage environmental, safety and operational improvements. Bringing relief from traffic to unsuitable roads from the burden of through traffic is a key objective for the strategic network and underlies the continuing programme of trunk road improvements in the capital.

7.8 Better and clearer signing has an important part to play in helping drivers to follow the most suitable routes both through and within London. Much of London's signing is old and discrepancies have developed over the years; and the M25 offers new choices to drivers. A study has therefore been commissioned to review and to make proposals for improving London's signing across the capital.

CONCLUSION

8.1 This White Paper has set out the Government's policy for roads in England, reviewing the past and looking to the future, and Volume II describes in detail the results of the review of the Roads Programme, and lists the schemes that are being added to it. There is an active research and development programme to create and foster innovation and to take advantage of it as soon as possible. The importance of the large number of roads which are the responsibility of local authorities is recognised in many ways, in particular by the support given to the improvement of roads of more than local importance through Transport Supplementary Grant. Adequate resources will continue to be provided for the maintenance of the motorway and trunk road network, and for the particularly important task of maintaining bridges. The Government is determined to continue to improve the trunk road and motorway network, so that it can cope with the steady growth in wheeled traffic, to make it safer for all road users, and to improve the environment by removing traffic from unsuitable roads in towns and villages and to safeguard the environment.

CONTENTS

TABLES

INTRODUCTION

1.1 The Secretary of State for Transport is responsible for central government functions relating to roads in England. He is the highway authority for trunk roads and provides financial assistance for approved local highway authority improvement schemes. Volume I of this White Paper covers developments in the Government's policies for trunk and local roads in England and reports generally on the Secretary of State's management of the trunk road system.

1.2 This second Volume of the White Paper is more specifically an account of the Secretary of State's administration of the trunk road construction and improvement programme since publication of 'National Roads England 1985'in June that year. It records the outcome of the Review of the construction programme undertaken this spring.

1.3 Progress on major schemes is described separately for each Region illustrated by maps. Full lists are given of schemes completed since June 1985 and of those which are currently in the forward programme. Charts are included showing the relationship between trunk and local road mileages, the traffic carried and expenditure on them. A map inside the back cover shows the present trunk road network in England and indicates where major improvements are planned.

EXPENDITURE

2.1 During the financial year 1986/87 expenditure on the construction, improvement and maintenance of trunk roads in England was ££853m (provisional). In 1987/88 expenditure is planned to rise to ££911m. The trends in expenditure since 1983/84 are set out in the table below:

PAST AND PLANNED EXPENDITURE (£m Cash - Net Expenditure)

	Capital Spending1			Current Spending2	Total3
	New Construction & Improvement	Structural Renewal	Total		
1983-84	511	130	641	64	705
1984-85	564	154	718	78	796
1985-86 (provisional outturn)	568	166	734	77	811
1986-87	539	220	759	94	853

Notes:

1. Capital expenditure includes expenditure on the purchase of winter maintenance vehicles (average £2 m per annum) and includes receipts from the sale of surplus land, recoveries of VAT and receipts from the European Commission.
2. Current expenditure includes expenditure on the operation

and maintenance of the Woolwich Ferry (average £2m per annum), and includes toll receipts from the Severn Bridge.
3. Small arithmetical differences are due to rounding.

PROGRESS

3.1 Progress since June 1985 on the development of the motorway and trunk road network has continued at a high rate with 55 schemes having been completed. Details are set out in Table 2.

3.2 During this period 21 motorway schemes have been completed opening up 73 miles of new motorway and the improvement of a further 6 miles. Together they represent an investment of 527m. There are 4 such schemes currently under construction and 28 more schemes in various stages of detailed design and preparation - a total of 177 miles to be built at a cost of 863m.

3.3 Most notable among the motorway schemes was the completion during 1985/86 of the remaining sections of the M25 London Orbital. The final section between the M1 at Bricket Wood and the A1(M) at South Mimms was officially opened by the Prime Minister last October. The M25 is the world's longest orbital motorway. Circling London at a radius of between 13 and 22 miles from its centre it is 117 miles long and has been built at a total cost of very nearly £1,000m. It connects with all London radial motorways and major trunk roads and provides an easier, faster and cheaper route around the Capital for through traffic with consequential benefits for the many communities in and around London. But the M25 is not the only motorway development of significance to be completed since 1985. The M42 linking the M6 to the M5 south of Birmingham was opened last summer and more recently last December H R H the Duke of Kent opened the Roestock to Stanborough section of the A1(M) in Hertfordshire.

3.4 The construction and improvement of other trunk roads has not been neglected. In the same period 34 schemes were completed covering 100 miles of the network at a cost of 273m. By far the majority of these schemes were bypasses and among the busy towns relieved of heavy through traffic were Accrington, Chelmsford, Chesterfield, Darlington, Great Yarmouth, Ipswich and Lincoln. Construction is under way on 46 schemes which, when coupled with the further [ ] schemes in preparation, will lead to [ ] miles of new or improved trunk road with an aggregate value of [£ m] being open by the mid-1990s.

THE 1987 REVIEW

4.1 The continued good progress achieved in construction over the last two years has led to a further major review of the trunk road programme. This identified 82 new schemes, with a total estimated works cost of £693m, which have been added to the programme to improve the network to cater for the traffic expected to use it in the 1990s. These new schemes are listed separately in Table 1. The likely timing of the schemes already in the programme has also been reassessed, taking account of progress in development of the proposals and in completing the statutory procedures for the making of the necessary Orders. Schemes now under construction are listed at Table 3, those in preparation at Table 4. Some of the latter now appear in a different time period from that shown in 'National Roads England 1985'. Schemes added to the programme in the period between the 1985 and 1987 Reviews are identified

separately. [Four] schemes which after study no longer appear viable on economic or environmental grounds have been withdrawn from the programme and are included in Table 5. The net effect of all these changes is that the trunk road programme has now been increased to [ ] schemes under construction and in preparation with a total value of [£ m]. Bypasses and relief roads account for [per cent] of schemes in the forward construction programme. Local highway authority schemes receiving central government grant under s.272 of the Highways Act 1980 are listed at Table 6; [the decision has been taken to make a grant for one new scheme - at Ponteland in Northumberland- because of the considerable benefits it will confer on through traffic using the trunk road.]

4.2 Each new scheme has been considered against the objectives set out in paragraph [ ] of Volume I to this White Paper and of decisions regarding future public spending. Of the 82 new schemes, 21 are bypasses and relief roads, reinforcing the Government's firm resolve to take trunk road traffic away from communities where possible. Examples here include a scheme 42 miles long to bypass Kidderminster, Stourbridge and Wolverhampton - at £170m much the largest scheme added at this Review - a western bypass of the City of Durham and an eastern bypass of Hastings. [ ] further schemes also have important environmental benefits. Particular attention has been paid to meeting the needs of business and industry. Among the schemes aimed at increasing the traffic capacity of major through routes are widening schemes on sections of the A1, M2, M3, M4, M40 and M62. The improvement of junctions on heavily trafficked roads, particularly when they are made grade separated, pays handsome dividends in terms of reduced accidents. Sixteen such schemes have been included at this Review, 4 of them on the A1 and 2 each on the M4, A3 and A4 near to London. Further details are given in the Regional reports that follow.

[FIGURE 1 TO BE INSERTED]

[FIGURE 2 TO BE INSERTED]

ACTIVITY IN THE REGIONS

5.1 The rest of this White Paper gives a more detailed account, Region by Region, of the major developments on the trunk road network since June 1985 and of prospects for the future.

THE NORTH

6.1 Since June 1985 considerable progress has been made in implementing the strategy for trunk road improvements in the Northern Region. Work was completed on the A66 Darlington Bypass; on the Greenhead Diversion, Cross Lane and Team Valley Grade Separated Junctions, all on the A69; and on Stage 2 of the A1 Alnwick Bypass. Construction work is in progress on the A1 Clifton-Stannington Bridge scheme which is due for completion this summer and on the A69 Eighton Lodge Junction Improvement for completion this autumn.

6.2 Work has begun on the A69 Newcastle Western Bypass and the remaining works contracts will be let later this year and early 1988 with completion scheduled for autumn 1990. This scheme is the major element in the programme of road improvements which represents an investment of over £100m in the Region. When complete this scheme will remove north-south traffic from the centres of both

Newcastle and Gateshead. On completion, the Newcastle Western Bypass will be re-numbered A1 and form the main link between the A1(M) south of Newcastle and the A1 northwards into Scotland.

6.3 Although the A1(M) south of Newcastle to Scotch Corner is adequate for present and foreseeable levels of traffic the need for additional capacity on certain stretches, including possibilities for providing climbing lanes, will be kept under review. Following a review with Durham County Council of the road network around the City of Durham a scheme to provide an A167 western bypass of the City has been added to the programme.

6.4 The A19 from Tyneside and Teeside southwards into North Yorkshire has already been improved to dual carriageway standard. Peterlee Junction on the A19 was added to the programme in 1985 and was the subject of a public inquiry in December 1986. Improvements in progress and planned for the A1 through Yorkshire will enable the Region to take full advantage of the investment already made on the A1 and A19.

6.5 On the A1 north of Newcastle to the Scottish Border, dual carriageways will have been provided as far as Morpeth once the Clifton-Stannington Bridge scheme is completed this summer. Beyond Morpeth, realigned single carriageways and bypasses of Felton, Alnwick, Belford and Berwick upon Tweed have been provided. North of Alnwick the aim is to complete the provision of a high standard single carriageway A1 into Scotland since current and foreseeable traffic levels do not warrant dualling throughout. However, schemes to provide two short lengths of dual carriageway at Brownieside and at Marshall Meadows have been added to the programme. These improvements will ease traffic flows by providing additional overtaking opportunities and other similar schemes will be considered for inclusion in the Regional programme of smaller schemes.

6.6 On the A696 the proposed Woolsington Bypass was the subject of a public inquiry in February this year and construction could start at the end of the year. [The A696 Ponteland Bypass has been withdrawn from the programme. It is being replaced by a local authority scheme, the Callerton Lane Link, and the Department will be contributing under s.272 of the Highways Act 1980 towards the cost of this alternative scheme. However, the line of the proposed Ponteland Bypass will be safeguarded until the effects on travel patterns of the Newcastle Western Bypass have become clear.] For this reason also, preparation work on two bypass schemes further north on the A696 at Otterburn and Belsay will be put back within the programme.

6.7 On the A66, preparation work will continue on the Bowes Bypass-County Boundary Improvement with a public inquiry at the end of the year.

6.8 The main work will start shortly on the A69 Horsley-Corbridge Improvement which will complete the provision of dual carriageways on this road between Newcastle and Hexham. West of Hexham the aim is to remove through traffic from communities although current and foreseeable traffic volumes do not justify the provision of dual carriageways. The first priority is the Haltwhistle Relief Road which was added to the programme in December 1985 in place of an

earlier bypass proposal. The new scheme would use railway land which will not become available until 1991 following electrification of the East Coast Main Line. Preparation of the scheme will continue meantime. Despite exstensive investigation it has not proved possible to find a viable solution to the traffic and environmental problems of Haydon Bridge. However, the situation will be kept under review in the context of conditions on the A69 as a whole.

YORKSHIRE AND HUMBERSIDE

7.1 Since June 1985 the Department has completed the A63 South Docks Road in Hull which provides better access between the docks and the motorway network. The opening of the new junction flyover at Barnsdale Bar on the A1 near Doncaster has improved road safety.

7.2 The commitment to improving the A1 in Yorkshire was given further emphasis by the start of work during 1986 on the new Wetherby Bypass together with a new junction at Baldersby. The junction will be completed by the summer; Wetherby Bypass is due to be completed during summer 1988. Further schemes are in hand on the A1. Draft Orders have been published for a new interchange at Dishforth and for improvements to the Bramham to Wetherby section. Draft Orders will be published shortly for the improvement of the Wetherby to Dishforth section. These sections will have dual 3-lane carriageways and improved junctions.

7.3 The programme for the A1 now includes the provision of dual 3-lanes between Dishforth and Scotch Corner: this will further improve safety and provide additional capacity. Construction will be programmed to coincide with Phase 2 of the junction improvements on this section now being prepared. A new junction at Gatenby Lane will be taken forward separately as Phase 1 to allow priority to be given to accommodating the increased traffic resulting from the development of RAF Leeming.

7.4 An announcement is likely later this year of the outcome of the East of Leeds study which will report specifically on the need for improvement to the A64, A642 and the A1 from Bramham southwards towards Doncaster. Pending the outcome of the study, earlier scheme proposals to improve the A64 between Leeds and Bramham are being kept under review.

7.5 Construction began on six other schemes during 1986 and early in 1987. The first two sections of the important A629/A650 Airedale route will provide a high standard road from Kildwick south east of Skipton to Crossflatts near Bingley. Work also started on bypasses of Settle and Giggleswick on the A65 route to Cumbria; of Seamer-Crossgates on the A64 near Scarborough; and of Riccall and Barlby near Selby on the A19. In addition work began on the A616 Stocksbridge-M1 route which will provide a bypass of Stocksbridge and relief to the north of Sheffield. The Riccall and Barlby Bypass will be open to traffic in autumn 1987; all other schemes should be completed during 1988. A new grade separated junction is being built at Copmanthorpe on the A64 near York with the aid of 100 per cent grant paid by the Department under s.272 of the Highways Act 1980.

7.6 A westbound climbing lane on the M62 west of Huddersfield is planned to be built during 1988.

7.7 An announcement will be made later this year about the outcome of public consultation on the Shipley Eastern Bypass and improvements to the existing A650 route between Cottingley Bar and Branch Public House. Other forthcoming announcements include decisions on the line of the A65 Addingham Bypass and the A650 Drighlington Bypass near Leeds and a decision following public inquiry on the A65 Burley-in-Wharfedale Bypass. Preferred routes have now been announced for bypasses at Selby on the A63, Gargrave and Draughton on the A65 and at Market Weighton on the A1079. A route decision has also been announced for the A638 Doncaster North Bridge Relief Road; this scheme is being prepared jointly with Doncaster Metropolitan Borough Council.

7.8 A study to consider the need for a direct connection between the M1 south of Wakefield and the M62 near Huddersfield is nearing completion. As a result of other studies which have been completed a number of new schemes have been added to the programme: the improvement of part of the A6120 Leeds Outer Ring Road; a bypass of Rillington and a diversion at Staxton both on the A64; a grade separated junction on the A63 at Melton ,west of Hull; and the improvement of Hedon Road on the A1033 east of Hull. On the M18 a new junction with the B6094 Cockhill Lane is also planned. Further studies will investigate traffic problems on the A65 in Ilkley and assess the operation of the M1/M62 Lofthouse Interchange south of Leeds.

7.9 The A63 Howden Western Bypass has been withdrawn from the programme because the expected benefits would be outweighed by environmental disadvantages.

THE NORTH WEST

8.1 A major feature of the programme in the North West since June 1985 was the opening in July 1985 of the A56 Accrington Easterly Bypass in Lancashire. It completed a new high standard route linking the M65 Calder Valley Motorway to the M62 Motorway and the Manchester conurbation. Two important bypasses have opened in Cheshire, on the A51 at Tarporley and the A54 at Kelsall.

8.2 There has been good progress towards the Region's main task of completing and upgrading the Manchester Outer Ring Road. Construction has started on the remainder of the southern section of the Ring (the M63 from Portwood to Brinnington) and on the first section of the eastern side (the M66 from Brinnington to Denton). A public inquiry has been held into proposals for the remaining section of the Ring Road - the 10 miles of M66 between Denton and Middleton. Two of the three main contracts for upgrading the M63 between Stretford and Eccles to the west of Manchester, including Barton Bridge, are proceeding well and it is hoped to let the final contract soon. A public inquiry into Orders for the A6(M) Stockport North-South Bypass should start later this year.

8.3 During 1987 a start will be made on the installation over the next few years of a sophisticated signalling system covering the whole of the Outer Ring Road and the immediately joining lengths of

motorway. This will involve providing gantry mounted direction signs and matrix signals on almost 60 miles of existing and proposed motorways which are urban in character with closely spaced junctions. The new system will be centrally controlled by the Greater Manchester Police and will be capable of providing a wide range of signals and instructions to drivers. They will be easier to understand than conventional signing.

8.4 Following recent designation of the Urban Development Corporation sites covering Trafford Park and Irlam Steelworks, the Department is considering with the Development Corporation and the local highway authorities what needs to be done to improve the roads and transport infrastructure.

8.5 Elsewhere in the Region, the A52 Barthomley Link to M6 in Cheshire and the A595/6 Thursby Bypass in Cumbria will be opened to traffic in the summer. Construction of the A483 scheme from the Chester Southerly Bypass into Wales is under way with completion expected in summer 1989.

