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The History and Background of the Planning, Policy and Funding Frameworks of Mega Urban Transport Projects in the United Kingdom

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Francis Terry,
Bartlett School of Planning, University College London, UK.

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Abstract

The paper reviews the economic and legislative context within which the planning and funding of major British transport projects was has taken place over the past sixty years. The main findings are that projects suffered from a slow process of post-war reconstruction, followed by a period of high priority for highway construction linking major cities. Within the conurbations, the highway programme ran into major difficulties over costs and public opposition. The alternative of promoting public transport projects was accepted only gradually, partly owing to constraints on public spending in the 1980s and later because government hoped to rely heavily on the private sector for funding. After 1997, with the economy strengthening and a change of political control, it has been possible for a number of major projects to be completed, and more are planned especially in London. The conclusion is that Britain has suffered from a lack of consistent institutional focus for transport planning, low political priority for resource allocations and an absence of strategic direction.

Keywords

Infrastructure, transport, planning, highways, railways, private finance, public-private partnerships, urban development, regulation, major projects, legislation, regional policy.

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LIST of Exhibits

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Introduction

Scope and definition of the paper

This paper reviews experience in Great Britain over the period from 1945 to date in the development of 'mega' urban transport projects (MUTPs). These are broadly defined as road, rail, bridge, tunnel or other projects combining these types of links, costing in excess of US$500m (at 1990 prices), located either within urban areas or having a significant impact on urban and metropolitan development.

The historical setting

Prior to World War II, MUTPs were promoted either by private companies, as in the case of railways and ports in the 19th century, or by local authorities, as with the first Mersey tunnel opened in July 1934 (see for example Jackson [1], Dow [2], Oakley & Holland [3]. Central government generally took a view on such projects, chiefly so that any necessary legislation could be passed, but it did not actively plan or promote them. After 1945, the perception of risks involved, and the likely financial return, made major transport projects relatively unattractive to the private sector. On the other hand, a mood of optimism, and calls to build a better Britain, led to a broad political consensus on the legitimate role of the state in relation to land-use planning and the collective provision of infrastructure.

The argument of this paper is that in the decades that followed, these aspirations were undermined by two principal factors:

- the nation's lacklustre economic performance, and
- a failure, despite good intentions at first, to develop appropriate institutional frameworks for planning and funding major projects on a consistent, long-term basis.

As a result there has been a sustained pattern of under-investment in British transport infrastructure, relative to what is typically seen in continental Europe. The economic and social costs - arising from congestion, unreliability and limited accessibility in making everyday journeys - have been widely documented and are perceived to be excessive by many commentators (see for example Royal Commission on Environmental Pollution [4], Institution of Civil Engineers [5], W S Atkins/Commission for Integrated Transport [6]. Attempts are now being made by government to address the investment backlog, as a response to recurrent pressures from business, local government, voluntary organisations and EU initiatives. Institutional arrangements in relation to planning and project approval are proposed for reform. But there has been a sad legacy of money wasted, project schedules lost and economic benefits deferred.

As a context for the examination of planning, policy and funding frameworks since 1945, we begin with a brief review of the economic setting.

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Economic conditions

Post-war austerity

The British economy since 1945 can be regarded as passing through four distinct periods, see Dell [7] Jackson [8]. The first, covering the decade after 1945, was a period in which the UK (like the rest of Europe) was rebuilding its economy, and looked to the United States for help that would ease that process. The UK was soon disabused of any hopes that it would receive preferential treatment from its erstwhile war-time ally, and in the event received substantially less help than most other European countries. In the post-war world, Britain found itself deeply indebted; in fact, the most indebted country in the world.

The Labour governments of 1945-51 were identified with a policy of public ownership of major industries, including transport, and the Transport Act 1947 duly nationalised the railways, canals and road haulage operators. The policy was seen as a pre-requisite, or essential component, of economic planning and regulation of the economy, to which Labour was ideologically committed, see Dorey [9]. Against the background of pre-war under-investment and poor industrial relations in the coal industry, nationalisation was also thought to be potentially more efficient than the 'anarchy' and strife of the free market. The newly-formed British Transport Commission (BTC) was given a general duty under the 1947 Act to provide 'an efficient, adequate, economical and properly integrated system of public inland transport and port facilities within Great Britain for passengers and goods'.

Despite the hopes of creating a more rational, modern and co-ordinated transport network, recurrent economic crises ruled out virtually all major new transport projects for the time being. Priority was given to restoring the existing infrastructure, and those projects that had already been started but suspended after the outbreak of war, remained in abeyance. The half-built extensions to underground railway lines ('tubes') in London, notably the Northern and Central Lines, were never completed. The Tyne Tunnel project in Newcastle/Gateshead, planned in 1937, remained unfinished for 30 years. The pilot headings and workings associated with a new road tunnel under the Thames at Dartford, started before the war, took even longer to complete. Meanwhile the political agenda dictated heavy spending on housing, health and defence, including the development of both a civil and military capability in nuclear power.

Nevertheless, some official ambitions for transport projects endured. The Special Roads Act 1949 provided the basis for motorway construction, and a great deal of planning, surveying and preparation of major road schemes began, although the first example, the M6 Preston by-pass, was not opened until 1958. Long-standing proposals for a new rail tunnel under the Pennines were revived soon after nationalisation. Linked with electrification of the main line through Manchester, Sheffield and Wath (in the heart of the south Yorkshire coalfield), the project was finally completed in 1954. The first electrification of suburban rail routes out of Liverpool Street station (London) was also completed, as described by Fiennes [10], in 1949. Thus the first decade after the war is characterised by an almost complete dearth of MUTPs in Britain.

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Stop -go

For the next 20 years, up till about 1974, some degree of stability was ensured by fixing exchange rates in relation to the US dollar. The economies of western Europe revived, under a benign system of regulation (the Bretton Woods system) overseen by the US. Even so, living within such a system was difficult for the UK, because it was subject to recurrent pressures on sterling and the reserves available were never large enough to repel any serious attack in the currency markets. The UK became a regular supplicant to the International Monetary Fund (IMF) with all the humiliation that involved.

This was an unhappy period of stop-go economic management, in which tranches of public spending were periodically released for transport projects that found political favour. First came the 1955 Railway Modernisation Plan, to be wholly funded by government at a cost of £15bn (1990 prices) over 15 years. The contents of the Plan were skewed towards schemes which the formerly private railway companies had envisaged in the 1930s and were not necessarily imbued with fresh thinking about future needs.