8.6 In Cumbria, preferred routes have been announced for the A590 Dalton-in-Furness Bypass, for the bypasses of Egremont and Hensingham on the A595 and of Wigton on the A596. In Cheshire, a preferred route has been announced for the A52 Nantwich Bypass. In Lancashire, the strategy linking the M65 and thhe M6 to the south of Blackburn has been reaffirmed; it is hoped to announce the preffered route for the scheme later in the year.

8.7 Notable additions to the programme on this occasion are schemes for widening two of the Region's busiest stretches of motorway. The M62 north of Manchester, sections of which regularly carry around 100,000 vehicles per day, is to be widened to a 4 lane carriageway between Junctions 12(M63) and 18(M66). East of Preston, the stretch of the M6 between Junctions 30(M61) and 31(A59) is also to be widened to 4 lanes and northwards to Junction 32(M55) the motorway will be improved as necessary. Eight further schemes have been added to the programme in the North West.

8.8 In Cumbria, a further improvement is planned to the A595 Cumbrian coastal route at Duddon Bridge where the existing road is narrow and badly aligned. The scope for further minor improvements to the A595 will be examined. A study will be commissioned to determine the needs of trunk road traffic in the Carlisle area.

8.9 In Cheshire, an A523 bypass of Poynton has been added to the programme which will relieve traffic delays particularly at the junction with the A5149 in the centre of the town. The busy stretch of the A556 through Bucklow Hill and Mere, used by traffic between the M56 (Junction 7) and M6 (Junction 19) motorways is to be improved to dual carriageway standard. The important A550 route between the Wirral and North Wales is also to be improved from the A5117 Woodbank Junction northwards to Ledsham. A scheme to bypass Basford/Hough on the A52 has been added to the programme. This will help deal with the additional traffic expected to use this section following the opening of the Barthomley Link to M6 further to the east.

8.10 The main addition to the programme in Lancashire is an A585

link from the M55 motorway (Junctions 3/4) to join the A585 route to Fleetwood at Norcross to the east of Blackpool. The intention is to relieve the communities of Greenhalgh, Esprick and Little Singleton along the A585 of the effects of through traffic, including heavy port traffic to and from Fleetwood. One of the options here is construction of the Flyde Coast Easterly Bypass for which the County Council is protecting a route. North of Blackburn bypasses on the A59 at Copster Green and at Mellor Brook are now included in the programme.

8.11 In conjunction with the West Midland Region a major study is to be undertaken to review the capacity of the M6 and of other routes in that corridor to the south of Manchester. It will assess future strategic traffic needs and provide a basis for longer term investment decisions.

8.12 Decisions on the need for further trunk road investment on Merseyside will be taken when conclusions have been reached on the future shape of the trunk network. Metropolitan Districts in Merseyside have been consulted about this.

8.13 'National Roads England 1985' announced that proposals were being examined for improving connections between the M6 and Morecambe and Heysham. Ministers have considered a study report by Lancashire County Council and have concluded that there is insufficient justification for the provision of a trunk road link to the port of Heysham. The study of the A628 through Mottram, Hollingworth and Tintwistle on the Derbyshire County boundary led to the conclusion that a major bypass is ruled out by environmental and economic considerations; there will, however, be discussions with the two local highway authorities concerned, on the prospects for finding more modest solutions to the problems on this road.

8.14 The study of long distance traffic needs in the area of Lancashire around Preston and west of the M6 has already led to the addition of new schemes to the programme to widen and improve the motorway. The study also points to the need for a bypass linking the A59 to the M6 south of Preston and for a number of other improvements to the A59 and A570, including a bypass of Ormskirk. Consideration is being given to these conclusions.

8.15 The consultants' report on the study of the A6 route through Disley and High Lane is expected in a few months' time.

THE WEST MIDLANDS

9.1 The main recent development in the Region has been the construction of the M42 which is now nearing completion. Seven contracts have been finished in the last 18 months adding 25 miles to the trunk motorway network. The route is now open from M5 at Bromsgrove to A453 at Appleby Magna in Leicestershire. The final connection to M5 north - the Northern Turn - has just been to public inquiry where all objections were withdrawn. Work is now expected to start early in 1988.

9.2 The M5 was built 25 years ago and is now in need of

reconstruction, added to which increased traffic was placing strain on the two-lane carriageways. The opportunity has therefore been taken to widen it and the 5 mile section between Rashwood-Catshill (J4A-J5) has been completed to meet current demands. Work has begun on a further 6 mile length between Warndon and Rashwood (J5-J6). Three miles between Catshill and Lydiate Ash (J4-J4A) will be widened as part of the M42 Junction Northern Turn contract; the design of the final 12 miles between Warndon and Strensham (J6-J8) is now under way with a view to publication of all the Orders in autumn 1988.

9.3 The preferred route for the A446 Birmingham Northern Relief Road was announced in March 1986; design work is continuing and draft Orders will be published this summer. The scheme will provide much needed relief to the A6 through the conurbation and also take through traffic out of settlements in the A5/A446 corridor between Essington and Coleshill. The scheme is programmed to start on site in 1991.

9.4 In the meantime conditions are being improved on the Midlands Links. To improve overall capacity, an access control trial involving the use of traffic signals and computer control on the M6 southbound slip road at Junction 10 is proving very successful. Its use will be extended in other areas and other traffic management measures to improve flows are planned. Much of this work will have a permanent value because, even when the Northern Relief Road and the M6 are operating together, the demand in the corridor is such that sophisticated traffic management control will still be needed. The control centre at Perry Barr has a high priority as does the refurbishment and improvement of all the control systems on and around the Midlands Links. There is a three stage programme of improvements starting this year which will see the installation of the most up-to-date communications infrastructure using fibre optic cables. Further TV surveillance will be provided and second generation electronic equipment will be connected in the early 1990s. This will provide a higher degree of automatic operation to assist the Police in implementing a cohesive communications and traffic management strategy.

9.5 The study into the needs of the A449 corridor at Kidderminster, Stourbridge and Wolverhampton has led to an addition to the programme of a 42 mile scheme to bypass all three. The Kidderminster Eastern Bypass which, with Hereford and Worcester County Council's proposed Bewdley Link could relieve the town of almost all north-south and east-west through traffic, will bring significant environmental benefits. The Stourbridge and Wolverhampton bypasses individually will relieve the old and outdated road network in this part of the conurbation and greatly improve access to the potential growth areas of the Black Country. Taken together, the continuous through route from the M5 near Bromsgrove to the M54 north of Wolverhampton will, with M42 and the proposed Birmingham Northern Relief Road, complete an orbital route around the conurbation stimulating economic growth by providing quick and ready access to the national motorway network. It will also serve as a diversionary route when the M5/M6 is under repair.

9.6 Within the conurbation there is an urgent need to ensure that the highway infrastructure aids and supports economic regeneration. The aim is to identify the strategic roads network and the improvements needed in the light of current and prospective developments. The Dudley Enterprise Zone and the area of the

proposed Urban Development Corporation are key areas in this respect. The local authorities' Black Country Route now under construction is a first step; the Regional office are discussing with local highway authorities what more needs to be done. This is a continuing review, which will include an assessment of the suitability of main routes for trunking.

9.7 The proposal to grade separate the A45 junction with the A446 at Stonebridge Roundabout is also new to the programme. The scheme will smooth flows on this busy route leading to the National Exhibition Centre and Birmingham International Airport.

9.8 Considerable progress has been made with M40, which is likely to prove to be the single most important length of highway infrastructure in the regeneration of the West Midlands' economy. Work on the section between M42 and A46 will begin in June 1987. Statutory processes on the Gaydon and Banbury Bypass sections are nearing completion. Work is to be carried out under five contracts, the first of which should begin towards the end of 1987 and the aim is to have the whole route, including the Waterstock-Wendlebury section in the South Eastern Region, open to traffic by 1991.

9.9 Wider afield, the A483 Oswestry Bypass and associated A5 Improvements were opened in December 1986. Important bypasses are nearing completion on the A435 at Evesham and on the A422 Stratford Northern. Both will be open to traffic this summer. On the A38 work has started on a scheme to provide a grade separated junction at Hilliards Cross. Work will begin in the summer on the A46 Coventry Eastern Bypass, the A34 Hanford Grade Separated Junction and the A49 Leominster Bypass. Work is progressing well on the three bypass schemes on the A435 between South West Birmingham and Evesham. At Alcester the decision following public inquiry is expected shortly; a preferred route has been announced for the adjoining Studely Bypass; and the public were recently consulted on a modification at the southern end of the preferred route for the Norton and Lenchwick Bypass. A further scheme on the A435 to bypass Sedgeberrow has now been transferred from the regional to the national programme. Routes have also been announced for the A5 bypass of Fazeley, Two Gates and Wilnecote in Staffordshire, the A423 Southam Bypass, and the A50 Blythe Bridge to Queensway Improvement at Stoke-on-Trent. This last scheme is an urban relief road on which the Department and the local highway authority have co-operated in seeking proper provision for relieving an overloaded route. It replaces the Stoke Southern Bypass in the programme because recent traffic and economic forecasts show that the Bypass could not be justified at present. The need for a bypass will, however, be kept under review.

9.10 A number of smaller improvements and bypass schemes are programmed along the A49 at Hereford, Dorrington, Prees and Whitchurch; an improvement of Skew Bridge at Woofferton has now been transferred from the regional to the national programme. Recent work has confirmed that the scheme to bypass Craven Arms is uneconomic and has little or no environmental benefit; it has therefore been withdrawn from the programme and the possibility of minor improvements to the existing A49 will now be considered. Bypasses on the A5 at Nesscliffe and on the A483 at Pant/Llanymynech have been added to the programme. The A422 will also be improved between the Stratford Northern Bypass and the A435 Alcester Southern Bypass.

9.11 Studies of remaining traffic needs on the A5 between Shrewsbury and Oswestry, on the A49 to the north of Shrewsbury and on the A45 between M42 and M45 are continuing. Some potential schemes have already been identified.

9.12 The Birmingham Northern Relief Road will relieve pressure on the M6 through the conurbation. Further north, the M6 will continue to carry heavy volumes of traffic between the West Midlands and the North West. In conjunction with the North West Regional Office a study is being commissioned to review the capacity of the motorway and to assess what needs to be done to meet future traffic growth. Studies are also to be undertaken on the A523 from Mayfield to north of Leek and on the A435 west of Evesham to the county boundary.

THE EAST MIDLANDS

10.1 Since 1985 considerable progress has been made in the improvement of the trunk road network in the East Midlands, particularly in the provision of bypasses. Construction has continued apace, a welcome feature being early completion by contractors of several schemes. Preparation of other schemes in the programme has been successfully advanced and preliminary studies of several potential projects are in hand.

10.2 The complex urban scheme on the A61 Inner Relief Road at Chesterfield was opened to traffic in July 1985 well in advance of the contract date. So too was the A46 Lincoln Relief Road which was opened in December 1985. A number of important bypasses opened in 1986: at Worksop on the A57, at Bulwick on the A43, on the A47 at Billesdon and the A52 at Bingham. Difficult ground conditions and harsh weather have delayed progress on the A6 Chapel-en-le-Frith Bypass in the Peak District, which is now expected to open to traffic in the summer. Construction was started on three further schemes in 1986 - A43 Brackley Bypass, A43 Towcester Bypass and A47 Wardley Hill Diversion - and good progress is being made on all.

10.3 Earlier this year a contract was let for the A17 New Washway Road in Lincolnshire. This will be followed shortly by contracts for the A42 Measham-Ashby Bypass on the new M42/A42 route between Birmingham and the M1 near Nottingham. Priority is being given within the Region to completing this strategic route. The final scheme will be A42 Castle Donnington (North) for which the line has now been established following a further public inquiry in 1986 and a contract for advance works will be let shortly; draft Side Road and Compulsory Purchase Orders for the scheme are to be published later this year. It is expected that contracts will be let during 1987 for the A17 Long Sutton/Sutton Bridge Bypass, at Boston on the A16 south of Haven Bridge, for the replacement of A17 Fosdyke Bridge and for the A46 Newark Relief Road. A decision following the public inquiry into the A52 Bottesford Bypass in Leicestershire is expected later this year.

10.4 Also of strategic importance is the new A564 route between Stoke and the M1 near Nottingham, known as the Stoke-Derby Link. This is divided into three major schemes: Hatton/Hilton and Foston Bypass, Derby Southern Bypass and the Doveridge Bypass, together

with the associated A516 Etwall Bypass. Following the completion of the major traffic modelling work, detailed reassessments of all these schemes have been carried out [and decisions on the route are expected to be announced shortly.]

10.5 In Lincolnshire good progress is being made on the comprehensive improvement of the A16 and A17 near The Wash. Schemes are in preparation on the A16 between Boston and Algarkirk and from Spalding to Sutterton, both of which utilise long lengths of disused railway to avoid farm severance, and also on the Wigtoft-Sutterton Bypass on the A17. Elsewhere in the county preparation continues on the A16 bypasses of Louth and Market Deeping/Deeping St James; on the A17 Leadenham Bypass and on the A43 Stamford Bypass. A new bypass scheme has been added to the programme for Partney on the A16 north of Boston and studies are to be carried out on the A46 between Lincoln and Newark and on the A17 between Leadenham and Sleaford.

10.6 The main scheme in Northamptonshire is the strategically important east-west M1-A1 Link together with the associated A43 Kettering Northern Bypass [on which decisions are expected shortly following a long and complex public inquiry.] Substantial progress continues to be made towards the comprehensive improvement of the A43 to the south of the M1 at Northampton. Preparation work is in hand for Silverstone Bypass, dualling the section between Whitfield Turn and Brackley Hatch, and for Blisworth Bypass which incorporates a new junction with the M1 and for which draft Orders have now been published. Beyond Northampton three further schemes on the A43 have now been added to the programme: Moulton and Geddington Bypasses and dualling of the section between Moulton and Broughton. On the A6, the proposed improvement south of Kettering has been divided into three separate bypass schemes - at Burton Latimer and at Rushden-Higham Ferrers for which preferred solutions have been announced , and at Finedon. A new scheme has been added to the programme for a bypass of Flore on the A45. The needs of Rothwell and Desborough on the A6 continue to be studied.

10.7 The improvement of A6 continues from Northamptonshire into Leicestershire. Between Kettering and Leicester schemes to bypass Great Glen and Market Harborough are in preparation. [Draft Orders will be published for Market Harborough this summer.] To the north of Leicester draft Orders will be published later this year for a Quorn and Mountsorrel Bypass and preparation work is proceeding for a Kegworth Bypass. A major study is to be carried out of the A6 at Loughborough. Draft Orders have now been published for the A46 Leicester Western Bypass which incorporates a new junction on the M1. This project fills a missing link in the trunk road network and will provide relief for the city from through traffic.

10.8 A public inquiry was held last October into proposals for the improvement of the junction on the A52 Nottingham Outer Ring Road with A6005 at Abbey Street; the decision is likely to be made shortly. A detailed reassessment is being carried out of the proposals for the A453 Clifton Lane Improvement on the southern outskirts of Nottingham following adverse reaction at public consultation stage. A new scheme has now been added to the programme for a grade separation on the A1 at the junction with the A57 and A614 east of Worksop. Studies are to be carried out on the A453 between Clifton and the M1 and also on the A46 north and south of Newark.

10.9 In Derbyshire preparation work continues on the A52 Ashbourne Relief Road and a further study has been commissioned into the complex problem of the A6 at Buxton. Investigations are also in hand for improvement on the A6 north of Whaley Bridge. The previously suspended scheme for a bypass on the A628 of Mottram-Tintwistle across the county boundary has been withdrawn after further investigation and the possibility of localised improvement will be studied.

THE SOUTH WEST

11.1 The last two years have seen very substantial progress in the trunk road programme in the South West: there are now ten schemes under construction, with major investment in road improvements being made in all seven counties of the Region.

11.2 In Cornwall, work is well advanced on the A38 Saltash tunnel and bypass. On the A30 the Long Rock Bypass has been completed and, following a public inquiry, work will start later this year on a dual carriageway bypass for Blackwater. A public inquiry has been held into the dual carriageway improvement between Launceston and Plusha and preparation of the scheme between Okehampton and Launceston is continuing. Schemes to bypass Mitchell and Summercourt have been combined into one extended scheme, Penhale to Carland Cross, for which Orders will be published later this year. Work is progressing on other schemes within the County.

11.3 New additions to the programme in Cornwall include a substantial scheme to improve the A38 between Liskeard and Bodmin. Two more stretches of the A30 to the east and west of Bodmin together totalling 8 miles will be upgraded to dual carriageway standard with the village of Victoria being bypassed. The possibility of a bypass for Camelford on the A39 and the improvement of the A38 between Saltash and Liskeard will be kept under review.

11.4 Routes into and through Devon are being very substantially improved. The A30 dual carriageway from Whiddon Down to Okehampton and the A39 Bideford Bypass with its bridge over the Torridge estuary will be opened within the next few months. Work has started on the A30 bypass of Okehampton itself and on Stage 2A of the North Devon Link from Tiverton to Newtown. Construction will start later this year on the final stage of the North Devon Link and on the A39 Barnstable Bypass. On the A38, an underpass has been provided at Belvedere Cross near Exeter so that local traffic does not have to cross the busy main road; substantial improvements are planned to the Marsh Mills junction in Plymouth.

11.5 On the A35 in East Devon a public inquiry will open shortly into proposals for a bypass for Axminster and the possibility of a bypass for Wilmington will be kept under review. Public consultation has recently taken place on possible routes for new dual carriageway stretches of the A30/A303 between Exeter (M5) and Honiton and from Honiton to the County boundary at Marsh. The preferred routes will be announced when the responses have been considered.

11.6 In Dorset, the A31 Ferndown Bypass opened in December 1986. On the A35, construction is under way on the Bridport Link Road and work is expected to start on the Dorchester Bypass this summer. Following a public inquiry, the line of the Charmouth Bypass has been determined. Further east on the A31 a preferred route has been announced for the dual carriageway improvement between Yellowham Hill and Troytown. The possibility of a bypass for Winterbourne Abbas remains under study and other improvements to the A35 will be carried out in the programme of regional schemes.

11.7 The main trunk road in Somerset is the A303 for which major improvements are in progress and planned. Construction work has started on the 9 mile South Petherton-Broadway (Ilminster Bypass). A public inquiry has been held into proposals for Sparkford Bypass and construction is planned to start next year. A public inquiry has also been held into proposals for a dual carriageway improvement between Ilchester and South Petherton. Revised proposals for the stretch between Mere and Wincanton will be published shortly. New schemes now added to the programme will upgrade the two remaining unimproved stretches of A303 in Somerset, between Sparkford and Ilchester and from the new Ilminster Bypass to the Devon boundary at Marsh.

11.8 The A36 runs through North East Somerset. Draft Orders have been published for a bypass of Beckington which is intended, with Frome Bypass a local highway authority scheme, to free this attractive village from through traffic.

11.9 In Wiltshire, the Heytesbury Bypass on the A36 was opened last December. There are currently three more schemes under construction within the county: a bypass of Warminster on the A36; an underpass to take the A350 under the A303 at Furze Hedge; and the provision of dual carriageway on the A419 between Blunsdon and Cricklade. Further north on the A419, the County Council as the Department's agent is studying the options for Latton Bypass on which the public will be consulted in due course. Draft Orders have recently been published for bypasses of Codford and Steeple Langford on the A36 and a new scheme to improve the A36 between Heytesbury and Codford has been added to the programme. The possibility of bypasses for Chicklade and Winterbourne Stoke on the A303 will be kept under review. Proposals are being prepared for a bypass of Salisbury and three nearby communities on the A36 and the public will be consulted next year on possible routes.

11.10 In Avon major improvements are planned to the A46 between Bath and the M4. The preferred route was announced last October for a bypass of Batheaston-Swainswick, together with a new link to the A36 east of Bath which would remove trunk road traffic from the city. Further north on the A46 a public inquiry has been held into proposals for the Bath (Upper Swainswick)-A420 scheme and the section north of the village of Pennsylvania to Field Lane will be improved by a new scheme which has now been added to the programme.

11.11 Strengthening work on the existing Severn Bridge, and proposals for a Second Severn Crossing, are referred to at paragraphs [ ] of Volume I to this White Paper.

11.12 In Gloucestershire on the A417 draft Orders have been published for a bypass of Brockworth, which includes a new junction

with the M5, and Orders have been made for Birdlip Bypass on which construction will start early next year. A new scheme has now been added to the programme for improving the steep A417 Crickley Hill which lies between two bypasses. A bypass for Stratton has been restored to the programme, together with a new scheme to improve some 8 miles of the A417 immediately to the north of Stratton.

11.13 Also in Gloucestershire, work is in progress on the investigation of possible ways to improve the substandard stretch of the A40 between Highnam and the M50 at Jays Green, including the use of the B4215/B4221 route as an alternative. The public will be consulted on these later this year. A scheme to improve the A438 west of Ashchurch to its junction with the A435 is in preparation.

11.14 The Department is also contributing ££6.1m to the Welsh Office towards the cost of constructing the A48 Chepstow Inner Relief Road and Bridge now under way.

THE SOUTH EAST

12.1 Since June 1985 there has been continued significant progress both in carrying out road improvements and in advancing schemes towards the construction stage. Perhaps most notable has been completion of the M25; in the Region the Airport Spur-M4, Wisley-Leatherhead-Reigate and Swanley-Sevenoaks sections all coming into use between September 1985 and February 1986. Also on the London orbital route, Kent County Council have completed schemes for widening the A282 Dartford Tunnel southern approach road and extending the toll booth plaza, the costs of which were met by the Department under s.272 of the Highways Act 1980. A scheme was added to the programme last September for a privately funded bridge at Dartford, with associated approach roads, to double the capacity of the Thames crossing [and a hybrid Bill has now been introduced in Parliament.]

12.2 Action is in hand to deal with congestion in the south west quadrant of the M25. Traffic management measures have been implemented at Junctions 10(A3), 12(M3) and 13(A30). A scheme was added to the programme last August for construction of a fourth lane in each direction between Junctions 11(A320) and 13, where space has been provided in the central reservation, and consultants were appointed in October to undertake the necessary preparation work. A further announcement will be made as soon as possible. In accordance with an earlier undertaking, Ministers will consider whether there is a need for any additional connections to the M25/M26 motorways in the Sevenoaks area when the results of detailed traffic surveys are available.

12.3 Widening of the M4 to dual 4-lane standard between the M25 interchange and the Heathrow Spur was completed in December 1985. Following a study, schemes have now been added to the programme for a fourth lane in each direction between the M25 and Junction 8/9 (Maidenhead) and to provide free flow links at Junction 8/9.

12.4 The southern extension of the M3 is now open as far as Bar End, Winchester; [and following a public inquiry in 1985 decisions have been announced on the proposals for the final section of the M3 from Bar End to the M27 at Bassett.] The Swaythling Link from the

M27 into the northern outskirts of Southampton came into use in summer 1986. Following a study into the possible need for more capacity on the older sections of the M3, a scheme to provide a fourth traffic lane along the eastbound carriageway between Junctions 2 (Thorpe) and 3 (Lightwater) has now been added to the programme. An improvement within the regional programme at the A339 Black Dam junction adjacent to the M3 will be considered.

12.5 On the A34, the East Ilsley to Chilton Improvement was opened to traffic last December. Statutory procedures for the Whitway Diversion have been completed and construction should start this summer. Draft Orders for the Newbury Bypass have been published and it seems likely that a public inquiry will be necessary. A scheme has now been added to the programme to carry the A34 under the M4 in the area of the Chieveley interchange (Junction 13). Together these schemes will complete the improvement of the A34 route south of Oxford.

12.6 On the A3, which is being progressively improved, a decision following a public inquiry into proposals for Liphook and Petersfield Bypasses was announced last December. Part of the route has now been fixed, and it is hoped to make a further announcement this summer following consultation on possible modifications to the remainder. Following a public inquiry in 1985 construction of the Compton-Shackleford Improvement should start this summer. A preferred route for the Milford Bypass has been announced and it is hoped to publish draft Orders later this year. Public consultation is currently being undertaken on the Hindhead scheme. Following a study, it has not been possible at this Review to add to the programme an improvement on the A3 at Guildford between the A25/A322 Dennis Roundabout and the junction with the A31 Hogs Back, but the position will be kept under review.

12.7 Following a public inquiry in 1985, a decision in principle to proceed with the planned improvement of the A23 between Warninglid and Brighton was announced last December; and the public will be consulted later this year on the Handcross-Pease Pottage Improvement scheme. A further scheme has now been added to the programme to improve the section between the Handcross Flyover and Warninglid, which when built will complete the comprehensive improvement of the A23 route from the southern end of the M23 to Brighton.

12.8 On the A21, construction of the Pembury Bypass is well under way and is due for completion in spring 1988. [Final decisions to complete the statutory procedures for the Robertsbridge Bypass have been announced] and construction is planned to start in spring 1988 when a replacement school has been provided. Preparations are being made for public consultation on the Lamberhurst Bypass and the scheme for dualling between the Tonbridge and Pembury Bypasses; and preparation is continuing on the other two programmed schemes on the A21 route, for a northbound climbing lane at Silverhill and an improvement between Kippings Cross and Lamberhurst.

12.9 Government strategy provides for the M20 to be improved as the main traffic artery from the M25/M26 to serve the planned Channel Tunnel, Folkestone and, with the A20, the port of Dover. Preparation is continuing as quickly as possible to have all three outstanding schemes for this route in place, subject to the necessary Parliamentary and statutory procedures, by the time the Tunnel is planned to open in 1993. The Inspector's report on last year's

public inquiry into the remaining draft Orders for the Maidstone-Ashford section of the M20 is now being considered; and the scheme added to the programme in February 1986 for widening the M20 between Junctions 5-8 (Maidstone Bypass) is being prepared. Proposals for the western section of the A20 Folkestone-Dover Improvement, from the M20 at Folkestone to Court Wood, are included in the Channel Tunnel Bill which is still before Parliament. Draft Orders for the eastern section from Court Wood to Dover have now been published.

[12.10 On the A2/M2 route, completion of the A2 Barham Crossroads Grade Separated Junction is imminent.] Work to provide hard shoulders on the A2 from the London boundary to the M2, phased over a six-year period to 1991, is continuing; two contracts have been completed and a third will be let this year. A scheme to provide a third traffic lane in each direction on the M2 between Junctions 1 and 3 has now been added to the programme. No other major improvements to the A2/M2 route are planned at present, but the position will be kept under review. On the A249, a preferred route for an extended Iwade Bypass was announced last December and preparation for publication of draft Orders is continuing. The response to the recent public consultation on the improvement of the section between M2 and A2 is being considered. It has not been possible at this Review to add to the programme a further improvement of the A249 north of the Kingsferry Bridge or a second crossing at the bridge.

12.11 The A27 Langstone Flyover was opened in November 1985. Along the south coast route a further eight major A27 schemes and four more on the A259 are already in the active programme. On the A27, the Havant Bypass-Chichester Bypass Improvement and the Fontwell Bypass are both now under construction. The route of the Brighton Bypass has been fixed, and a public inquiry into subsidiary proposals, including the land requirements, was held in January this year. A decision following the 1986 public inquiry into proposals for the Pevensey Bypass will be announced later this year. This summer it is planned to publish draft Orders for the Westhampnett Bypass, and to consult the public on possible alternative routes for the Arundel Bypass. Preparation is continuing for publication of draft Orders for the Polegate Bypass and for public consultation on the Patching Junction Improvement. The Department will also be putting in hand a study of the possible need for improvement along the section of the A27 between Lewes and Polegate. The study into the possibilities for providing relief for the A27 in the Worthing and Lancing area, announced in 'National Roads England 1985', is making good progress. The consultants' report is expected later this year and the addition of a Worthing/Lancing scheme to the programme will then be considered.

12.12 On the A259, a preferred route for the Winchelsea Bypass was announced in March last year and draft Orders will be published shortly. At about the same time the public will be consulted on an improvement at Rye. Preparation for the Bexhill and Hastings Western Bypass is in hand. In consequence of the planned Channel Tunnel, the Department announced last October the restoration to the active programme of the previously suspended scheme on the A259 to bypass New Romney. Design agents for this scheme will be appointed shortly. The Department also announced that it proposed to replace the A259 as a trunk road between Hythe and the A20 at Folkestone by the A261/A20 route between Hythe and Junction 11 on the M20 at Stanford. Schemes have now been added to the programme for an improvement of the proposed new trunk route, for an A259 Hastings

Eastern Bypass, and for restoring to the active programme a scheme to bypass St Mary's Bay and Dymchurch which will link to the west with the New Romney Bypass.

12.13 Fresh draft Orders have now been published for the route of the M40 between Waterstock and Wendlebury. The proposed new route is generally on the line of that recommended by the Inspector, in preference to the published 'Ot Moor' route following the public inquiry in 1982/83. As noted in.....[refer to WMRO text], construction of the Banbury Bypass section, to the north of Wendlebury, should start at the end of this year. A decision on supplementary proposals for the A43/A421 Peartree Hill- Wendlebury Improvement has been announced, and construction should start later this year. The Inspector's report on the 1986 public inquiry into proposals for the A41 Bicester Bypass is being considered. Proposals to add the A421 between Bicester and Wendlebury (M40) to the Department's trunk road network have been published, and preparation work for its improvement is already in hand. The A420 between Swindon and Oxford has now ecome a trunk road. A preferred route for the A420 Kingston Bagpuize and Southmoor Bypass has been announced and it is hoped to publish draft Orders later this year. On the A40, preparation is continuing towards public consultation on both the Witney Bypass-Cassington Dualling scheme and the North of Oxford Improvement. Schemes have now been added to the programme for improving Headington Junction on the A40, and for dualling the A43 between its junction with the B4031 and the proposed junction with the M40 at Ardley.

12.14 A decision following public inquiry will be announced later this year on the proposals for the A423 Maidenhead Thicket-Burchetts Green improvement, and the associated trunking of the A404 route to the M40 and de-trunking of the A423 between Burchetts Green and Oxford. The A303 Andover-Thruxton scheme was completed in November 1985; work on the Thruxton-Amesbury section is well under way and should be finished in Summer 1988, completing improvement within the Region of a high standard M3/A303 route. On the A339, Stage 2A of the Basingstoke Northern Bypass Improvement is in use, and preparation work is continuing on a scheme for Stage 3. Schemes have now been added to the programme for bypasses of Headley on the A339 and West Wellow on the A36.

EASTERN ENGLAND

13.1 The most notable achievement in the Region was the completion last October of the final section of M25, from Micklefield Green to the A1(M) at South Mimms in Hertfordshire. Other motorway improvements have included the A1(M) Hatfield Tunnel scheme opened in December 1986; and the trunking and enlargement of the A120 roundabout at Junction 8 of the M11 in preparation for the expansion of Stansted Airport. New schemes added following the current Review are for: the widening to three lanes of the M40 between Junctions 4 (Handy Cross) and 5 (Stokenchurch), where traffic flows are building up and will increase further with the extension of the motorway; the addition of north-facing slip roads at Junction 5 of the M11 (Loughton), which a study has established are now justified on traffic grounds; and the addition of climbing lanes to both carriageways of the M1 at Junction 9 (Friars Wash) to counter congestion there.

13.2 Progress has been maintained on schemes for improving routes

to the East Coast ports. [The strategy for the M1-A1 Link Road has recently been confirmed, subject only to changes of detail. With the A12/A45 Ipswich Bypass now fully open and grade separation of the A45 junction at Trimley to the east, the Link Road will complete a high standard dual carriageway route from the Midlands to East Anglia. Provided the remaining statutory procedures can be concluded satisfactorily, the first of 9 contracts could begin in Spring 1988.] Meanwhile the opening of the A45 St Neots Bypass has taken much traffic out of this attractive riverside market town.

13.3 The important A12 and A47 routes to the east coast from London and the Midlands respectively are also being improved. On the A12 the Chelmsford Bypass has filled the last remaining gap in the dual carriageway from the outskirts of London to Ipswich and design of a grade separated junction at Capel St Mary to the south of Ipswich is going ahead. There will be a further study of the A12 between M25 and Chelmsford in Essex, which will look in greater depth at it's future needs, following on from the broader study carried out by the County Council in 1985. The new study will take account of measures to ease congestion on existing junctions on the A12 inside the M25 ring.

13.4 North of Ipswich, it was agreed with Suffolk County Council in 1985 that the A12 to Lowestoft would not be detrunked. Martlesham Bypass has progressed well and is due to open by the spring of 1988, and a bypass for Farnham and Stratford St Andrew has been added to the programme. Further north, Saxmundham Bypass, which was promoted by Suffolk County Council, will be finished this summer, while the County are also promoting a bypass for Kessingland. At Lowestoft itself, a tidal-flow traffic system is shortly to be introduced to ease peak hour congestion on the Bascule Bridge, which carries the A12 over Lake Lothing. A consultants' study report on the need for further measures to provide extra capacity is awaited. On the A47 the Great Yarmouth Western Bypass (including a new bridge over Breydon Water) opened in Spring 1986 and draft Orders for its southern extension, the Gorleston Relief Road, will be published shortly.