The verdict of history, see Allen [11] and Fiennes (*op. cit*), was that too much was spent on inappropriate projects – for example, the building of new marshalling yards while goods switched decisively in favour of road transport, and the needless multiplication of motive power types. Crucially, the Modernisation Plan failed almost completely to reverse the railways' overall decline in both passenger and freight traffic, a trend which continued for the next forty years. With the passage of the Transport Act 1962, the BTC was broken up into separate public corporations for ports, waterways and railways which henceforth were required to become financially self-sufficient. The BTC's remit for building an integrated transport network was dead, and soon there were extensive closures of railway routes, following the report by Dr (later Lord) Beeching, on the grounds that they were, and never could be, economic. Over 4,000 route-miles and 3,000 stations were closed, representing reductions of about 25% and 50% respectively. Exhibit 1 shows the proposed contraction of the network (NB a few lines were, in the event, rejected for closure).

Within the Ministry of Transport, policy-makers came to regard the railways as essentially outmoded for many purposes and too uneconomic to be retained on a wide scale. Roads were seen as more flexible, popular and able to cater for the outputs of the British car industry, then of considerable importance for industrial and employment reasons. Publicly-funded programmes of motorway (and trunk road) construction were launched. After the Preston by-pass in December 1958, the first long-distance section (part of the current M1) opened in 1959: 61.5 miles at a cost of £170M (1990 prices).

In parallel with the surge in road building, illustrated by Exhibit 2, new institutional and funding arrangements were introduced. Jointly-staffed Road Construction Units (RCUs) were formed by central and local government as the delivery mechanism for major projects. Not all experts saw these developments as entirely beneficial. In the report *Traffic in Towns* (Buchanan report) [12], published in November 1963 when there were fewer than seven million cars on Britain's roads, the steering group wrote 'It is impossible to spend any time on the study of the future of traffic in towns

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without at once being appalled by the magnitude of the emergency that is coming upon us. We are nourishing at immense cost a monster of great potential destructiveness [the motor vehicle], and yet we love him dearly. To refuse to accept the challenge it presents would be an act of defeatism.'

Buchanan highlighted the distinction between two types of roads: distributors, designed for movement over any significant distance; and access roads to serve the buildings. While the problems of managing access continues to attract research and debate, government of the 1960s and '70s were in no doubt about the value of improved distributors. The basic structure of the British motorway network was devised, with routes linking London to Birmingham, Leeds and the north-west, and shorter sections reaching south and west of the capital. Exhibit 3 shows the extent of the network and current plans. Across the north of England, a start was made on the M62 motorway linking Hull with Liverpool via Leeds and Manchester. Information on costs is difficult to pin down, as many schemes were developed incrementally and sources of funding, although all from the public sector, came under various local and central budgets. From this period date the Kingsway (Liverpool) tunnel (1971), see Cairncross and Jones [13], the Erskine bridge in Glasgow (1971) and the Avonmouth motorway bridge (1974). Exhibit 4 contains a list of principal motorway construction projects (over 20km in length), with costs where known.

Within the cities however, highway construction faced major problems, and in many places initial plans far exceeded what was eventually delivered. Short stretches of urban motorway were built in Glasgow, Bristol, Reading, Southampton, Portsmouth and Newcastle although only in Birmingham was a complete inner ring achieved. The most significant of the other MUTPs in this period were the electrification of the Glasgow suburban railways, starting in 1961, and London's Victoria underground line, stage I of which opened in 1968 (cost £211M at 1990 prices) with stage II in 1971 (cost £130M at 1990 prices). Much of the Victoria Line infrastructure however suffered from budget restrictions: platforms were narrower than usual and fewer escalators were installed than planned, resulting in severe congestion at peak times.

The Transport Act 1968 brought new institutional and funding arrangements for the railways and for the planning and operation of public transport in the conurbations. An early product of the new arrangements was the 'Loop and Link' underground railway scheme (Merseyrail), completed in Liverpool between 1972 and 1977. The 1968 Act also enabled government to pay British Railways (BR) for continuing to run 'socially necessary' services that were unremunerative (the Public Service Obligation). Capital expenditure remained subject to a limit, latterly £5M, above which BR could not spend, even using its own resources, without approval from HM Treasury. New Passenger Transport Authorities (PTAs) and their operational arm, the Passenger Transport Executives (PTEs), were created in the conurbations to co-ordinate and finance bus and rail services.

Retrenchment and restraint

The third economic period followed the collapse of the Bretton Woods system in 1971-73 and the oil price surge in 1974. It is characterised by floating exchange rates, albeit a regional substitute for Bretton Woods emerged in the form of the Exchange

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Rate Mechanism of the European Monetary System, which the UK briefly joined in 1990 and was then expelled from two years later. In a more competitive world, inflation rather than unemployment was recognised as the principal economic evil. Yet British governments repeatedly deceived themselves as to their capacity to stimulate non-inflationary growth. Optimistic forecasts of economic growth tended to be made by way of justification for public expenditure commitments; in the event, growth estimates typically proved too high while expenditure estimates proved too low, see Terry [14] for an illustration of how this occurs. At times of boom, major transport projects received a modest share of public investment, while still accounting for an annual percentage well below 5% of total public spending and dwarfed in terms of relative scale compared to social services, education and health.

Historically, British local authorities had extensive powers to raise funds from local property taxes, and to make bond issues or borrow money from central government, at preferential rates of interest, through the medium of the Public Works Loan Board (PWLB). Depending on the regulations at any given time, government offered subsidy to pay for loan charges. Now, local authorities' financial freedom of manoeuvre was progressively curtailed, as capital approvals were severely limited to act as a (presumed) lever against inflation. Local independence was further reduced by the reform of local taxation in 1989 when the system of property taxes was abolished (although reinstated in much modified form three years later). As a result, new projects became heavily dependent on approvals and subsidies from central government. In line with the political emphasis on stimulating private enterprise and scaling down the public sector, the private finance initiative (PFI) was launched in 1992. Again, the magnitude of this reform and its implications are considered more fully later.

In terms of the MUTPs completed in this period, the picture is largely characterised by false starts and 'making-do', punctuated by some significant projects justified on grounds of economic regeneration. Prime Minister Harold Wilson cancelled the revived proposal for a publicly-funded channel tunnel (and a new London airport at Maplin on the Essex coast) in 1974. The Greater London Council under its flamboyant Leader, Sir Horace Cutler, waged a running battle with central government over the extension of the Jubilee line. Official 'ground-breaking' ceremonies were conducted by him at various sites in 1977-78, only to be forgotten when central government cut off any hope of financial assistance.

Two notable projects were completed however: the Tyne & Wear metro opened in 1980, partly as a renewal of the already life-expired suburban railways around Newcastle and Gateshead and as a much-needed fillip to regeneration in the area. It represented perhaps the high point of integrated public transport planning in Britain, before political doctrines declared such an approach antithetical to free enterprise. The Docklands Light Railway (DLR) was opened in 1987 as a 'budget' solution (cost £100M) to the urgent need for regeneration in east London. Designed as a modest light rail system, control of which was excluded from London Transport for political reasons, it soon had mass transit status thrust upon it and has had to be re-engineered several times since.

In line with the 'free market' principles espoused by the Conservative government after 1979, the Transport Act 1985 brought about the privatisation of the National Bus

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Company and the almost complete deregulation of road passenger services. The legislation had some implications for MUTPs, insofar as it limited the influence of the PTEs and led to the disposal of physical assets such as bus garages and bus stations that might otherwise have been factored into new investment projects. Integration of public transport reached a very low ebb, a trend that was reinforced by the abolition of the metropolitan county councils and the Greater London Council in 1986. Strategic planning across the board – not only in transport – was out of favour and out of fashion, as 'good government' became synonymous with less government and lower public expenditure.

On the roads, a reduced motorway expansion programme continued, with the opening of the second tunnel under the Thames at Dartford in 1980 (cost £85M at 1990 prices) and the completion of the M25 as an orbital route around London in 1986. Meanwhile, British Rail (BR) managed to secure funding for the electrification of the main London – Edinburgh rail line at a cost of £446M (1990 prices), bringing it within the definition of an MUTP. The completed scheme opened in late 1990. The more modest Thameslink project, providing a new north-south rail link across London, on an upgraded existing alignment, opened in 1988.

By far the most important project to be launched – the Channel Tunnel – was only allowed to go ahead on the basis that the private sector would provide the entire capital cost and no subsidy would be forthcoming from government. The 'chunnel' had had several false starts, dating back to the 19th century and on more than one occasion succumbed to worries about national security. In response to pressure from the construction industry, rather than any official plan for improved links with continental Europe, construction of a privately funded channel tunnel started shortly after the signing of the Franco-British Channel Fixed Link Treaty on 12 February 1986. The completed 50.45 km twin-track rail tunnel opened in 1994 at an estimated out-turn cost of £10 billion, including an 80% over-run. Despite buoyant volumes of road and rail traffic, usage has been well below the highly optimistic projections originally made. The tunnel company, Eurotunnel, has since been in continual negotiation with its creditors in an effort to re-schedule its massive burden of debt.

The conclusion of this third economic era is marked by a gradual recovery from the collapse after the 'Lawson boom' of the late 1980s, and a delicate political balance dominated by short-termism (see Jenkins, 1995). The Transport and Works Act 1992, intended to simplify the process for approval of all but the largest and most complex transport projects is dealt with later, while the Railways Act 1993 set the stage for breaking up the national rail network into more than one hundred privatised fragments. The combined effect of these two pieces of legislation – one centralising the decision-making over new projects while the other dispersing the responsibility for promoting them – has had until very recently a generally deterrent effect on MUTPs.

Modern growth

In the fourth economic period, dating from about 1996 till 2008 the UK has found itself in a sustained period of economic growth, accompanied by both low inflation and low interest rates. Following an extended period of restraint during much of the

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1990s, which was continued for two years after the Labour election victory of 1997, public expenditure has since risen steadily. The main beneficiaries have again been the health and education services rather than transport.

Nevertheless, recognising that transport has been under-invested for too long, government spending on it has now reached unprecedented levels - £8.44bn of central government expenditure alone in 2006/07. There is an impressive list of projects for which government now appears ready to commit funding, particularly in London and the south-east. These include the £15bn Crossrail scheme, linking east and west London with full-size railway tunnels, an upgrade for the Thameslink rail route, reconstruction and extension of the East London underground line, and a new tramway system for Edinburgh.

With the passing of the Transport Act 2000, a revised system for control of local transport expenditure was introduced, through Local Transport Plans (LTPs). These are prepared or revised annually by authorities with transport powers and responsibilities, and are in effect a bid to central government for resources, both in the form of permission to borrow money and to receive subsidy. Somewhat different arrangements apply in Scotland and Wales under the devolved structures of government which they enjoy. Complicated rules govern the content of LTPs, the eligible forms of expenditure, performance against previous plans etc. but much of the resources are consumed in maintenance of the road system, or support for bus services, and they have proved to be an inadequate vehicle for major projects.

Outside the LTP system, a few large projects have been realised, since economic conditions began to improve, through separate contributions from government. Examples are the major expansions of the DLR in 1999 and 2005, completion of the Manchester orbital motorway (M60) in 1999, and the motorway connexion between the M1 and A1(M) in south Yorkshire. Substantial additional funding for local transport is to be introduced from 2008/9, through the Transport Innovation Fund (TIF). This is intended to promote projects with a genuinely fresh approach to transport problems, particularly reducing congestion. The Fund is forecast to grow from £290 million in 2008/09 to over £2 billion by 2014/15. Change is in prospect also for the PTEs, as the draft Local Transport Bill proposes to extend their powers over public transport and highways, and extend the model of regional transport collaboration to areas outside the conurbations.

Undoubtedly the most impressive MUTP completed in recent years is the channel tunnel rail link (CTRL). Now known as ‘High-Speed 1’, it opened in 2007 at a cost of £9bn – on time and on budget. Although privately promoted by London & Continental Railways, it ultimately proved feasible only with the benefit of government guarantees for the loans raised in money markets. This was an extraordinary departure from Treasury doctrine, which normally refuses any government guarantee for privately funded projects, on the grounds that they potentially represent a call on public funds. In this case, such caution may well have been justified: the guarantee was called on two occasions in the life of the project.

Meantime, the wider problems of urban movement have been addressed by spending on bus services. These are seen as cheaper and more flexible than MUTPs even though they seem markedly less effective in achieving ‘modal shift’ away from car

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use which is, after all, the principal obstacle to efficient urban mobility. But they preserve politicians' freedom of manoeuvre, because they can be relatively easily cut or expanded, and they make a more rapid impact than the necessarily longer time span needed to complete a major infrastructure project. Consequently, the expansion of light rail systems advocated in the *Ten-Year Plan for Transport* (Secretary of State for Transport [15] and taken up by cities such as Leeds, Bristol, Liverpool and Portsmouth were firmly rejected by the Chancellor, Alistair Darling in 2005. The effect of such vacillation in policy-making has been to exacerbate the problems of urban movement, apart from wasting an estimated £750M spent by these cities on preparing their cases to government.