13.5 On the A47 east of Norwich, work is in progress on dualling between Postwick and Blofield and work will start shortly on the Acle Bypass. Two grade separated schemes at Peterborough, one at Westwood which opened in January and another at Longthorpe due for completion in October, will ease junction problems. To the west of the Longthorpe scheme, the Castor and Ailsworth Bypass is, as a result of the revised capacity standards, now to be built as a dual carriageway and draft Orders will be published shortly. The Inspector's report is awaited on the £53m Norwich Southern Bypass. There are six other schemes in the programme for improving the A47 between Peterborough and Norwich and two new schemes have been added providing for dualling between Blofield and Acle to the east of Norwich and between Wansford and Sutton to the west of Peterborough.

13.6 Much work is in hand on the other radial routes in the Region. Studies of the A1 have led to the addition to the programme of three new junction improvements at Tempsford in Bedfordshire and Norman Cross and Glatton, both in Cambridgeshire. The results of these studies are still being considered and further schemes may be brought forward if justified. Grade separation is also proposed for the A5/A418 junction at Sheep Lane in Bedfordshire and the need for further improvements on the A5 between the M1 and the already improved section south of Milton Keynes will be studied. On the

A6, slightly revised proposals for the Barton Bypass are being considered following a public inquiry. The preferred route of the combined A428/A6 bypass of Bedford has recently been announced and the feasibility of lowering part of the route through Queens Park into cutting to mitigate its impact on the environment is being considered. On the A10, the Buntingford Bypass is nearing completion and the section to the south of Buntingford as far as Hay Lane is to be improved under a new scheme. Also on the A10,in Cambridgeshire the Ely/Littleport Bypass was opened to traffic last June and work will start soon on the Melbourn Bypass; and further north, in Norfolk, a scheme (A134 to Hardwick Roundabout) to bypass the villages of Setchey and West Winch and at the same time to improve the eastern approach on the A47 to Kings Lynn has been added to the programme.

13.7 The Department has agreed in principle with Norfolk and Suffolk County Councils that the A134 from south of Kings Lynn to Bury St Edmunds should become a trunk road and draft Orders will be published later this year. In the programme Review special attention has again been paid to the needs of the A11, about which there is continuing concern because of its importance to communications with North-East Norfolk. The Barton Mills Bypass in Suffolk has been completed and the improvement between Wymondham and Cringleford in Norfolk should be finished at the end of the year. In January, it was announced that Thetford Bypass would be built partly as a dual carriageway and with provision for dualling the remainder at a later date. These proposals replace those for the essentially single carriageway originally put forward. When these schemes are completed, together with the six other schemes already in the programme and those now added for dualling from Stump Cross to Four Wentways and for 3km to the west of Elveden, some 75 per cent of the road will be built to dual carriageway standard. The need for further improvements will continue to be monitored closely in the light of traffic growth.

13.8 Elsewhere in the Region, the A428 Bromham Bypass to the west of Bedford has been in use since September 1986, and a new scheme has been added for an A428 bypass of Great Barford to link to the west with the proposed Bedford Bypass. Progress continues to be made on three important bypass schemes on the A41 at Kings Langley, Berkhamsted and Aston Clinton, with the preferred route for the latter announced at the beginning of the year. Ministers' consideration of the East-West Routes Study report by the seven counties in the Region has led them to conclude that the A120 should be given trunk road status between the M11 and A12 in recognition of its increased importance in the light of the expansion of Stansted Airport and the need to improve east-west communications in the Region. The timing of this will depend on the outcome of negotiations with Essex County Council. It is also intended in the longer term to give trunk road status to a route in the corridor between Thame and Stevenage, with the trunk road scheme which has been suspended from the active part of the programme since 1980 now dropped. A local authority scheme to bypass Leighton Linslade has been approved in principle for 100 per cent grant under s272 of the Highways Act 1980. Three further local authority schemes for bypasses of Little Wymondley, Luton and Wing will each be considered for s272 grant provided they meet the Department's overall strategy for the Thame-Stevenage route. Buckinghamshire County Council will be encouraged to develop further their proposals for a bypass of Aylesbury. Scheme identification studies will be carried out for the remainder of the route. Other longer term recommendations in the East-West Route Study report are still under consideration.

LONDON

14.1 The major development in providing for movement in London was the completion last year of the M25. Traffic with no need to be in the Capital was for the first time able to bypass it completely. The impact of the M25 has been substantial with one in five heavy goods vehicles taken off London's densely trafficked roads.

14.2 Since 1985 there has been steady progress on the current programme with its emphasis on upgrading the North Circular Road and the A40, and in particular on improving access to Docklands and East London generally where some two thirds of the programme is situated.

14.3 The earlier emphasis given to the A406 North Circular Road is now beginning to show real progress. Construction work is continuing on the South Woodford to Barking Relief Road which will extend the North Circular Road to the A13 by early next year. December 1986 saw the conclusion of the major public inquiries into the East London River Crossing, one of the nation's largest transport projects aimed at linking East and South London and providing a strategic access for London's fast developing Docklands. The statutory procedures for the Great Cambridge Road (A10) Junction Improvement and the improvement between Chingford Road and Hale End Road have been completed. Advance works have been in progress for some time on both schemes and the main contract for Great Cambridge has recently been let. Draft Orders for the Regents Park Road Junction have been published and a preferred scheme for the improvement between Bounds Green and Green Lanes has recently been announced. It is hoped to publish draft Orders later in the year for the East of Silver Street to A1010 and Dysons Road to Hall Lane improvement schemes, following the introduction last year of modifications to both preferred schemes. Final decisions on the schemes to improve the adjacent sections between Popes Lane and Western Avenue and from Hanger Lane to Harrow Road are still awaited. The Falloden Way to Finchley High Road scheme was the subject of a decision in 1986 to reopen the public inquiries to hear further evidence related to the carriageway standards and new exchange land issues. These Inquiries are now completed and a decision is expected before the end of the year. The Golders Green Road Junction Improvement scheme was readmitted to the programme in June 1985 and will be progressed in due course.

14.4 In West London,significant progress has also been made, notably the completion of two major public inquiries on the A40 junction schemes in Hillingdon at Swakeleys Road and Long Lane. [The Orders for Swakeleys Road have since been made]. Also on the A40, following the second round of public consultation, the preferred scheme for the Gipsy Corner Junction Improvement has been announced and draft Orders are now expected to be published later in the 1987. Orders for the adjoining junction scheme at Western Circus were published late in 1985 and there are likely to be public inquiries for this scheme later this year.

14.5 To the east of London, the route has been fixed for the A12 Hackney Wick-M11 Link, a major new radial leading to the A102, the Blackwall Tunnel and Western Docklands. Revised proposals published for the two intermediate interchanges will further reduce the impact on local communities. They involve a third length of tunnel at the Green Man, Leytonstone, and a signal controlled junction at the

River Lea giving greater control of the flow of traffic entering Hackney and other inner areas. Further east the public were consulted on an alternative route for the A13 Thames Avenue to Launders Lane section across Rainham Marshes on which an announcement is expected soon.

14.6 In South London, work is continuing on the A20 Sidcup Bypass and the A2 Rochester Way Relief Road (a former GLC project) with both schemes expected to be opened to traffic by spring 1988.

14.7 A series of studies looking at specific problems in London have produced new proposals for the national trunk road programme. In North London the aim of the M1-A1 Scratchwood Link and the associated improvemnt of M1 Junction 1 is to improve traffic flow and safety within this important corridor. The A1 Archway Road scheme will be considered in the light of the East London Assessment Study. In South London work on the A23 Coulsdon Inner Relief Road has been restarted and the route safeguarded. Nearer into London on the A205 South Circular Road a scheme for the improvement of Catford Town Centre has been added to the programme.

14.8 Three important junction schemes have been added to the programme to improve access to Heathrow Airport. One is on the M4 at the junction with the Airport Spur; the other two are on the A4 at Henly's Corner (with the A130) and at Waggoners Corner (with the A132). Earlier this year in March plans were announced for a Western Environmental Improvement Route aimed at taking through traffic out of the unsuitable residential and shopping streets in and around the Earls Court one-way system. Further to the south, the A3 Hook Interchange and Robin Hood Gate to Roehampton Vale improvement schemes have been added to the programme.

14.9 To the east, consultants have been carrying out a study of the improvements needed both in the short and long term to improve conditions along the A13, to relieve adjacent areas of through traffic and to cater for access to the rapidly developing Docklands area. The Department is working closely with the London Docklands Development Corporation and the London Boroughs concerned to link the new road infrastructure for Docklands with the A13. New schemes for further improvements to the A13 between Limehouse and Dagenham will be identified in a study to be completed shortly. Preparation work is proceeding with the A13/A117 Junction Improvement. Further east the Thames Avenue-Launders Lane and Wennington-Mar Dyke schemes together with a new scheme addition to improve the junctions at Heathway (with A1240) and Ballards Road (with B178) complete the work in hand aimed at linking East London and Docklands with the M25.

14.10 Many of these proposals have been based on the close working relationship between the Department, the 32 London boroughs and the City of London, the London Docklands Development Corporation, and British Airports Authority. These relationships include a working party on access to Heathrow, the joint study into improving the environment and traffic conditions in Parliament Square, the joint working group study for Purley District Centre, and the London Assessment Studies.

14.11 The consultants' reports on the problems in the four areas of London which the Assessment Studies cover were published last

December. Discussions have been held with the local authorities involved about the way forward. In March their comments were invited upon the draft terms of reference for the next stage, which will look for solutions. It is hoped to start that stage in the summer. The objectives will be to deal more efficiently with existing traffic, where possible to stop it from using unsuitable residential roads and shopping streets, and to enable other road users, including cyclists and pedestrians, to move more safely and freely.

14.12 The Department attaches great value to getting the most out of the existing road network and is paying increasing attention to traffic management. An important study has recently been commissioned to review the scope for low cost, high value schemes in managing the network. The study is putting particular emphasis on the scope for accident investigation and prevention (AIP) schemes. Preliminary work has already shown there maybe some 250 sites where casualty reduction from low cost engineering measures may be possible on London's trunk road network. Emphasis is also being given to advanced techniques of traffic control where new developments in technology are bringing about fresh opportunities. The current trials of the new MOVA technique of traffic signal control at Hanger Lane have quickly shown great promise. The study is also exploring the scope for the improvement of the roadscape by attention to detail and a number of ways to reduce traffic nuisance.

TABLES

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TABLE 1: SCHEMES ADDED TO THE NATIONAL TRUNK ROAD CONSTRUCTION PROGRAMME APRIL 1987

Route Number	Scheme	Proposed Standard	Estimated Works Cost (£million November 1986 prices)	Approximat Length (Miles)
M1	CLIMBING LANE AT JUNCTION 9, HERTFORDSHIRE	D4	3.4	1.2
M2	WIDENING BETWEEN JUNCTIONS 1-3, KENT	D3	28.0	3.8
M3	WIDENING EASTBOUND CARRIAGEWAY BETWEEN JUNCTIONS 2-3, SURREY	D4	8.9	6.6
M4	JUNCTION 4 IMPROVEMENT, LB OF HILLINGDON	D/S	7.0	0.9
M4	WIDENING BETWEEN M25 INTERCHANGE AND JUNCTION 8/9, BERKSHIRE/ BUCKINGHAMSHIRE	D4	37.0	8.7
M4	FREE FLOW LINKS AT JUNCTION 8/9, BERKSHIRE	-	7.3	-
M6	WIDENING BETWEEN JUNCTIONS 30-31, LANCASHIRE	D4	13.8	2.2
M6	IMPROVEMENTS BETWEEN JUNCTIONS 31-32, LANCASHIRE	-	4.0	4.3
M11	NORTH-FACING SLIP ROADS AT JUNCTION 5, ESSEX	-	5.1	-
M18	JUNCTION WITH B6094 COCKHILL LANE, DONCASTER MD	-	1.2	-
M40	WIDENING BETWEEN JUNCTIONS 4-5, BUCKINGHAMSHIRE	D3	15.0	7.7
M62	WIDENING BETWEEN JUNCTIONS 12-18, ROCHDALE MB/SALFORD MB/BURY MB	D4	20.0	7.5
A1	BROWNIESIDE DIVERSION, NORTHUMBERLAND	D2	1.9	2.2
A1	DISHFORTH-SCOTCH CORNER CARRIAGEWAY IMPROVEMENTS, NORTH YORKSHIRE	D3	30.0	24.9
A1	FIVE LANES END (A1/A57/A614) GRADE SEPARATED JUNCTION, NOTTINGHAMSHIRE	-	2.0	-
A1	CLATTON GRADE SEPARATED JUNCTION, NOTTINGHAMSHIRE	-	1.1	-
A1	M1-A1 SCRATCHWOOD LINK AND M1 JUNCTION 1 IMPROVEMENT, LB OF BARNET	S	30.0	0.6
A1	MARSHALL MEADOWS IMPROVEMENT, NORTHUMBERLAND	D2	1.1	1.0

A1	NORMAN CROSS JUNCTION AND IMPROVEMENTS, CAMBRIDGESHIRE	D3	4.3	1.2
A1	TEMPSFORD ROAD GRADE SEPARATED JUNCTION, BEDFORDSHIRE	-	1.4	-
A3	HOOK INTERCHANGE IMPROVEMENT, LB OF KINGSTON	-	9.4	-
A3	ROBIN HOOD GATE JUNCTION-ROEHAMPTON VALE IMPROVEMENT, LB OF KINGSTON	D3	24.9	1.6
A4	HENLYS' CORNER (A4/A30) JUNCTION IMPROVEMENT, LB OF HOUNSLOW	-	1.8	-
A4	WAGGONER'S CORNER (A4/A132) JUNCTION IMPROVEMENT, LB OF HOUNLSOW	-	5.8	-
A5	NESSCLIFFE BYPASS, SHROPSHIRE	S	2.0	2.6
A5	SHEEP LANE GRADE SEPARATED JUNCTION, BEDFORDSHIRE	-	1.5	-
A10/A47	A134-HARDWICK ROUNDABOUT IMPROVEMENT, NORFOLK	D2	7.5	3.9
A10	HAY LANE-BUNTINGFORD IMPROVEMENT, HERTFORDSHIRE	D2	1.9	1.2
A11	STUMP CROSS-FOUR WENTWAYS IMPROVEMENT, CAMBRIDGESHIRE	D2	3.4	3.2
A11	WEST OF ELVEDEN IMPROVEMENT, SUFFOLK	D2	1.9	1.9
A12	FARNHAM/STRATFORD ST ANDREW BYPASS, SUFFOLK	S	1.3	0.9
A13	JUNCTION IMPROVEMENTS WITH A1240 AND B178, LB OF BARKING	-	14.7	-
A16	PARTNEY BYPASS, LINCOLNSHIRE	S	1.1	0.9
A23	HANDCROSS-WARNINGLID IMPROVEMENT, WEST SUSSEX	D3	4.0	2.0
A30	BODMIN-INDIAN QUEENS IMPROVEMENT, CORNWALL	D2	7.0	7.1
A30	SHALLOWATER HILL IMPROVEMENT, CORNWALL	D2	1.2	0.9
A34	CHIEVELEY/M4 (JUNCTION 13) IMPROVEMENT, BERKSHIRE	D2	8.0	1.2
A36	HEYTESBURY-CODFORD IMPROVEMENT, WILTSHIRE	S	2.3	1.8
A36	WEST WELLOW BYPASS, HAMPSHIRE	S	3.4	2.8

A38	HILLIARDS CROSS GRADE SEPARATED JUNCTION, STAFFORDSHIRE	-	1.7	-
A38	LISKEARD-BODMIN, CORNWALL	D2/S	19.4	9.9
A40 *	HEADINGTON GRADE SEPARATED JUNCTION, OXFORDSHIRE	-	4.0	-
A43	GEDDINGTON BYPASS, NORTHAMPTONSHIRE	S	6.0	4.2
A43	MOULTON-BROUGHTON DUALLING, NORTHAMPTONSHIRE	D2	5.5	5.2
A43	MOULTON BYPASS, NORTHAMPTONSHIRE	D2	1.5	0.8
A43	M40-B4031 DUALLING, OXFORDSHIRE/NORTHAMPTONSHIRE	D2	6.5	3.7
A45	FLORE BYPASS, NORTHAMPTONSHIRE	S	2.4	1.7
A45	STONEBRIDGE ROUNDABOUT GRADE SEPARATED JUNCTION, SOLIHULL MB/ WARWICKSHIRE	-	3.4	-
A46	PENNSYLVANIA-NORTH OF FIELD LANE IMPROVEMENT, AVON	D2	2.2	1.9
A47	POSTWICK-BLOFIELD DUALLING, NORFOLK	D2	1.2	1.1
A47	BLOFIELD-ACLE DUALLING, NORFOLK	D2	1.1	1.2
A47	WANSFORD-SUTTON IMPROVEMENT, CAMBRIDGESHIRE	D2	2.1	1.4
A49	SKEW BRIDGE AT WOOFFERTON IMPROVEMENT, SHROPSHIRE	-	1.1	-
A52	BASFORD/HOUGH BYPASS, CHESHIRE	S	2.5	0.7
A59	COPSTER GREEN BYPASS, LANCASHIRE	S	2.5	1.4
A59	MELLOR BROOK BYPASS, LANCASHIRE	S	1.8	1.0
A63	MELTON GRADE SEPARATED JUNCTION, HUMBERSIDE	-	3.0	-
A64	RILLINGTON BYPASS, NORTH YORKSHIRE	S	2.3	1.9
A64	STAXTON DIVERSION, NORTH YORKSHIRE	S	3.4	2.5
A167	DURHAM WESTERN BYPASS, DURHAM	S	4.7	2.4
A205	CATFORD TOWN CENTRE IMPROVEMENT, LB OF LEWISHAM	D2	12.0	0.6
A259	HASTINGS EASTERN BYPASS, EAST SUSSEX	S	6.6	5.3
A259	ST MARY'S BAY AND DYMCHURCH BYPASS, KENT	S	5.8	4.2