The institutional framework

The context within which MUTPs are devised, promoted and approved has up till now consisted of generic frameworks applicable to a wide range of developments, large and small, and not designed specifically for the purpose. Discussion of the topic falls into three parts:

- the regime for local and regional *land-use planning* in Britain, which has important but somewhat indirect implications for the promotion of MUTPs. Related to this aspect are the recent changes in the governance of Scotland and Wales, and the special circumstances of London;
- a range of *other mechanisms* which have the effect of regulating how, when and where they can be realised; and
- the *policy-making process* which may or may not favour MUTPs at particular times.

The absence of a standing mechanism for strategic national planning in transport, or for infrastructure more generally, is in marked contrast to the French Commissariat du Plan, or the Dutch Ministry of Planning (both of which incidentally manage to operate without vitiating local democracy or stifling private sector initiative). The situation is however likely to change as a result of the Planning Bill, published in autumn 2007 and designed to follow up the proposal in the Planning White Paper (Cm 7120) issued in May of that year.

Planning

Types of planning control

Planning in the present context can be understood in several possible ways:

(i) The statutory requirement for local authorities to formulate indicative plans for land-use, indicating broadly where developments of various kinds (industry, housing, leisure etc) are expected to take place or are likely to be allowed. Plans are periodically revised and subject to review by an independent planning inspector, before being formally adopted as a quasi-legal document.

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(ii) A system of 'development control', or specific permissions to develop land and buildings, exercised by local authorities in response to applications from individuals or organisations. It is normally expected that planning applications should fall within the parameters of the current land-use plan, though there are provisions for exceptions and for appeals in disputed cases.

(iii) Local Transport Plans, as explained in a previous section.

(iv) In an effort to achieve closer integration between transport and other policy areas, a stronger link with spatial planning has been instituted by the present government, requiring Regional Transport Strategies to be produced under the auspices of the Regional Development Agencies (RDAs). LTPs are expected to fit within this broader framework.

In addition, various non-statutory plans may be formulated by private or public bodies to construct new developments, including major transport projects. Responsibility for such business or policy plans may rest with:

- Private companies, for example a supermarket chain which wishes to construct a series of regional shopping centres;
- Nationalised industries, which have (or used to have) long-term plans for providing facilities such as power stations or gas pipelines in order to renew existing assets or cater for increased demand. This is important mainly in a historical context;
- Local authorities and other public or non-profit agencies which may develop non-statutory plans in the public interest to improve, say, urban communications, educational or leisure facilities etc.

Proposals under all these headings are, to a greater or lesser extent, influenced by, and may ultimately be decided upon, through the mechanisms referred to in (i) and (ii). While the underlying principles of the system introduced in 1947 have changed little, land-use policy has altered with nearly every government since 1950 see Davies [16] and Grant [17]. In the early post-war years, town planning was somewhat experimental (see, for example, the development of the New Towns) and the profession was small and technically orientated. By the start of the economic turmoil in the mid-1970s, the production of indicative land-use plans had become a fully developed function in central as well as local government, see Cherry [18]. Regional plans and strategies – heavily biased towards roads in the transport sector – were being published, though with somewhat uncertain expectations as to whether they would ever be realised, following the onset of economic crisis in the mid-1970s and the imposition of 'cash limits' in 1976 as a lever against inflation.

Following the election of a Conservative government in 1979, there was a decisive ideological shift against planning in all its forms, being seen as restrictive of private enterprise and contrary to free market principles. Local authorities' role was reduced to little more than that of a land-use regulator, while the planning directorates in central government were disbanded. Instead, the role of the private sector was encouraged through initiatives such as Urban Regeneration Grant (later City Grant),

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Unitary Development Corporations (UDCs), Simplified Planning Zones and Enterprise Zones (EZs).

Armed with special powers that by-passed those of local authorities and offered incentives (such as exemption from local taxes, grants and land below market value), so as to attract inward investment, the UDCs' main objective was to bring about physical regeneration. They were provided with substantial sums of public money as a means to attract further investment, though with only limited success outside London. There, the regeneration of the Docklands was trumpeted as a vindication of the policy - helped by construction of the DLR, delivered as a turn-key project.

In small, densely populated country such as the UK, the Conservative antipathy to planning could not last long: too many strategic decisions on transport, housing, retail, industry etc. could only be resolved by government. Yet while transport policies began to change in the mid-1990s, institutional mechanisms have lagged in their ability to deliver balanced solutions. Instead, government has resorted to the piecemeal use of consultants to resolve individual problems or, for policy development, has commissioned individual reviews by people working outside the normal machinery of government. The former Chairman of British Airways, Sir Rod Eddington, was commissioned to report on transport (published in 2006) [19] and the city economist Kate Barker has reported on housing supply (2004) [20] and land-use planning (2006)[21]. Sir Michael Lyons was appointed to examine the system of local government finance, and progressively had his remit extended to take in other aspects, with consequent delays to the submission of his report [22].

Despite the *ad hoc* nature of these policy reviews, government appears now to recognise the importance of integrating economic, social and environmental objectives in some form of common framework. In 2007, the White Paper *Planning for a Sustainable Future* (Cm 7120) [23] was published which, among other things, aims to simplify and speed up the process of approval for major projects. A diagram of the current process is at Exhibit 5.

For nationally significant infrastructure projects (apparently not including railways), the government now proposes to produce national policy statements and 'to help promoters improve the way that they prepare applications'. It is proposed also to 'streamline the development consent procedures by rationalising the different regimes, improving inquiry procedures, and imposing statutory timetables on the process'. An Independent Planning Commission (IPC) will be formed to determine major infrastructure projects. It will be accompanied by new approaches to community engagement, the use of independent expert decision makers and new inquiry procedures. Changes to the development plan and appeals system are also proposed. A summary of the current and proposed new arrangements, incorporated in the draft Planning Bill, are at Exhibits 6 and 7.

The role of central government

To an outside observer it may seem odd that, despite its concern with the approval process, government does not see itself as having any lead responsibility for either the promotion or the actual delivery of major projects. Central government has preferred

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instead to rely on influencing, by various means, the planning and timing of proposals prepared by other public or private agencies, including:

- By *executive action,* usually involving public expenditure. A prime example would be the development of the national motorway and trunk road network from the late 1950s onwards, by the RCUs and later the Highways Agency (HA). It may be noted that quite major schemes can be undertaken by this route without the need for planning permission at all; an example is the current widening schemes for sections of the M1 motorway.