* TRANSFERRED FROM REGIONAL TO NATIONAL PROGRAMME

A251	M20-A259 HYTHE IMPROVEMENT, KENT	S	3.5	3.5
A303	ILMINSTER-MARSH, SOMERSET	D2	5.5	3.9
A303	SPARKFORD TO ILCHESTER IMPROVEMENT, SOMERSET	D2	4.6	2.9
A339	HEADLEY BYPASS, HAMPSHIRE	S	1.5	1.6
A417	CRICKLEY HILL IMPROVEMENT, GLOUCESTERSHIRE	D2	1.8	0.9
A417	NORTH OF STRATTON-BIRDLIP DUALLING, GLOUCESTERSHIRE	D2	6.5	8.1
A417	STRATTON BYPASS, GLOUCESTERSHIRE	D2	5.4	2.5
A422	ALCESTER-STRATFORD-UPON-AVON IMPROVEMENT, WARWICKSHIRE	D2	4.0	3.7
A428	GREAT BARFORD BYPASS, BEDFORDSHIRE	D2	5.5	3.9
A435	SEDGEBERROW BYPASS, HEREFORD AND WORCESTER	S	1.3	1.4
A449	KIDDERMINSTER, STOURBRIDGE AND WOLVERHAMPTON BYPASS, HEREFORD AND WORCESTER/STAFFORDSHIRE	D2	170.0	42.3
A483	PANT/LLANYMYNECH BYPASS, SHROPSHIRE	S	5.0	3.4
A523	POYNTON BYPASS, CHESHIRE	D2	11.0	3.7
A550	A5117 WOODBANK JUNCTION - LEDSHAM IMPROVEMENT, CHESHIRE	D2/S	6.0	3.2
A556	M56 JUNCTION 7-M6 JUNCTION 19 IMPROVEMENT, CHESHIRE	D2	7.5	4.0
A585	NORCROSS-M55 (JUNCTIONS 3/4) LINK, LANCASHIRE	D2	17.0	7.0
A595	DUDDON BRIDGE IMPROVEMENT, CUMBRIA	S	1.3	0.6
A1033	HEDON ROAD IMPROVEMENT, HUMBERSIDE	D2	4.0	1.2
A6120	LEEDS OUTER RING ROAD IMPROVEMENT, LEEDS MD	D2	5.5	1.2

Notes:
S single carriageway
D2 dual carriageway, two lanes
D3 dual carriageway, three lanes
D4 dual carriageway, four lanes

TABLE 2: NATIONAL TRUNK ROAD PROGRAMME COMPLETED BETWEEN 1 JUNE 1985 AND 24 APRIL 1987

Route Number	Scheme	Standard	Estimated Works Cost (£million outturn prices)	Approximate Length (miles)	Date of Completion
M3	Popham-Bar End, Stage 2, Hampshire	D3/D4	15.5	4.3	August 1985
M4	Widening between M25 Interchange and Heathrow Spur, LB of Hillingdon	D4	7.4	0.9	December 1985
M5	Widening and reconstruction Rashwood-Catshill, Hereford and Worcester	D3	22.0	5.3	December 1986
M5/M42	Junction, (Southern Turn), Hereford and Worcester	D3/D2	6.7	1.0	March 1987
M25	Airport Spur to M4 (incl- Surrey/Buckinghamshire	D4	61.5	2.1	September 1986 (Interchange December 1985)
M25	Leatherhead-Reigate, Surrey	D3	20.5	4.8	October 1985
M25	M4-Maple Cross (M4-M40), Buckinghamshire	D3	31.0	4.2	September 1985
M25	Micklefield Green-South Mimms Contract 1, Hertfordshire	D3	35.8	3.5	October 1986
M25	Micklefield Green-South Mimms Contract 2, Hertfordshire	D3	25.1	1.9	September 1986
M25	Micklefield Green-South Mimms Contract 3, Hertfordshire	D3	22.2	3.9	October 1986
M25	Micklefield Green-South Mimms, Contract 4, Hertfordshire	D3	26.2	3.7	October 1986
M25	Swanley-Sevenoaks, Kent	D3	53.3	8.6	February 1986
M25	Wisley-Leatherhead, Surrey	D3	23.7	4.7	October 1985
M27	Swathling Link, Hampshire	D2	2.7	0.7	August 1986
M42	Bromsgrove (Lickey End Section), Hereford and Worcester	D4	17.7	4.3	June 1986
M42	Bromsgrove (Umberslade	D3/D2	21.9	6.3	July 1985

	Section), Warwickshire				
M42	Tamworth (Kingsbury Section), Warwickshire	D2	21.6	5.8	December 1985
M42	Tamworth (Polesworth North), Warwickshire/ Leicestershire	D2	12.6	5.0	August 1986
M42	Tamworth (Polesworth South), Warwickshire/ Leicestershire	D2	10.4	2.4	August 1986
M42	Tamworth (Water Orton Section), Warwickshire	D3	30.4	2.7	December 1985
A1(M)	Roestock-Stanborough, Hertfordshire	D3/D2	58.7	3.1	December 1986
A1	Alnwick Bypass Stage 2, Northumberland	S	3.7	4.0	December 1985
A1	Barnsdale Bar Flyover, Doncaster MD	-	0.9	-	November 1985
A10	Ely/Littleport Bypass, Cambridgeshire	S	7.3	7.5	June 1986
A11	Barton Mills Bypass, Suffolk	D2	3.3	2.1	May 1986
A12	Chelmsford Bypass, Essex	D2	34.8	9.2	November 1986
A27	Langstone Flyover, Hampshire	D2	3.2	0.9	November 1985
A30	Long Rock Bypass, Cornwall	D2	2.5	1.1	December 1986
A31	Ferndown Bypass, Dorset	D2/S	6.4	3.4	December 1986
A34	East Ilsley-Chilton Improvement, Berkshire	D2	4.0	1.9	December 1986
A36	Heytesbury Bypass, Wiltshire	S	1.3	1.1	December 1986
A38	Belvedere Cross-Halden Hill Grade Separated Junction, Devon	-	0.9	-	April 1987
A43	Bulwick Bypass, Northamtonshire	S	2.1	1.7	April 1986
A45	Ipswich Bypass (Western Section), Suffolk	D2	18.1	4.5	October 1985
A45	St. Neots Bypass, Cambridgeshire	S	7.9	3.4	December 1985
A45	Trimley Grade Separated Junction, Suffolk	-	2.1	-	December 1985
A46	Lincoln Relief Road, Lincolnshire	D2/S	18.8	7.5	December 1985

A47	Billesdon Bypass, Leicestershire	S	2.5	2.2	October 1986
A47	Great Yarmouth Western Bypass (Northern Section) (Road Works), Norfolk	D2/S	9.6	2.0	March 1986
A47	Great Yarmouth Western Bypass (Southern Section) (Breydon Bridge), Norfolk	S	9.2	0.2	March 1986
A47	Peterborough Westwood Grade Separated Junction, Cambridgeshire	-	1.2	-	January 1987
A49/ A51	Tarporley Bypass, Cheshire	S	3.8	2.4	September 1986
A52	Bingham Bypass, Nottinghamshire	S	2.6	2.0	December 1986
A54	Kelsall Bypass, Cheshire	D2	3.8	2.2	October 1986
A56	Accrington Eastern Bypass, (Southern Section), Lancashire	D2	10.5	3.4	July 1985
A57	Worksop Southern Bypass, Nottinghamshire	D2/S	11.3	5.1	May 1986
A61	Chesterfield Inner Relief Derbyshire	D2	26.9	2.7	July 1985
A63	South Docks Road, Hull, Humberside	D2	31.3	5.2	November 1985
A66	Darlington Bypass, Durham	S	5.9	4.9	November 1985
A69	Cross Lane Grade Separated Junction, Gateshead MB	-	2.3	-	April 1986
*A69	Greenhead Diversion, Northumberland	S	3.0	1.5	December 1984
A69	Team Valley Grade Separated Junction, Gateshead MB	-	2.7	-	November 1985
A303	Andover-Thruxton, Hampshire	D2	7.4	4.5	November 1985
A339	Basingstoke Northern Bypass, Stage 2A, Hampshire	D2	2.5	0.7	December 1985
A428	Bromham Bypass, Bedfordshire	S	4.8	2.2	September 1986
A483	Oswestry Bypass and A5 Improvements, Shropshire	S	18.0	10.6	December 1986

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* Omitted from 'National Roads England 1985', Table 4

Notes

S	single carriageway
D2	dual carriageway, two lanes
D3	dual carriageway, three lanes
D4	dual carriageway, four lanes

TABLE 3: NATIONAL TRUNK ROAD PROGRAMME SCHEMES UNDER CONSTRUCTION AT 24 APRIL 1987

Route number	Scheme	Standard	Estimated Works cost (£million current prices)	Approx-imate length (miles)	Expected date of completion
M5	Widening Warndon-Rashwood Hereford and Worcester	D3	18.5	5.2	Winter 1988/89
M63	Stretford-Eccles Improvement Stages 1&2, (Junctions 1-3), Salford MB/Trafford MB	D3	21.0	1.7	Spring 1989
M63	Stretford-Eccles Improvement Stage 3, (Junctions 5-7), Trafford MB	D3/D2	2.5	1.1	Summer 1988
M63/M66	Portwood-Denton, Stockport MB/Tameside MB	D3/D2	44.2	5.0	Spring 1989
A1	Baldersby Grade Separated Junction, North Yorkshire	-	2.8	-	Summer 1987
A1	Clifton-Stannington Bridge, Northumberland	D2	7.0	2.5	Summer 1987
A1	Wetherby Bypass, Leeds MD	D2	11.8	1.4	Summer 1988
A2	Barham Crossroads, Grade Separated Junction, Kent	-	2.4	-	Spring 1987
A2	London Boundary-M2 Improvement, Kent	D3	9.0	12.5	In stages to Spring 1991
† A2	Rochester Way Relief Road, LB of Greenwich	D2	61.0	3.5	Spring 1988
A6	Chapel-en-le-Frith Bypass, Derbyshire	D2	30.4	4.4	Summer 1987
A10	Buntingford Bypass, Hertfordshire	S	4.3	3.0	Spring 1987
A11	Wymondham-Cringleford Norfolk	D2	8.3	5.2	Winter 1987/88
A12	Martlesham Bypass, Suffolk	D2	6.9	1.9	Spring 1988
A17	New Washway Road, Lincolnshire	S	3.7	3.0	Autumn 1988
A19	Ricall and Barlby Bypass, North Yorkshire	S	5.3	5.0	Autumn 1987

† Additional scheme since June 1985

A20	Sidcup Bypass, LBs of Bexley/Bromley	D2	37.2	3.8	Spring 1988
A21	Pembury Bypass, Kent	D2	9.3	2.9	Spring 1988
A27	Fontwell Bypass, West Sussex	D2	4.1	2.1	Summer 1988
A27	Havant Bypass-Chichester Bypass, Hampshire/West Sussex	D2	25.8	8.6	Winter 1988/89
A30	Exeter-Ckehampton Stage 3, Devon	D2	13.4	5.4	Summer 1987
A30	Ckehampton Bypass, Devon	D2	16.6	5.5	Autumn 1988
A35	Bridport Link Road, Dorset	S	5.0	1.8	Summer 1988
A36	Warminster Bypass, Wiltshire	S	9.4	6.1	Winter 1989
*A38	Hilliards Cross Grade Separated Junction, Staffordshire	-	1.7	-	Autumn 1987
A38	Saltash Bypass, Cornwall	D2/S	7.4	2.4	Summer 1988
A39	Bideford Bypass, Devon	S	16.3	5.1	Spring 1987
A43	Brackley Bypass, North-amptonshire	D2	8.7	4.5	Winter 1987
A43	Towcester Bypass, North-amptonshire	D2	5.4	3.4	Summer 1988
A47	Peterborough Longthorpe Grade Separated Junction, Cambridgeshire	-	1.3	-	Autumn 1987
*A47	Postwick-Blofield Dualling, Norfolk	D2	1.2	1.1	Autumn 1987
A47	Wardley Hill Improvement, Leicestershire	S	1.8	2.0	Summer 1988
A52	Barthomley Link-M6, Cheshire	S	6.5	3.4	Summer 1987
A64	Seamer-Crossgates Bypass, North Yorkshire	S	7.2	2.5	Spring 1988
A65	Settle and Giggleswick Bypass, North Yorkshire	S	8.3	3.7	Autumn 1988
A69	Eighton Lodge Junction Improvement, Gateshead MB	-	5.6	-	Autumn 1987

* Transferred from Regional to National Programme April 1987

A69	Newcastle Western Bypass, Newcastle City/ Gateshead MB	D3/D2	72.3	6.9	Autumn 1990
A303	Furze Hedge Improvement, Wiltshire	S	0.7	0.5	Summer 1987
A303	South Petherton-Broadway (Ilminster Bypass), Somerset	S	13.7	8.7	Spring 1988
A303	Thruxton-Amesbury, Hampshire	D2	10.0	6.0	Summer 1988
A361	North Devon Link Stage 2A (Tiverton-Newtown), Devon	S	22.5	15.1	Summer 1989
A406	South Woodford-Barking Relief Road, LBs of Barking and Dagenham/ Redbridge	D3	76.0	6.5	Spring 1988
A419	Blunsdon-Cricklade Dualling, Wiltshire	D2	1.9	2.4	Summer 1988
A422	Stratford Northern Bypass, Warwickshire	D2/S	11.6	7.0	Summer 1987
A435	Evesham Bypass, Hereford and Worcester	S	7.3	4.0	Summer 1987
A483	Chester Southerly Bypass- Welsh Border, Cheshire	D2	6.8	2.4	Summer 1989
A595/ A596	Thursby Bypass, Cumbria	S	1.5	1.1	Summer 1987
A616	Stocksbridge-M1, Barnsley/Sheffield MD	S	18.3	7.4	Spring 1988
A629	Airedale Route (Kildwick- Beechcliffe), Bradford MD	D2/S	21.7	4.6	Summer 1988
A650	Airedale Route (Victoria Park-Crossflatts), Bradford MD	D2	14.6	2.0	Winter 1988/89

NOTES:

S single carriageway
D2 dual carriageway, two lanes
D3 dual carriageway, three lanes

TABLE 4: NATIONAL TRUNK ROAD PROGRAMME SCHEMES IN PREPARATION AT 24 APRIL 1987

Route number	Scheme	Proposed standard	Estimated works cost (£million November 1985 prices)	Approximate length (miles)
A. PLANNED START OF CONSTRUCTION TO MARCH 1989				
M3	Bar End-Compton, Hampshire	D3	29.8	3.7
M3	Compton-Bassett Widening, Hampshire	D3	18.1	5.6
M5	Widening Catshill-Lydiate Ash and M42 Junction (Northern Turn), Hereford and Worcester	D3/D2	21.7	3.6
M20	Maidstone-Ashford, Kent	D3	61.6	14.1
†M25	Widening between Junctions 11-13, Surrey	D4	23.7	5.8
M40	Oxford-Birmingham (Banbury Bypass), Warwickshire/ Oxfordshire/Northamptonshire	D3	120.0	26.9
M40	Oxford-Birmingham (Gaydon Section), Warwickshire	D3	27.8	7.9
M40	Oxford-Birmingham (Warwick Section), Warwickshire	D3	40.0	11.0
M40	Oxford-Birmingham (Waterstock -Wendlebury), Oxfordshire/ Buckinghamshire	D2	54.4	12.6
M62	Eastbound Climbing Lane between Junctions 21-22, Rochdale MB	D4	3.0	3.8
M62	Westbound Climbing Lane, West of Junction 25, Kirklees MD	D4	2.0	2.9
M63	Stretford-Eccles Improvement Stage 4 (Junctions 3-5), Trafford MB	D3/D2	12.8	1.6
*A1	Brownieside Diversion, Northumberland	D2	1.9	2.2
A1	Dishforth Interchange, North Yorkshire	-	6.4	-
*A1	Marshall Meadows Improvement, Northumberland	D2	1.1	1.0
A3	Compton-Shackleford Improvement, Surrey	D2	8.4	2.7