- Reforming *structures of governance* (which may require legislation), so as to add or remove emphasis in planning functions. An example is the creation of regional development bodies under Labour in the 1960s and their subsequent abolition by the Conservatives, as inimical to private enterprise.

- The issue of *planning guidance* to local authorities which, while not legally binding in the final analysis, constitutes a presumption to approve or reject certain forms of development. Planning guidance has been particularly important over recent years in the transport context, where recommended standards have been laid down for the provision of car-parking associated with office developments, for example.

- By *'calling in'* a planning application submitted to a local authority and requiring that a public inquiry be held so as to enable relevant issues to be more openly debated, and evidence submitted by interested parties, before a final recommendation is made by an independent planning inspector. The inspector's findings are subject to confirmation, rejection or modification by the responsible Secretary of State.

- By *steering the policies of nationalised industries* to move in a particular direction, usually on grounds of the wider public interest. (Following privatisation of these industries, this approach is now of historical interest only.)

It will be seen that the planning system operating in Britain in essence is regulatory: it does not make use of legally binding plans, as happens for example in Germany. As a result, where public bodies require to bring about a major transport development they need either to obtain some alternative or additional sanction (by Ministerial consent, or a separate Act of parliament for example); or they themselves must obtain planning approval through the same channels as a private body. Procedures and checks of various kinds are firmly in place to avoid the possibility that a planning authority can simply award itself permission without due process. The impression is also maintained that public bodies are not the preferred vehicle for many projects: private sector initiative is in principle seen as superior.

The regional dimension

MUTPs, almost by their nature, deserve to be planned in a regional context. Their economic and social impact is typically regional in scale, and insofar as they rely on

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public funds, the resources can often only be justified on a regional basis. (It may be significant that investment in the highly-developed urban transit systems found in German cities invariably relies on contributions from the Länder, as well as local and central authorities.) Yet British regional policies and institutions have endured a slow and uncertain progress, with consequent repercussions on major projects.

In the towns and cities outside London, transport was for 25 years after the war the direct responsibility of local authorities and the nationalised British Railways. Many of the municipalities owned and operated bus networks, tramways, trolleybus networks, airports and ports, and in Glasgow the underground railway system also. In the conurbations, authorities collaborated more or less effectively on an *ad hoc* basis, but the weak basis for joint action in addition to economic constraints ensured that few, if any, urban transport projects of any size were accomplished. In fact, the picture was one of steady decline as car ownership spread to the mass of the population.

The weakness of local and regional institutions was remedied partly by the agencies of central government in respect of road construction, and between 1975 and 1986 by the existence of the metropolitan counties. Sometimes schemes were actively promoted with the help of the local authority, as in Birmingham, and sometimes were imposed - usually in the name of economic regeneration - against lukewarm local opinion or outright opposition. In Birmingham, for example, where a complete inner ring road (the Queensway) was assembled from widening existing streets along with new tunnels and viaducts, the result was later dismantled in the interests of creating a more environmentally-friendly city with increased priority for other modes.

Planning for public transport in the regions was greatly improved by the creation, under the Transport Act 1968, of the Passenger Transport Authorities (PTAs) and their associated Passenger Transport Executives (PTEs), responsible for all operational matters. PTAs and PTEs were set up to plan and co-ordinate public transport across the English conurbations (Tyne & Wear, West Yorkshire, South Yorkshire, Greater Manchester, Merseyside and West Midlands). Greater Glasgow (later Strathclyde) was established on similar lines in Scotland. When local government outside London was reorganised in 1975 (1974 in Scotland), metropolitan county councils were created in the conurbations, primarily to conduct strategic planning, and many smaller authorities below them were amalgamated. This period has been described as ‘a high water-mark for town planning achievement and its reputation worldwide’ see Kerry (*op. cit*).

From this point onwards, there has been a progressive transfer (some would say usurpation) of functions and powers away from the local level, and in favour either of the private sector or central government, see for example Stoker [24], Chisholm [25] and Jackson [26]. While local authorities retain responsibility for local transport planning, their freedom to allocate resources and to determine major projects is severely constrained, see House of Commons Transport Committee [27]. This is in marked contrast to most other European countries, where, the transfer of power has moved largely in the opposite direction, partly helped and encouraged by policies of the European Union and work by the Council of Europe, see King and Ma [28], Keating [29].

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However that may be, the PTEs tended to be preoccupied with co-ordination and rationalisation, until the privatisation after 1985 of the bus operations which they had previously controlled directly; and after the abolition of the metropolitan counties in 1986, their task was complicated by the loss of a clear linkage with strategic land-use planning. In parallel with the demise of land-use planning, as related in the previous section, came a radical revision of regional policies and institutions. Regional aid was cut back and regional development grants were abolished in 1988: thus, regional policy expenditure, as a proportion of GDP, fell by three-quarters between 1970 and 1984, see Hall [30].

Within the conurbations, the resources available to the PTEs have always been limited and heavily dependent on precepting by the local authorities. The unpopularity of local property taxes ('council tax') means that major projects are always outside their grasp unless special financial help can be granted from some other source – usually central government. Most recently, it appears that the role of PTEs may at last be strengthened under current government proposals, see Department for Transport [31], and the model of regional supervision for transport services – expected now to include major roads – may be extended to other areas outside the conurbations.

The devolved administrations

Following the election of the Labour government in 1997, the centralisation trend has been reversed to some extent by the devolution of power to Scotland and Wales, bringing with it the creation of separate democratic institutions in 1998 for governing those countries, see Midwinter and McVicar [32], Thomas [33]. In parallel, their structures of government have been substantially re-cast. Transport Scotland was created in 2005 with strategic responsibilities and funding powers covering the country as a whole. It has already shown a sense of purpose and direction in sponsoring major projects, including proposals for a new road crossing of the Forth estuary, re-opening the Edinburgh – Glasgow rail line via Bathgate, a rail connexion to Glasgow airport, re-instatement of the Borders railway from Edinburgh to Galashiels, and improvements to the motorway network in Scotland. It remains to be seen how far this flush of enthusiasm for major projects will survive the political currents playing around them, see Gordon [34], Midwinter [35], particularly since the devolved administrations have tended to supersede part of the role and functions of local authorities. Similar issues and trends are emerging, though rather more slowly, in Wales, see Cole [36].

London

London, like other capital cities, has traditionally enjoyed special treatment in terms of powers and resources, and particularly so in transport, see Croome and Jackson [37]. The creation of the Greater London Council (GLC) in 1965 made it possible for a locally elected body to take a strategic view of planning in the capital. An elaborate document, the Greater London Development Plan (GLDP), was produced and then subjected to a public inquiry in 1969, the process taking several years. The GLDP was a long-term strategy for management and development of the capital, and a major

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part of its transport plan centred on the creation of 'ringways'. These had been a key feature of the Greater London Regional Plan produced by Professor Abercrombie [38] in 1944:

- Ringway 1 (popularly referred to as the 'motorway box') bounded the ancient city of London and the West End, approximately along the line of the current congestion charge boundary;
- Ringway 2 was essentially an upgrade of the existing North Circular and South Circular roads, cutting through the middle suburbs of London;
- Ringway 3 carved through such areas as Kingston-on-Thames and Epping Forest, including parts of what was eventually built as the M25 motorway;
- Ringway 4 was conceived as a 'leafy parkway' orbiting London about 50 km from the centre, and largely running through open countryside.
- Radial links, largely along the route of ancient highways approaching London and intersecting with the ringways at strategic points.

The plan initially had widespread support when publicly announced in 1966 but no estimates of cost were revealed. When the cost for Ringway 1 alone was estimated at £1.7bn in mid-1970, central government intervened with a formal request for details of the routes, dates of construction and 'what scope there is at this stage for killing the whole project'. The GLC was forced to admit that it needed a 75% grant for construction costs, which in effect gave the Treasury a veto. Although the plan remained as part of the GLDP, public opposition began to mount against the destruction of property potentially involved, and the London Boroughs turned against it.

Justice Layfield, a High Court judge, was appointed to hold an inquiry on all aspects of the GLDP and reported in January 1973 [54]. He proposed that Ringway 1 should be built, bringing radial routes further into the city to meet it. Elsewhere, he proposed public transport and environmental improvements, with the scrapping of about one-third of the total mileage of the Ringway plan. In retrospect, Ringway 1 seems to have led a dual political life - doomed from 1969 as the Treasury tried to kill it off, and yet maintaining strong political backing which in the end amounted to approval in principle by the Cabinet. Indeed some short sections were actually built.

Meanwhile, the Ministry of Transport started work in 1973 on the first section of Ringway 3 between Potters Bar and Cheshunt. Before that road opened in 1975, it was announced that it would be linked with the southern and western sections of Ringway 4 to form one circular motorway, avoiding the need to build the most controversial sections of Ringway 3 - the whole to be known as M25. Shortly afterwards the GLC announced that it was calling off the Ringway 2 plans on the grounds that the M25 made it unnecessary. The deal was closed when, in 1986, the last two sections of M25 were opened, effectively two halves of two different ring roads. Forming only a quarter of the Ringway plan, it is perhaps not surprising to find that it is today the country's most congested road. The remnants of Ringway 1 have now been downgraded to A-roads, and thus the inner London 'motorway box' moved from notoriety to obscurity in thirty years.

The story of strategic road planning in London is related at some length because it illustrates some key features of the British context in which MUTPs have (or have

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not) been developed. It is characterised by a limited understanding of the relationship between infrastructure and economic growth, a disjunction between planning and resource allocations, political divisions between branches of government and a poor appreciation of public concerns and private property.

Since 2000, London has recovered its strategic planning capability under a directly-elected Mayor, whose plans are scrutinised by the elected London Assembly and acted upon by the Greater London Authority. Transport is now seen as one of the most crucial factors in maintaining London's economic vitality and social integration and the Mayor has developed a strong agenda of major projects and other improvements, see Transport for London (TfL) [40]. The massive Crossrail project has been entrusted to his office, along with responsibility for the regulation or promotion of various other transport modes such as taxis, ferries and cycling. The franchising of a group of suburban rail services (previously controlled by central government) has also been transferred to TfL to form a truly regional capability in transport operations and planning.

Regulatory and other mechanisms

Parliamentary controls and legislation

The principal legislative control over MUTPs is the Transport and Works Act 1992 (TWA), which covers all transport projects not considered to be of 'national significance' (not explicitly defined). In place of the normal planning approval process, projects are submitted to, and decided upon, by the Secretary of State under powers delegated by parliament. The procedure embraces compulsory purchase and other permissions that may be needed besides planning. While the Act was intended to provide promoters with a quicker and cheaper way of obtaining approvals, this has not always resulted in practice. For some smaller proposals that is certainly true; but in the case of larger projects, delays have occurred while each case is prepared for ministerial decision by the small team of civil servants in the Department for Transport. Dissatisfaction about such delays has contributed to the feeling that new procedures, as envisaged in the current Planning Bill, may be needed.

Historically, parliament was the forum to which all proposals in the 19th century for new railways, ports and tramways were submitted and then debated, case by case. This was in accordance with the British tradition of open access, in principle, for all public or commercial interests to obtain legal authority for a course of action. Since parliament is sovereign, it could (and does) over-ride any other authority or preceding statute if it wishes. Government, while it can influence the course of a private Bill through exercising a majority in parliament, seldom does so unless the matter is likely to prove politically controversial.

Nowadays, major transport projects can still be considered directly by parliament on grounds of national significance. In that case, the vote in parliament replaces the need for planning or any other statutory approval. The proposal by Central Railway Company (CRC) for a new line connecting north-west England with the Channel Tunnel is the best known example to arise since the TWA was enacted. It was opposed by government and rejected by parliament in 1996, demonstrating that

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private sector MUTPs do not necessarily receive any more rapid or favourable treatment than those emanating from the public sector.

Economic and environmental regulation

Economic regulation has become significant in the context of railways since privatisation, and indirectly governs the scope and timing of major projects promoted by the infrastructure operator, Network Rail (NR). Formally, the Office of Rail Regulation (ORR) is primarily concerned with ensuring that the rail network is managed efficiently and in a way that meets the needs of its users; it also seeks to encourage continuous improvement in health and safety performance. The current expansion of traffic on the railways means however that NR needs to invest not only to meet the Regulator's broad objectives but also to create substantial extra capacity in the network. Hence the Regulator periodically takes a view on NR's investment plans, (which, however, do not necessarily coincide with what government is prepared to spend). The picture is complicated by the fact that many projects depend also on the contribution which government, along with other partners such as train operating companies (TOCs), are prepared to make.