† Additional scheme since June 1985
* Additional scheme April 1987

A6	Barton Bypass, Bedfordshire	D2	5.7	1.3
A10	Melbourn Bypass, Cambridge-shire	S	4.0	3.3
A11	Four Wentways Junction Improvement, Cambridgeshire	-	6.6	-
A11	Thetford Bypass, Norfolk	D2/S	7.2	4.7
A16	Boston-Algarkirk, Lincoln-shire	S	6.8	5.8
A16	South of Haven Bridge, Boston, Lincolnshire	S	3.3	0.7
A17	Fosdyke Bridge Improvement, Lincolnshire	S	2.5	0.2
A17	Long Sutton-Sutton Bridge Bypass, Lincolnshire	S	10.0	7.3
A19	Peterlee Grade Separated Junction, Durham	-	2.5	-
A21	Robertsbridge Bypass, East Sussex	S	3.2	1.2
A23	Warninglid-Brighton, West Sussex	D3/D2	29.4	11.4
A27	Brighton Bypass, East/West Sussex	D3/D2	40.3	8.8
A27	Pevensey Bypass, East Sussex	S	5.8	3.3
A30	Blackwater Bypass, Cornwall	D2	4.3	2.2
A30	Launceston-Plusha, Cornwall	D2	6.2	5.9
A34	Hanford Grade Separated Junction, Staffordshire	-	3.5	-
A34	Whitway Diversion, Hampshire	D2	6.2	3.8
A35	Charmouth Bypass, Dorset	S	5.9	2.7
A35	Dorchester Bypass, Dorset	S	7.5	3.9
A36	Beckington Bypass, Somerset	D2/S	3.7	2.1
A36	Codford Bypass, Wiltshire	S	1.8	1.7
A36	Steeple Langford Bypass, Wiltshire	S	1.3	1.4
A39	Barnstaple Bypass, Devon	S	14.8	9.3
A40	Swakeleys Road Junction Improvement, LB of Hilling-don	-	8.1	-
A41	Bicester Bypass Stage 1 (Ploughley Road-A421 Bicester), Oxfordshire	S	3.2	1.8

A41/ A421	Bicester Bypass Stage 2 (A421 Bicester-Wendlebury(M40)), Oxfordshire	D2	2.2	1.9
A41	Chester Improvement, Cheshire	D2	12.7	3.0
A42	Castle Donington North, Leicestershire	D2	26.5	10.1
A42	Measham-Ashby Bypass, Leicestershire	D2	36.7	6.4
A43	Blisworth Bypass, Northamptonshire	D2	11.3	4.1
A43	Peartree Hill-Wendlebury Improvement, Oxfordshire	D2	22.0	6.2
A46	Bath (Upper Swainswick)-A420, Avon	S	3.0	2.5
A46	Coventry Eastern Bypass, Warwickshire	D2	21.0	5.1
A46	Newark Relief Road, Nottinghamshire	S	27.3	5.8
A47	Acle Bypass, Norfolk	D2	7.1	1.9
A47	Castor and Ailsworth Bypass, Cambridgesnire	D2	6.0	3.3
A47	East Dereham-North Tuddenham Improvements, Norfolk	S	3.3	3.1
A47	Eye Bypass, Cambridgeshire	S	4.3	3.3
A47	Guyhirn Diversion, Cambridgeshire	S	2.9	0.8
A47	Narborough Bypass, Norfolk	S	2.0	1.4
A47	Walpole Highway-Tilney High End Bypass, Norfolk	S	7.2	5.5
A49	Leominster Bypass, Hereford and Worcester	S	8.2	4.0
A49	Prees Bypass, Shropshire	S	1.5	2.1
A52	Bottesford Bypass, Leicestershire	S	3.8	3.2
A52	Nottingham Outer Ring Road, Abbey Street Grade Separated Junction, Nottinghamshire	D2	4.1	0.5
A59	Burscough Bypass, Lancashire	S	9.8	3.0
A65	Addingham Bypass, Bradford MD	S	2.8	2.5
A66	Bowes Bypass-County Boundary Improvement, Durham	D2	5.8	6.0

A69	Horsley-Corbridge Improvement, Northumberland	D2	3.1	2.5
A127	Rayleigh Weir Grade Separated Junction, Essex	-	7.9	-
A140	Dickleburgh Bypass, Norfolk	S	1.9	1.9
A140	Scole Bypass, Norfolk	S	2.0	1.9
*A205	Catford Town Centre Improvement, LB of Lewisham	D2	12.0	0.6
†A282	Dartford Crossing and Approach Roads, Essex/Kent	D4	‡20.0	4.7
A303	Ilchester-South Petherton, Somerset	D2	9.1	4.5
A303	Sparkford Bypass, Somerset	D2	5.4	3.2
A339	Basingstoke Northern Bypass Stage 3 Dualling, Hampshire	D2	4.5	2.5
A361	North Devon Link Stage 2B (Newtown-Barnstaple), Devon	S	18.5	11.3
A406	Chingford Road-Hale End Road, LB of Waltham Forest	D3	38.0	1.3
A406	Great Cambridge Road (A10) Junction Improvement, LB or Enfield	-	20.4	-
A406	Hanger Lane-Harrow Road, LBs of Brent/Ealing	D3	57.8	1.7
A417	Birdlip Bypass, Gloucestershire	S	1.5	1.7
A423	Maidenhead Thicket-Burchetts Green, Berkshire	D2	10.1	2.2
A435	Alcester Southern Bypass, Warwickshire	D2/S	7.2	3.7
*A435	Sedgeberrow Bypass, Hereford and Worcester	S	1.3	1.4
A453	Clifton Lane, Nottingham, Improvement, Nottinghamshire	D2	6.4	2.7
A523	Macclesfield Inner Relief Road, Cheshire	D2/S	10.6	3.3
A565	Derby Road Improvement, Sefton MB	D2	1.7	0.7
A604	M1-A1 Link (M1-Rothwell), Northamptonshire	D2	40.0	16.7
A604	M1-A1 Link (Rothwell-Kettering), Northamptonshire	D2	4.2	2.2

† Additional scheme since June 1985
* Additional scheme April 1987
‡ Approach Roads only, Dartford Crossing being privately financed

A604	M1-A1 Link (Kettering Northern Bypass), Northamptonshire	S	5.1	2.8
A604	M1-A1 Link (Kettering Southern Bypass), Northamptonshire	D2	22.2	4.6
A604	M1-A1 Link (Kettering-Thrapston), Northamptonshire	D2	19.8	6.8
A604	M1-A1 Link (Thrapston-A14) Stage 1, Cambridgeshire	D2	14.0	8.5
A650	Drighlington Bypass, Leeds MD	S	5.5	2.6
A696	Woolsington Bypass, Newcastle City/Northumberland	D2	8.7	3.0

TABLE 4: NATIONAL TRUNK ROAD PROGRAMME SCHEMES IN PREPARATION AT 24 APRIL 1987

Route number	Scheme	Proposed standard	Estimated works cost (£million November 1985 prices)	Approximate length (miles)
B. PLANNED START OF CONSTRUCTION APRIL 1989 TO MARCH 1991				
*M1	Climbing Lane at Junction 9, Hertfordshire	D4	3.4	1.2
*M6	Widening between Junctions 30-31, Lancashire	D4	13.8	2.2
*M6	Improvements between Junctions 31-32, Lancashire	-	4.0	4.3
*M40	Widening between Junctions 4-5, Buckinghamshire	D3	15.0	7.7
*M62	Widening between Junctions 12-18, Rochdale MB/Salford MB/ Bury MB	D4	20.0	7.5
M66	Denton-Middleton, Tameside MB/ Manchester MB/Oldham MB/ Bury MB	D3/D2	123.5	10.4
A1	Bramham-Wetherby Improvements, Leeds MD	D3	10.1	3.4
A1	Dishforth-scotch Corner Phase 1 (Gatenby Lane Junction), North Yorkshire	-	1.5	-
*A1	Tempsford Road Grade Separated Junction, Bedfordshire	-	1.4	-
A1	Wetherby-Dishforth Improvements, North Yorkshire	D3	41.0	15.6
A3	Liphook and Petersfield Bypasses, Hampshire	D2	26.8	12.6
A3	Milford Bypass, Surrey	D2	4.1	1.8
A5	Dunstable Bypass, Bedfordshire	S	10.7	4.4
A5	Fazeley, Two Gates and Wilnecote Bypass, Staffordshire	D2	10.0	4.0
A5	Little Brickhill Bypass, Buckinghamshire	S	3.3	1.6
*A5	Sheep Lane Grade Separated	-	1.5	-

* Additional scheme April 1987

	Junction, Bedfordshire			
A5	Telford-Shrewsbury, Shropshire	D2/S	45.0	18.9
A6	Burton Latimer Bypass, Northamptonshire	S	2.3	1.9
A6	Clapham Bypass, Bedfordshire	S	4.5	2.4
A6	Market Harborough Bypass, Leicestershire	S	7.3	5.0
A6	Quorn and Mountsorrel Bypass, Leicestershire	D2	22.8	5.4
A6	Rushden-Higham Ferrers Bypass, Northamptonshire	S	5.7	4.0
A10	Wadesmill, High Cross and Colliers End Bypass, Hertfordshire	D2	12.5	3.8
A11	Besthorpe-Wymondham, Norfolk	D2	9.7	4.9
A11	Four Wentways-Newmarket Dualling, Cambridgeshire	D2	8.2	4.7
A11	Newmarket-Red Lodge, Cambridgeshire	D2	1.9	1.4
A11	Red Lodge Bypass, Suffolk	D2	2.6	1.8
A11	Roudham Heath-Snetterton Improvement, Norfolk	D2	5.2	3.6
A12	Capel St. Mary Grade Separated Junction, Suffolk	-	2.0	-
A12	Gorleston Relief Road, Norfolk	D2	12.9	2.6
A12	Hackney Wick-M11 Link, LBs of Haringey/Redbridge/ Waltham Forest	D3/D2	106.0	3.7
*A13	Junction Improvement with A1240 and B178, LB of Barking & Dagenham	-	14.7	-
A13	Thames Avenue-Launders Lane, LBs of Barking & Dagenham/ Havering	D2	36.0	3.0
A13	Wennington-Mar Dyke, Essex	D2	11.3	2.8
A16	Louth Bypass, Lincolnshire	S	6.1	3.6
A16	Spalding-Sutterton Improvement, Lincolnshire	S	19.3	11.9
A17	Leadenham Bypass, Lincolnshire	S	3.0	1.7
A17	Wigtoft-Sutterton Bypass, Lincolnshire	S	3.9	2.8

A20	Folkestone-Dover Stage 1 (Folkestone-Court Wood), Kent	D2	26.6	4.5
A23	Coulsdon Inner Relief Road, LB of Croydon	D2	10.6	1.5
A23	Handcross-Pease Pottage Improvement, West Sussex	D3	5.1	2.3
A27	Polegate Bypass, East Sussex	D2/S	8.3	2.8
A27	Westhampnett Bypass, West Sussex	D2	3.0	2.7
A30	Penhale-Carland Cross, Cornwall	D2	8.1	4.5
A30	Plusha-Bolventor, Cornwall	D2	7.2	5.3
A30	Zelah Bypass, Cornwall	S	2.1	1.7
A34	Newbury Bypass, Berkshire	D2	29.1	8.4
A35	Axminster Bypass, Devon	S	5.9	2.7
A35	Yellowham Hill, Troytown Improvement, Dorset	D2	2.5	1.8
A38	Marsh Mills Junction Improvement, Devon	-	to be determined	-
A40	Gipsy Corner Junction Improvement, LB of Ealing	-	16.8	-
A40	Western Circus Junction Improvement, LBs of Ealing/ Hammersmith	-	19.3	-
A40	Long Lane Junction Improvement, LB of Hillingdon	-	14.3	-
A41	Aston Clinton Bypass, Buckinghamshire	S	4.7	3.4
A41	Berkhamstead Bypass, Hertfordshire	D2	18.7	7.1
A41	Kings Langley Bypass, Hertfordshire	D2	16.6	4.7
A41	Whitchurch Bypass, Shropshire	S	5.2	3.5
A46	Leicester Western Bypass, Leicestershire	D2	39.0	7.1
A47	Norwich Southern Bypass, Norfolk	D2	52.6	14.0
*A49	Skew Bridge at Woofferton Improvement, Shropshire	S	1.1	1.3
A49	Weaverham Diversion, Cheshire	S	3.2	2.1
A52	Nantwich Bypass, Cheshire	S	3.3	2.2

* Additional scheme April 1987

*A59	Mellor Brook Bypass, Lancashire	S	1.8	1.0
A65	Burley-in-Wharfedale Bypass, Bradford MD	S	4.1	1.5
A65	Draughton Bypass, North Yorkshire	S	2.0	1.5
A69	Brampton Bypass, Cumbria	S	5.2	3.0
*A167	Durham Western Bypass, Durham	S	4.7	2.4
A249	A2 Junction-M2 Junction Dualling, Kent	D2	4.1	2.2
A249	Iwade Bypass, Kent	D2	14.8	3.9
A259	Winchelsea Bypass, East Sussex	S	3.8	3.1
A303	Mere-Wincanton, Somerset	D2	9.3	4.8
A406	Dysons Road-Hall Lane, LB of Enfield	D3	39.5	1.5
A406	East of Silver Street-A1010, LB of Enfield	D3	25.5	0.7
A406	East London River Crossing, LBs of Greenwich/Newham	D2	151.6	5.7
A406	Falloden Way-Finchley High Road, LB of Barnet	D3	25.6	1.9
A417	Brockworth Bypass, Gloucestershire	D2	11.6	3.2
A420	Kingston Bagpuize and Southmoor Bypass, Oxfordshire	D2	3.3	2.8
A423	Southam Bypass, Warwickshire	S	1.5	1.5
A428	Bedford Bypass, Bedfordshire	S	37.2	8.1
A428	Lavendon Bypass, Buckinghamshire	S	2.0	1.6
A435	Norton and Lenchwick Bypass, Warwickshire/Hereford and Worcester	S	12.7	5.2
A435	Studely Bypass, Warwickshire/ Hereford and Worcester	D2	11.6	6.4
A516	Etwall Bypass, Derbyshire	S	2.5	1.2
A564	Stoke-Derby Link (Doveridge Bypass), Derbyshire	D2	7.5	4.0
A568	Widnes Eastern Bypass, Cheshire	D2	9.6	4.1

* Additional scheme April 1987

A590	Dalton-in-Furness Bypass, Cumbria	S	8.9	2.0
A595	Egremont Bypass, Cumbria	S	5.8	2.5
A595	Hensingham Bypass, Cumbria	S	3.5	1.1
A596	Wigton Bypass, Cumbria	S	3.2	1.4
A604	M1-A1 Link (Thrapston-A14) Stage 2, Cambridgeshire	D2	14.1	5.9
A638	Doncaster North Bridge Relief Road, Doncaster MD	D2	7.6	0.9
A650	Airedale Route (Crossflatts-Cottingley Bar: Advance Bridge-works), Bradford MD	-	2.2	-
A650	Airedale Route (Crossflatts-Cottingley Bar), Bradford MD	D2	17.0	2.9
A1079	Market Weighton Bypass, Humberside	S	2.5	2.6
A6119	Brownhill Junction Improve-ment, Lancashire	-	1.5	-
-	M65-M6 Blackburn Southern Bypass, Lancashire	D2	49.1	9.3

TABLE 4: NATIONAL TRUNK ROAD PROGRAMME SCHEMES IN PREPARATION AT 24 APRIL 1987

Route number	Scheme	Proposed standard	Estimated works cost (£million November 1985 prices)	Approximate length (miles)
C. PLANNED START OF CONSTRUCTION FROM APRIL 1991 ONWARDS				
*M2	Widening between Junctions 1-3, Kent	D3	28.0	3.9
*M3	Widening Eastbound Carriageway between Junctions 2-3, Surrey	D4	8.9	6.8
*M4	Free Flow Links at Junction 8/9, Berkshire	-	7.3	-
*M4	Junction 4 Improvement, LB of Hillingdon	-	7.0	-
*M4	Widening between M25 Interchange and Junction 8/9, Berkshire/Buckinghamshire	D4	37.0	8.7
M5	Widening between Junctions 6-8, Hereford and Worcester	D3	30.0	12.0
M6	Widening between Junctions 20-21a, Cheshire	D4	30.0	5.3
*M11	North-facing Slip Roads at Junction 5, Essex	-	5.1	-
*M18	Junction with B6094 Cockhill Lane, Doncaster MD	-	1.2	-
M20	Widening between Junctions 5-8 (Maidstone Bypass), Kent	D3	14.0	6.7
*A1	Dishforth-Scotch Corner Carriageway Improvements Phase 1, North Yorkshire	D3	30.0	24.9
A1	Dishforth-Scotch Corner Junction Improvements, North Yorkshire	-	9.5	-
*A1	Five Lanes End (A1/A57/A614) Grade Separated Junction, Nottinghamshire	-	2.0	-
*A1	Glatton Grade Separated Junction, Cambridgeshire	-	1.1	-
*A1	M1-A1 Scratchwood Link and M1 Junction 1 Improvement, LB of Barnet	S	30.0	0.6