The confusion of remits was somewhat clarified by the passage of the Railways Act 2003. The chequered history of railway governance over the past ten years, has hardly been conducive to the rational development of infrastructure plans – still less the formulation of major projects. The urgency of making improvements however, coupled with the availability of public funds in a buoyant economy, has tended to offset the institutional inadequacies. The present plans of Network Rail, reported in The Guardian for 29 May 2007 [41], aim to spend £28bn between 2009 and 2014. The make-up of this figure is highly complex and changes with each financial year, see Ford [42].

Many other aspects of regulation, such open access for train operators over the infrastructure, as well as health and safety, are nowadays driven by EU policies and legislation and are of limited interest in the current context. The most important of these are the designation of Trans-European Networks (TENs) [43] and the requirement for major developments of all kinds to be subject to Environmental Impact Assessments (EIAs) [44]. The designation of TENs opens the door to EU funding for their enhancement, but their importance is relatively less in the British context than in areas where improved cross-border links are needed for economic integration. EIAs are now built into normal procedure for considering planning applications in Britain.

The policy process

The nature of transport policy

Transport policy has become a highly contested area in which ordinary citizens, as well as the various branches of government, industry and voluntary organisations, seek to exert their influence (see for example the protests in 2001 over fuel taxation).

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By contrast, the voice of transport professionals struggles at times to be heard, and is inclined to be discounted by government as too narrowly focused. Unlike some other areas of public policy, all of us have regular direct experience of transport in one way or another, and we tend to have views about it, conditioned by an enormous range of locational, economic, social and even emotional factors, see Steg & Tertoolen [45]; it is not an exclusive domain of the experts.

The debate over transport policy aims usually comes down to a contrasting pair of arguments:

- Concern to reduce the negative impacts of transport and travel on the environment and society, and even to reduce the volume of movement *per se*;
- Demands, especially from business and motoring organisations, to improve transport flows in the interests of economic development and competitiveness.

Characteristic of this debate has been the use of evidence to support policy preconceptions on either side of the argument, rather than to resolve it, see Terry [46]. The tension between individual preferences and collective impacts is a key feature - perhaps the defining dilemma – of transport policy. It is tempting therefore to see in the ambivalence of official policy-making a reflection of the inconsistencies in attitudes and behaviour at the individual level. This does not mean that strategic goals for policy are impractical to define, or better left to the tactical and local level; rather it points to the need for effective institutional mechanisms and strong political leadership.

The political dimension

The standard of public services is an enduring focus of political debate in the UK. Governments of all persuasions are tempted to promise that they will deliver more and better services, preferably without increases in taxation. The position in transport is further complicated because policies devised by central government rely not only on local authorities but also, to a very significant extent, on co-operation from the private sector. The effect is that delivering a transport policy has to rely on contractual arrangements with private firms like bus and rail operators, a framework of regulation, financial incentives and penalties, and programmes of investment and subsidy that, under the British system, are liable to be curtailed when more pressing priorities emerge.

That is partly because transport has seldom been regarded as one of the more important portfolios, in political terms. As Marsh [47] relates, it was reserved for people who are in the process of building a political career and hoped soon to move on to higher things. The consequence is that Secretaries of State for Transport do not spend very long in the post – 18 months is a typical period in office - and often do not know much about transport as a discipline. Lack of political weight by the Transport Secretary was, for several decades, reflected in relatively low levels of resource allocation when the public budget was drawn up each year. In the second and third economic periods described, road building was the dominant focus of investment – meaning that many of the issues

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tended to be settled on technical grounds. Until recent years therefore, transport was not an area where sharp divisions appeared between the main political parties.

On the other hand, conflicts between what national government sees as a priority and what local politicians demand have been a recurrent feature, and do not necessarily follow party lines (see for example the arguments between the GLC and Whitehall over urban motorway plans). The Department for Transport's recent fascination with busways is another example, with money pressed on local authorities who will accept such schemes (as in Cambridgeshire, where a scheme is under way) or who won't (as in Bedfordshire, where funding for a busway was initially refused by the county council). A more high profile clash emerged over the public-private partnership (PPP) for the London Underground, between the Chancellor of the Exchequer, Gordon Brown, who insisted on imposing it and the London Mayor, Ken Livingstone, who resolutely opposed it.

Transport policy in review

As explained in the section on economic conditions, competing priorities in the early post-war period resulted in a dearth of major transport projects. From around 1960 onwards, both Labour and Conservative governments pursued a transport policy which was largely dominated by public sector highway construction averaging about £2bn annually in real terms, see Terry [48]. The policy – dubbed 'predict and provide' by Goodwin [49] - seemed for a long time so self-evidently appropriate to match the rising levels of car ownership that it attracted little public controversy and no major policy pronouncements: the main arguments were over how much could be built and how rapidly, especially in urban areas where local opposition to demolition of property was understandably fierce.

The policy was re-affirmed by the Conservative White Papers of 1989 [50][51], in which the largest-ever highway investment was announced - £18bn at 1997 prices over ten years. These grandiose plans were progressively modified as the recession of the early 1990s took hold, making it essential to cut public spending again. The government hoped however that the private sector would replace at least part of the cuts through the development of the private finance initiative (PFI), and that motorway tolling would raise new income for road schemes, see Department of Transport [52]. In retrospect it seems remarkable that the growth trends in vehicle miles and car ownership were elevated to a position in official policy making where they dominated over all other evidence, including evidence about the effects of the policy itself. But by the early 1990s, organisations outside government, ranging from the Royal Commission on Environmental Pollution to local pressure groups, had begun to seriously challenge the fundamental direction of transport policy.

Signs that the declared policy was becoming unsustainable appeared with the 1996 Green Paper (Cm 3234) [53] which canvassed a range of diverse and more environmentally-friendly objectives. The incoming Labour government soon produced a new White Paper (Cm 3950) [54] in mid-1998. Entitled *A New Deal for Transport – Better for Everyone* it marked a major shift of emphasis towards promoting alternatives to car use. After a temporary reduction in road building, many smaller schemes have nevertheless continued to go ahead, while aspirations for new MUTPs were noticeably

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lacking. The 1998 White Paper was followed by the *Ten-Year Plan* for transport [*op. cit*.] published in 2000 and intended to show how investment needs could be met (see the section on finance below).

Legislation designed to offset the deleterious effects of railway privatisation (the Railways Act 1999), by creating a Strategic Rail Authority (SRA), was undermined by ineffectual leadership and lack of adequate powers. After a further White Paper in July 2004, on The Future of Rail (Cm 6233) [55], followed by more legislation to wind up the SRA and transfer its functions to the DfT, a convincing solution to the problems of a privatised railway has continued to elude the government. There remains a need for clearer policy formulation, effective strategic planning and better value-for-money.