* Additional scheme April 1987

*A1	Norman Cross Junction and Improvements, Cambridgeshire	-	4.3	-
A3	Hindhead Improvement, Surrey	D2	12.1	4.0
*A3	Hook Interchange Improvement, LB of Kingston	-	9.4	-
*A3	Robin Hood Gate Junction-Roehampton Vale Improvement, LB of Kingston	D3	24.9	1.6
*A4	Henlys' Corner (A4/A30) Junction Improvement, LB of Hounslow	-	1.8	-
*A4	Waggoner's Corner (A4/A132) Junction Improvement, LB of Hounslow	-	5.8	-
A4/A46 /A36	Batheaston-Swainswick Bypass, Avon	D2/S	20.5	3.3
*A5	Nesscliffe Bypass, Shropshire	S	2.0	2.6
A6(M)	Stockport North-South Bypass, Stockport MB	D4/D3/D2	51.0	5.2
A6	Finedon Bypass, Northampton-shire	S	2.1	1.2
A6	Great Glen Bypass, Leicester-shire	D2/S	2.1	2.3
A6	Kegworth Bypass, Leicester-shire	S	2.5	2.0
*A10/ A47	A134-Hardwick Roundabout Improvement, Norfolk	D2	7.5	3.9
*A10	Hay Lane-Buntingford Improve-ment, Hertfordshire	D2	1.9	1.2
*A11	Stump Cross-Four Wentways Improvement, Cambridgeshire	D2	3.4	3.2
*A11	West of Elveden Improvement, Suffolk	D2	1.9	1.9
*A12	Farnham/Stratford St. Andrew Bypass, Suffolk	S	1.3	0.9
A13/ A117	Junction Improvement, LB of Newham	-	1.9	-
A16	Market Deeping-Deeping St. James Bypass, Lincolnshire	S	4.2	3.0
*A16	Partney Bypass, Lincolnshire	S	1.0	0.9
A19	Easingwold Bypass, North Yorkshire	S	1.3	2.8
A20	Folkestone-Dover Stage 2	D2	12.5	4.8

* Additional scheme April 1987

	(Court Wood-Dover), Kent			
A21	Kipping's Cross-Lamberhurst Improvement, Kent	S	4.1	2.8
A21	Lamberhurst Bypass, Kent	S	4.2	1.6
A21	Silverhill Northbound Climbing Lane, East Sussex	S	1.1	0.8
A21	Tonbridge Bypass-Pembury Bypass Dualling, Kent	D2	6.4	2.0
*A23	Handcross-Warninglid Improvement, West Sussex	D3	4.0	2.0
A27	Arundel Bypass, West Sussex	D2	16.2	4.7
A27	Patching Junction Improvement, West Sussex	D2	5.5	1.4
A30	Honiton-Exeter Improvement, Devon	D2	26.0	12.4
A30	Indian Queens Bypass, Cornwall	D2	6.0	3.8
*A30	Bodmin-Indian Queens Improvement, Cornwall	D2	7.0	7.1
A30	Okehampton-Launceston, Devon	D2	21.8	12.2
*A30	Shallowater Hill Improvement, Cornwall	D2	1.2	0.9
A30/ A303/ A35	Marsh-Honiton and Honiton Eastern Bypass, Devon	D2	17.7	8.4
A31	Ashley Heath Grade Separated Junction, Dorset	-	2.0	-
*A34	Chieveley/M4 (Junction 13) Improvement, Berkshire	D2	8.0	1.2
A35	Chideock-Morecombelake Bypass, Dorset	S	4.9	2.9
A35	Tolpuddle-Puddletown Bypass, Dorset	S	6.0	4.7
*A36	Heytesbury-Codford Improvement, Wiltshire	S	2.3	1.8
A36	Salisbury Bypass, Wiltshire	S	14.0	11.0
*A36	West Wellow Bypass, Hampshire	S	3.4	2.8
*A38	Liskeard-Bodmin Improvement,	D2/S	19.4	9.9
A39	Wadebridge Bypass, Cornwall	S	5.1	1.8
*A40	Headington Grade Separated Junction, Oxfordshire	-	4.0	-

* Additional scheme April 1987

A40	Highnam-Jays Green Improvement, Gloucestershire	S	5.5	10.5
A40	North of Oxford Improvement, Oxfordshire	D2	19.0	4.0
A40	Witney Bypass-Cassington Dualling, Oxfordahire	D2	7.7	5.2
*A43	Geddington Bypass, Northamptonshire	S	6.0	4.2
*A43	Moulton-Broughton Dualling, Northamptonshire	D2	5.5	5.7
*A43	Moulton Bypass, Northamptonshire	D2	1.5	0.8
*A43	M40-B4031 Dualling, Oxfordshire/Northamptonshire	D2	6.5	3.7
A43	Silverstone Bypass, Northamptonshire	D2	6.8	4.3
A43	Stamford Bypass, Lincolnshire	S	2.8	1.4
A43	Whitfield Turn-Brackley Hatch Dualling, Northamptonshire	D2	3.6	2.8
*A45	Flore Bypass, Northamptonshire	S	2.4	1.7
A45	St. Neots Bypass-Croxton Crossroads, Cambridgeshire	S	2.1	1.9
*A45	Stonebridge Roundabout Grade Separated Junction, Solihull MB/Warwickshire	-	3.4	-
*A46	Pennsylvania-North of Field Lane Improvement, Avon	D2	2.2	1.9
*A47	Blofield-Acle Dualling, Norfolk	D2	1.1	1.7
A47	Thorney Bypass, Cambridgeshire	S	2.9	2.0
*A47	Wansford-Sutton Improvement, Cambridgeshire	D2	2.1	1.4
A49	Dorrington Bypass-Hunger Hill Improvement, Shropshire	S	4.0	3.0
A49	Hereford North-South Relief Road, Hereford and Worcester	S	10.0	5.0
†A50	Blythe Bridge-Queensway, Staffordshire	D2	36.0	4.5
A52	Ashbourne Relief Road, Derbyshire	S	3.9	1.3
*A52	Basford/Hough Bypass, Cheshire	S	2.5	0.7
A58	Wigan, Hindley and	D2	32.0	8.7

† Additional scheme since June 1985
* Additional scheme April 1987

	Westhoughton Bypass, Wigan MB/Bolton MB			
*A59	Copster Green Bypass, Lancashire	S	2.5	1.4
A63	Selby Bypass, North Yorkshire	S	10.3	5.0
*A63	Melton Grade Separated Junction, Humberside	-	3.0	-
*A64	Rillington Bypass, North Yorkshire	S	2.3	1.9
*A64	Staxton Diversion, North Yorkshire	S	3.4	2.5
A65	Gargrave Bypass, North Yorkshire	S	3.8	3.6
A65	Hellifield and Long Preston Bypass, North Yorkshire	S	5.0	4.1
A66	Stainmore-Banksgate Improvement, Cumbria	S	2.8	2.3
A66	Temple Sowerby Bypass, Cumbria	S	1.2	1.1
A69	Haltwhistle Relief Road, Cumbria	S	4.2	1.3
A69	Warwick Bridge Bypass, Cumbria	S	5.6	2.2
A259	Bexhill and Hastings Western Bypass, East Sussex	S	17.9	7.5
*A259	Hastings Eastern Bypass, East Sussex	S	6.6	5.3
†A259	New Romney Bypass, Kent	S	2.5	2.1
*A259	St. Mary's Bay and Dymchurch Bypass, Kent	S	5.8	4.2
A259	Rye Improvement, East Sussex	S	5.9	3.7
*A261	M20-A259 Hythe Improvement, Kent	S	3.5	3.5
*A303	Ilminster-Marsh, Somerset	D2	5.5	3.9
*A303	Sparkford-Ilchester Improvement, Somerset	D2	4.6	2.9
*A339	Headley Bypass, Hampshire	S	1.5	1.6
A406	Bounds Green-Green Lanes Improvement, LB of Enfield	D2	48.8	2.2
A406	Golders Green Road Junction Improvement, LB of Barnet	-	9.0	-

† Additional scheme since June 1985
* Additional scheme April 1987

A406	Popes Lane-Western Avenue, LBs of Ealing/Hounslow	D3/D2	21.7	2.3
A406	Regents Park Road Junction Improvement, LB of Barnet	-	40.4	-
*A417	Crickley Hill Improvement, Gloucestershire	D2	1.8	0.9
*A417	North of Stratton-Birdlip Improvement, Gloucestershire	D2	6.5	8.1
*A417	Stratton Bypass, Gloucestershire	D2	5.4	2.5
A419	Latton Bypass, Wiltshire	D2	2.0	1.6
*A422	Alcester-Stratford-upon-Avon Improvement, Warwickshire	D2	4.0	3.7
*A428	Great Barford Bypass, Bedfordshire	D2	6.5	3.9
A438	West of Ashchurch-A435, Gloucestershire	S	6.7	3.0
A446(M)	Birmingham Northern Relief Route, Warwickshire/ Staffordshire/Walsall MD/ Birmingham City	D3	140.0	25.0
*A449	Kidderminster, Stourbridge and Wolverhampton Bypass, Hereford and Worcester/ Staffordshire	D2	170.0	42.3
*A483	Pant/Llanymynech, Shropshire	S	5.0	3.4
*A523	Poynton Bypass, Cheshire	D2	11.0	3.7
*A550	A5117 Woodbank Junction-Ledsham Improvement, Cheshire	D2/S	6.0	3.2
*A556	M56 Junction 7-M6 Junction 19 Improvement, Cheshire	D2	7.5	4.0
A564	Stoke-Derby Link (Derby Southern Bypass),Derbyshire/ Leicestershire	D2	53.0	18.6
A564	Stoke-Derby Link (Hatton/ Hilton and Foston Bypass), Derbyshire	D2	9.0	5.8
A585	Fleetwood Dock Street Diversion, Lancashire	S	3.3	1.6
*A585	Norcross-M55 (Junctions 3/4) Link, Lancashire	D2	17.0	7.0
A590	High and Low Newton Bypass, Cumbria	S	3.2	2.2
A590	Swarthmoor Bypass, Cumbria	S	1.5	1.1

* Additional scheme April 1987

*A595	Duddon Bridge Improvement, Cumbria	S	1.3	0.6
A595	Howgate–Hayes Castle Improvement, Cumbria	S	1.8	1.4
A596/ A66	Workington Bypasses, Cumbria	S	7.6	4.4
A629	Skipton–Kildwick Improvement, North Yorkshire	S	1.7	1.9
A650	Shipley Eastern Bypass, Bradford MD	D2	21.5	5.7
A696	Belsay Bypass, Northumberland	S	1.1	1.0
A696	Otterburn Bypass, Northumberland	S	2.8	2.2
[A696	Ponteland Bypass, Northumberland	S	5.3	2.6]
*A1033	Hedon Road Improvement, Humberside	D2	4.0	1.2
*A6120	Leeds Outer Ring Road Improvement, Leeds MD	D2	5.5	1.2
† –	Western Environmental Improvement Route, LBs of Hammersmith & Fulham/ Kensington & Chelsea	D2	85.0	2.4

† Additional scheme since June 1985

• Additional scheme April 1987

NOTES: (1) Scheme timings are based on latest planning information and may be subject to change.

(2) Schemes are subject to continuing appraisal in the course of preparation and may be amended or deleted from the national programme at any stage up to letting of contracts.

(3) S single carriageway
D2 dual carriageway, two lanes
D3 dual carriageway, three lanes
D4 dual carriageway, four lanes

TABLE 5: SCHEMES WITHDRAWN FROM THE NATIONAL TRUNK ROAD PROGRAMME, OR REVISED, SINCE 1 JUNE 1985

Route Number	Scheme	Reason
M1/A6183	Kirkhamgate-Dishforth (Lofthouse-Stourton), Leeds MB	Withdrawn following decision on the Kirkhamgate-Dishforth public inquiry. The need for road improvements in the area is currently being investigated as part of the East of Leeds Study.
A6183	Kirkhamgate-Dishforth (Knowsthorpe-A63 Austhorpe), Leeds MB	
A6183	Kirkhamgate-Dishforth (A63 Austhorpe-A1 Bramham), Leeds MB	
A6183	Kirkhamgate-Dishforth (M1 Stourton-Knowsthorpe), Leeds MB	
A1	Archway Improvement, LB of Haringey	Abolition of Residual Suspended List. Future of this scheme include in remit for East Lond Assessment Study.
A6	Burton Latimer-Rushden, Northamptonshire	Replaced by three separate schemes: A6 Burt Latimer Bypass, A6 Rushden-Higham Ferrers Bypass, and A6 Finedon Bypass, Northamptonshi
A12	Great Yarmouth Western Bypass, (Southern Section), Norfolk	Scheme renamed A12 Gorleston Relief Road, Norfolk.
A30/A303	Marsh-Honiton Improvement, Devon	Combined into A30/A303 A35 Marsh-Honiton and Honiton Eastern Bypass Devon.
A35	Honiton Link-A30, Devon	
A30	Mitchell Bypass, Cornwall	Combined into Penhale-Carland Cross, Cornwall.
A30	Summercourt Improvement, Cornwall	
A34	Clopton Bridge, Warwickshire	Scheme no longer required in light of planned M40 Oxford-Birmingham Motorway.
A35	Winterbourne Abbas Bypass, Dorset	Abolition of Residual Suspended List. Possibility of schemes to be kept under review.
A35	Wilmington Bypass, Devon	
A39	Camelford Bypass, Cornwall	

A41	Bicester Southern Bypass, Oxfordshire	To be constructed as t... separate schemes: A41 Bicester Bypass Stage (Ploughley Road-A... Bicester) and Bicester Bypass Stage 2 (A421 Bicester-Wendlebury (M40)), Oxfordshire.
A43	Kettering Southern Bypass, Northamptonshire	To be constructed as A604 M1-A1 Link (Kettering Northern Bypass), Northampton-shire
A47	Tilney High End Bypass, Norfolk	Combined into one scheme: A47 Walpole Highway-Tilney High End Bypass, Norfolk.
A47	Walpole Highway and St. John's Highway Bypass, Norfolk	
A49	Craven Arms Bypass, Shropshire	Replacement scheme within regional programme to be consid-ered
A59	Bickerstaffe-Bretherton remaining stages, Lancashire	Abolition of Residual Suspended List. Prop-osals to be determined in the light of consid-eration of the Preston-Ormskirk Area Study.
A59	Bretherton-Hutton, Lancashire	
A59	Preston Southerly Bypass, Lancashire	
A63	Howden Western Bypass, Humberside	Scheme no longer required as expected benefits likely to be outweighed by environ-mental disadvantages.
A64	Leeds-Bramham Stages 1 and 2, Leeds MD	Abolition of Residual Suspended List. Need for scheme to be considered in light of East of Leeds Study.
A69	Haydon Bridge Bypass, Northumber-land	Abolition of Residual Suspended List. Possib-ility of a scheme to be kept under review.
A303	Chicklade Bypass, Wiltshire	Abolition of Residual Suspended List. Possib-ility of schemes to be kept under review.
A303	Winterbourne Stoke Bypass, Wiltshire	
A418	Thame-Stevenage Improvement, Buckinghamshire/Bedfordshire/ Hertfordshire	Withdrawn in favour of development of bypass proposals on route by local highway authorit-ies and a study of the remaining needs of the A416/A505 route corrid...
A564	Stoke-Derby Link (Stoke Southern Bypass), Staffordshire	Withdrawn and replaced by A50 Blythe Bridge-Queensway, Staffordshir...

A570	Scarisbrick and Pinfold Bypass, Lancashire	Abolition of Residual Suspended List. Proposal to be considered in the light of the Preston-Ormskirk Area Study.
A628	Mottram-Tintwistle Bypass, Tameside MB/ Derbyshire	Possibility of more modest solutions to be considered with local highway authorities.
[A696	Ponteland Bypass, Northumberland	Withdrawn and replaced by Northumberland County Council's Callerton Lane Link - see Table 6]
-	Blackburn-M6 Link (including improvements to A6119/A677), Lancashire	To be constructed as two seperate schemes: A6119 Brownhill Junction Improvement and M65-M6 Blackburn Southern Bypass, Lancashire

TABLE 6: LOCAL AUTHORITY SCHEMES RECEIVING GRANT FROM CENTRAL GOVERNMENT UNDER S.272 OF THE HIGHWAYS ACT 1980 AT 24 APRIL 1987

Route Number	Scheme	Standard	Estimated Total Cost (£million*)	Approx Length (miles)	Level of Grant: Progress
A15	Brigg and Redbourne Bypass, Humberside	S	5.2	5.0	100% In preparation
A64	Copmanthorpe Grade Separated Junction, North Yorkshire		1.4	0.3	100% under construction
A282	Dartford Tunnel Approach Road (South), Kent	D3	13.9	1.5	100% Completed August 1986
	Dartford Tunnel - Toll Plaza, Kent	-	2.2	-	100% Completed November 1986
A418	Leighton Linslade Bypass, Bedfordshire	S	11.3	6.2	100% In preparation
[-	Callerton Lane Link, Northumberland	S	1.2	1.0	85% In preparation]

NOTES:

S single carriageway
D3 dual carriageway, three lanes

* Costs shown for schemes completed are at outturn prices; for schemes under construction costs are at current prices; for schemes in preparation costs are at November 1985 prices.

CJM

CC BG.

DEPARTMENT OF TRANSPORT
2 MARSHAM STREET LONDON SW1P 3EB

01-212 3434

My ref: JM/PSO/2505/87

Andy Bearpark Esq
Private Secretary
10 Downing Street
LONDON
SW1A 2AA

- 2 APR 1987

MF Prime Minister 2.

Dear Andy

PARLIAMENT SQUARE

Oakley

Your letter of 2 March refers. My Secretary of State has asked me to give you a situation report for the Prime Minister.

Westminster City Council's Planning and Development Committee met on 24 March to consider the consultants' report. They decided to conduct a public consultation exercise on the medium-term proposals involving closure of the South side of Parliament Square. These formed the basis of the presentation to the Prime Minister on 2 March. The Committee did not take a positive decision on the long-term proposals included in the consultants' report as warranting further study. However, the Leader of the Council and the Chairman of the Committee have open minds on them.

/ My Secretary of State issued a press notice about the Committee's decision on 25 March. He welcomed the medium-term proposals but emphasised the need to study more fundamental solutions. These will include the options of North-South and East-West underpasses as well as a tunnel under the Thames. We are in touch with Westminster to agree progress on further study of them. This will involve a consultancy. The City Council will probably agree to join in funding it. They will almost certainly expect the Government to finance works when the time comes. They are likely to regard them as of more national than local significance.

Meanwhile Westminster will wish to press ahead with the medium-term improvements. They plan a wide-ranging public consultation and exhibition lasting some 2 months. Results will be considered at Committee on 30 June. Final design details are expected to be completed by September. Works will take less than one year to complete. The Prime Minister knows that a Bill will be necessary to enable the works to be carried out. It is not likely to be politically controversial. Members of both Houses can be expected to welcome the improvements. It is probably optimistic to expect everything to be in place for introduction in November for the next Session. An Act passed early in the 1988/89 Session would still allow the improvements to the Square to be completed in 1990.

My Secretary of State is aiming to have the more radical options ready for consideration in time for them to be implemented if agreed, for the year 2000.

Yours sincerely

Jenny McCusker

JENNY McCUSKER
Private Secretary

Department of Transport
2 Marsham Street, London SW1P 3EB Telephone 212 3434

Press Notice No: 167

25 March 1987

GOVERNMENT WELCOMES PARLIAMENT SQUARE PROPOSALS

John Moore, Secretary of State for Transport, today supported proposals for improving Parliament Square in the near future but emphasised the need to consider more far-reaching solutions.

Commenting on Westminster City Council's decision to go to public consultation on medium-term proposals made to them by consultants Halcrow Fox, Mr Moore said:

"These proposals would bring appreciable benefits in the next few years to traffic and to the environment in Parliament Square at a reasonable cost. Legislation would be necessary, but the improvements could be in place relatively soon. They are, however, only a first step in relieving this historic centre of our national heritage from the problems traffic is causing.

"What we must do now is to study in depth the consultants' longer term proposals for more fundamental solutions. I intend to begin discussions immediately with Westminster City Council on the way forward.

"It is very fitting in European Year of the Environment to be considering such imaginative improvements in our capital city."

NOTES FOR EDITORS

1. Halcrow Fox were commissioned as consultants by Westminster City Council, jointly funded by the Department of Transport, to study improvements to Parliament Square. They held a press conference on 10 March to announce that they had presented their report. This recommended implementation of a medium-term scheme involving closure of the South Side of the Square as soon as possible. It also concluded that further consideration should be given to the more promising ideas in the long-term.

2. Westminster's Planning and Development Committee decided on 24 March to go to public consultation on two medium-term schemes.

3. Legislation would be needed to enable the necessary works to go ahead because Crown land is involved.

Press Enquiries: 01-212 0431
Out of hours: 01-212 7071.

Public Enquiries: 01-212 3434
ask for Public Enquiry Unit.

TRANSPORT –
Roads Policy
PL3

SUBJECT
cc master

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

2 March 1987

The Prime Minister attended the presentation on proposals for Parliament Square this afternoon. In addition to your Secretary of State, the Secretary of State for the Environment, Mr. Bottomley, Mr. Waldegrave and Councillor Bradley from Westminster were present as was a representative of the consultants, and an official from your Department.

The Prime Minister's main concern was that the medium term programme which was described to her should not in any way pre-empt decisions on a longer term solution to the problem which would almost certainly involve a tunnel underneath the Thames. Your Secretary of State agreed that he would consider the possibility of more radical options.

I am copying this letter to the Private Secretaries of those Ministers who attended the meeting.

(ANDY BEARPARK)

Miss Jenny McCusker,
Department of Transport.

DEPARTMENT OF TRANSPORT
2 MARSHAM STREET LONDON SW1P 3EB

01-212 3434

Andy Bearpark Esq
Private Secretary
10 Downing Street
LONDON SW1

27 February 1987

Dear Andy

The Prime Minister is being given a presentation on proposals for Parliament Square at 3 pm, Monday 2 March. I attach a note setting out the background and the way forward.

The presentation is scheduled to last half an hour. We envisage a crisp 10 minute presentation by the consultants (Halcrow Fox), after questions they would leave allowing time for Ministerial discussion.

Apart from Ministers and the consultants, Councillor Bradley from Westminster will also be present.

Yours sincerely

Jenny McCusker

JENNY McCUSKER
Private Secretary

DRAFT BACKGROUND NOTE TO THE PRIME MINISTER ON PARLIAMENT SQUARE PROPOSALS

BACKGROUND

1. The study arose from Mr Ridley's interest when Secretary of State for Transport in tackling notorious traffic problem spots in London while improving the environment in historic areas. A study of Parliament Square and its surroundings was agreed upon between the Department and Westminster City Council. It was decided that Westminster should be in the lead and that the costs of the study should be shared equally. Halcrow, Fox were appointed as the consultants in Spring 1986.

2. Their terms of reference were to develop proposals to improve

a. the environment of the Square;

b. the pedestrian access to the central island;

c. access to the Houses of Parliament;

whilst

d. improving or maintaining traffic conditions in or near the Square.

They were asked to seek the views of interested parties and to report by the end of the year.

SITUATION

3. The report sets out short, medium- and long-term options. It concludes that a medium-term scheme should be implemented. This would not rule out a longer term solution. Westminster and the Department are now studying the report. The model being used for the presentation is based on the consultants' preferred medium-term option.

THE WAY FORWARD

4. Legal advice to the Department is that a Government Bill would be necessary, principally because the central island of Parliament Square is a Royal Park. A similar Bill in 1949 required 6 clauses and attached plans. Whether it would be hybrid would depend on what interests might be affected. The Bill is not likely to be controversial in its aims although there will be many opinions on the details.

5. Westminster are still in the lead since they commissioned the report. They plan a Press Conference by the consultants next week to make public that they have received and are considering a range of proposals. Their Planning and Development Committee take the consultants' report on 24th March. Thereafter they plan to hold a public consultation for about two months in early Summer. Final decisions are then expected to be taken by Westminster in September/October.

DEPARTMENT OF TRANSPORT
2 MARSHAM STREET LONDON SW1P 3EB

01-212 3434

Prime Minister. 2

We will keep you informed but I doubt you need to attend the presentation

The Rt Hon Nicholas Ridley MP
Secretary of State for the Environment
Department of the Environment
2 Marsham Street
LONDON SW1P 3EB

23 February 1987

Would love to go to presentation

Dear Nicholas,

PARLIAMENT SQUARE

You will remember backing Westminster City Council's study of Parliament Square to look at the traffic arrangements there, with a particular eye to the environmental and historical importance of the area. The consultants have come up with some exciting ideas and I should very much like to discuss these with you. A model of what is proposed will be ready by 2 March and I thought it would be a good idea to get the consultants and Westminster along to explain to us just what is involved. Your officials and mine have meanwhile been in touch because it looks as though any scheme there would need to be legislation. This is Westminster's scheme at this stage and Alan Bradley will be presenting it as such. I had hoped we would have until 24 March - when Westminster Council look at the project - to take stock but Alan Bradley tells me that they feel obliged to announce in the week beginning 2 March the fact that they now have the consultant's report. This could stir up some Press interest.

I thought I would just put you on warning about this, though obviously we don't need to form a view about it until after you have had a chance to see what is proposed. I am sending a copy of this letter to the Prime Minister who has interested herself in this scheme in the past and also to John Biffen. They might also want to attend the presentation. Westminster have been keeping in touch with the House Authorities.

JOHN MOORE

PRIME MINISTER

PARLIAMENT SQUARE PROPOSALS

It has proved just as easy to arrange for the consultants to bring their model here as for you to visit it elsewhere, and we have therefore arranged for them to put it up in the Blue Room on Monday afternoon. A brief from the Department of Transport is attached. There will be a 10 minute presentation by Halcrow Fox, after which they will leave. Mr. Moore and Mr. Bottomley, and Councillor Bradley from Westminster will remain to discuss the model with you.

PAB

27 February, 1987.

DEPARTMENT OF TRANSPORT
2 MARSHAM STREET
SW1P 3EB
01-212 7051

With the Compliments of

Peter Bottomley MP

the Parliamentary Under Secretary of State

010

EBA

NBPN.

TRANSPORT SUPPLEMENTARY GRANT 1987/88

The attached print shows details of the intended Transport Supplementary Grant settlement for 1987/88.

The Secretary of State for Transport today announced his intentions for the 1987/88 TSG settlement so that local authorities may plan their road programmes with confidence. The 108 local highway authorities in England will receive £180m grant - an increase of almost 10% over 1986/87 - to help them improve their more important roads. Major schemes - those costing £1m or more - accepted in previous settlements will continue to be supported, and 70 new schemes will be accepted.

Road safety remains high on the agenda, even though European Road Safety Year is over. There are often very significant accident savings, amongst other benefits, from smaller schemes on heavily trafficked roads. Timely investment may also avoid the need for more substantial works at a later date, giving further benefits to the community. To encourage this worthwhile work, nationally some £55m of expenditure on minor works has been taken into account for grant in 1987/88, £14m more than in 1986/87.

The programmes on roads of more than local importance accepted for TSG are important because they save lives, reduce congestion and relieve communities from the effects of through traffic. They help the national economy by aiding the efficient flow of goods, people and services. TSG reflects the national taxpayer's interest in helping local authorities to improve roads carrying heavier longer distance traffic such as those on the country's Primary Route Network or major urban roads which must be adequate in quality and capacity to complement our trunk roads and motorways. The Department's commitment to maintain support in succeeding years providing progress is satisfactory gives authorities the confidence to plan and finance major schemes where they are needed.

Department of Transport

13 January 1987

APPLICATIONS FOR TRANSPORT SUPPLEMENTARY GRANT 1987/88

Accepted Highways Capital Programme for Barnet

Ref No.	Road No.	Scheme Name*	Start Year	Total Cost £000	1986/87 Expenditure Accepted £000	1986/87 Expenditure Budget £000	1987/88 Expenditure Estimated £000	1987/88 Expenditure Accepted £000
003H		TOTAL ROADS MINOR WORKS SATISFYING CRITERIA			328	325	855	950
Total estimated expenditure in 1987/88 accepted for TSG								950
Amount of TSG to be paid (calculated at 50%)								475

A: Note:

(RN) before a scheme name shows that the name has been revised.
(number) before a scheme name shows a previous reference number where changes to the scheme have required a new reference number.

DN.

CCBG letter only

PRIME MINISTER

Prime Minister
DRS
12/12

LONDON ASSESSMENT STUDIES

Lynda Chalker wrote to you in August last year about the assessment studies we commissioned into transport-related problems in four areas of London, including one around the South Circular Road.

The consultants' reports of the first stage of the exercise indentifying problems, are now being published. You may wish to see the enclosed leaflets summarising each of the four reports, a background note and the Press Notice.

IN 11 ATTACHED FOLDERS

A good deal of interest from the media is expected. Some Borough Councils may again try to scare residents with rumours about massive road plans, such as widening the South Circular to motorway standard. But as we have said all along, the studies represent a genuine attempt to tackle these difficult problems in a way which will improve the quality of life for all Londoners.

We intend pressing ahead to the next stage of the work - identifying options for overcoming or reducing the problems. I shall be drafting terms of reference for the consultants, and discussing these with boroughs early in the new year. We hope to be ready to start the next stage of the work by early summer.

JM.

JOHN MOORE

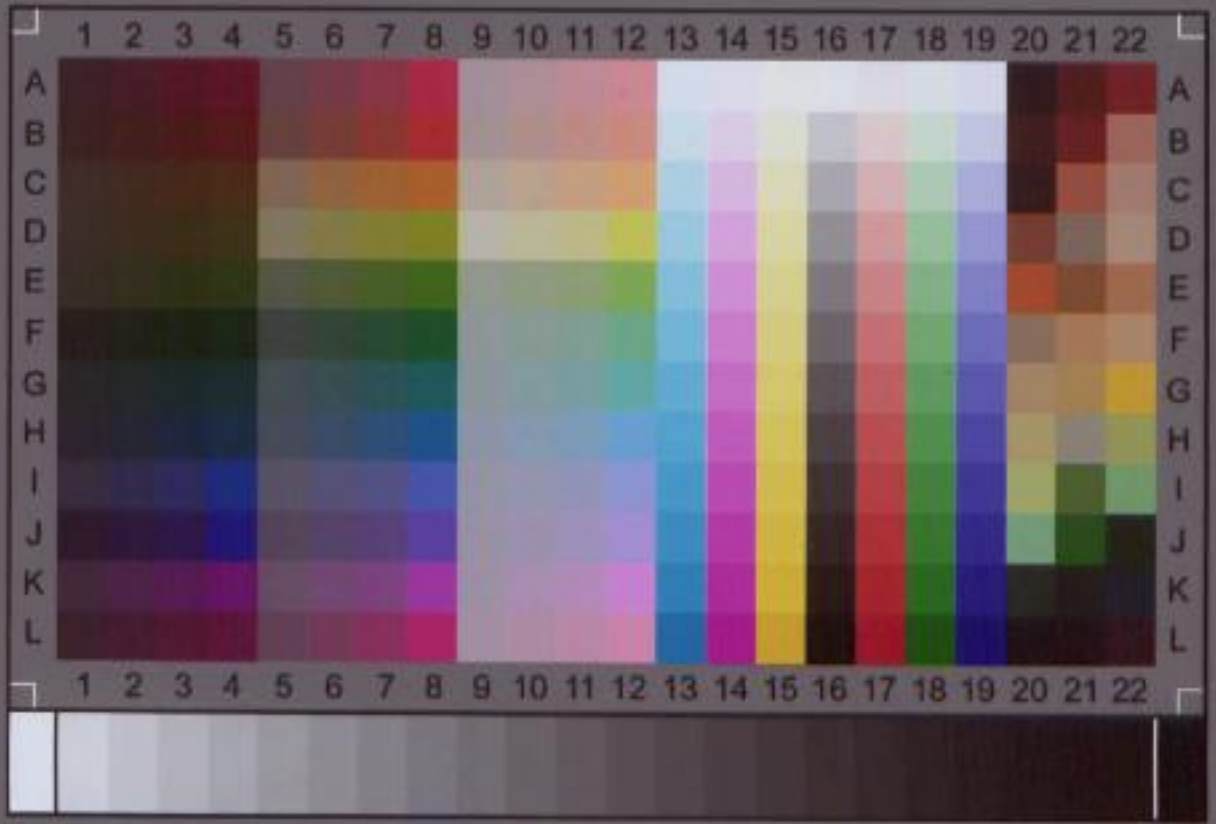
11. December 1986

PART 2 ends:-

Friends of the Earth Campaign v/o

PART 3 begins:-

SST Transport to PM 12/12/86



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