The decision to hold the 2012 Olympic Games in London has catapulted a further high-profile issue into the planning of south-east England. An early decision was made that access for spectators by private car to the Games would be prohibited, and the Olympic Delivery Authority (ODA) has since been working with TfL to bring forward a comprehensive set of public transport alternatives. Without the Games, it seems likely that several of the MUTPs long advocated for the region would still be under debate, whereas they are now being pressed forward with some urgency. The roll-call of Olympic and other projects in the south-east is shown in Exhibit 8.

Financial frameworks

Conventional public finance

In the post-war era, the conventional route for funding major projects was to rely exclusively on public funds. Indeed, Treasury doctrine until the late 1980s firmly set its face against any alternative on the grounds that, since government could always borrow more cheaply than anyone else, the alternatives represented relatively poorer value for money. Thus, the railway modernisation plan of the 1950s and virtually the whole of the motorway construction programme were paid for from annual public expenditure allocations. As such, they were subject to the vagaries of stop-go economic policies, cash limits and short-term financial planning.

Two other points deserve mention. First, the tighter controls imposed on local government in the third economic period ruled out, seemingly for ever, the opportunity for a local authority or PTE to sponsor a major project ‘off its own bat’. In Britain there has never been anything like the collaborative funding of transport investments (between levels of government) that one sees in Germany, France or the Netherlands. Second, the nationalised railway was under sustained pressure to become more efficient – which it succeeded in doing like no other in Europe. As part of this pressure, BR was subject to exceptionally tight control over investment through the mechanism of external funding limits (EFLs). These were related to the level of public borrowing which the Treasury thought prudent in each financial year; they took no account of the potential return on investment that might result. Thus, the cities of the East Midlands sponsored an independent study of electrification of the main line from London to Derby and Nottingham in the early 1980s which predicted an excellent return: it was impossible to proceed however because BR’s EFL was already taken up with more urgent renewals of the infrastructure in other places.

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Exhibit 8: Olympic projects

East London Line extension
On 10 June 2007 Taylor Woodrow began work on a £30 million enabling works contract, signalling the start of construction on the £1 billion first phase of the East London Line extension. The complete line will run from West Croydon, to the south of the capital, through east London and Docklands, up to Dalston in north-east London. If all goes to plan, trains will start serving the public in June 2010, while a second phase will add a spur at the north end to Highbury & Islington, and, midway along the line, another spur from Surrey Quays to Clapham Junction. The main works contract is valued at around £450 million.

Investment in existing London rail infrastructure
Transport for London (TfL) is overseeing £10bn of investment in the city's transport network (there will be no car parking at the Olympic park site except for the disabled). Principal projects are:

- A £20bn investment programme for improvements on the London Underground;
- Development of the London Overground, a network of under-utilised orbital suburban rail lines;
- the Docklands Light Railway (DLR) is being extended from Canning Town to Woolwich Arsenal at a cost of £200M.

Rail upgrades
Across southern England, rail operator Network Rail is nearing the end of a £3bn electrical upgrade programme ahead of the introduction of a fleet of 2,025 commuter trains in summer 2008. In 2012 these will transport spectators to Olympic venues in London from Kent, Sussex, Surrey and Hampshire. To meet the increased power demands of the vehicles, an extensive upgrade of the electrical power supply has been necessary, including the upgrading of 97 substations and laying of over 300km of feeder cable. A programme of platform extensions has also been carried out at 30 locations across the Southern region network.

Channel Tunnel Rail Link
The £3.2bn link from London St Pancras to the channel tunnel was completed in November 2007. The route, from Kent and Continental Europe via the French high speed rail network, to Stratford International, will enable the Javelin shuttle to run every seven minutes from Stratford to St Pancras main-line terminus;

Terminal 5
Heathrow Terminal 5 is romping towards its 2008 completion and opening date. It will be a key conduit for passengers travelling to the Olympic Games four years later.

Stratford Station
Stratford Regional Station is at the heart of the transport strategy for the London 2012 Olympics. By 2012 around 80,000 people are expected to use the station every day compared with 37,000 now. And on top of that will be another 50,000 Games spectators on their way into the Olympic Park during the Games. The huge increase in people using the interchange even without the Olympics is in large part down to the 1.2M.m^2 Stratford City development scheme under way next to the station. Total cost is around £150M, to be funded by government Olympics transport funds plus developers and other public bodies.

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The Private Finance Initiative

With the onset of troubled economic conditions in the mid-1970s, the accelerating cost of major projects represented a potential drain on the public finances which was perceived as unacceptable. Under-investment in infrastructure resulted on a comprehensive scale, see NEDO [56] as projects were pared down or postponed. By the end of the 1980s, Conservative Chancellors of the Exchequer faced a difficult balancing act between three competing pressures:

(i) The need for continued tight controls over public spending as a means to keep inflation under control;
(ii) Political commitments which dictated that 'demand-led' programmes like social security and housing benefit, should be maintained even to the extent of taking precedence over new capital investment.
(iii) The belief that tax cuts should be offered in a pre-election period in order to woo the voters.

The trigger for reform in conventional ways of delivering public projects came in the form of a report by the National Economic Development Office, see NEDO [57]. The report drew attention to a series of drawbacks in the present ways of working:

- Long and costly consultation and planning procedures for major projects;
- Reluctance by public services to recoup costs through charges to users;
- Land assembly sometimes possible only through compulsory purchase;
- Lack of formal channels for the private sector to identify and define projects needed by government;
- Lack of assurance that projects will be protected from competition by subsequent government decisions;
- Heavy front-end costs and the difficulty of sharing or spreading risks.

The response came in the Chancellor's announcement launching the private finance initiative (PFI) in 1992 [58]. A general commitment was given to seeking opportunities for the private sector to provide services for which the public sector was responsible and where much of the cost involved capital. Subsequent pronouncements made it clear that an effective working relationship between public and private sectors should be based on:

- A genuine transfer of risk and, if possible, control, to the private sector;
- Projects which offered 'value for money';
- Private sector partners being selected through a process of open competition.

While these principles went some way to meeting the concerns expressed in the NEDO report (*op.cit*), each has raised problems in practice. The prospect of assuming risks which it had hitherto managed to leave with the public sector did not appeal much to the construction industry, and especially at a time when trading conditions were difficult. From an investor's point of view, many of the projects which government might have wished to see being led by the private sector represented either a poor return when compared to other opportunities in the financial markets, or an excessive risk. For example, infrastructure projects that rely on public subsidy are

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liable to changes in what the government or local authority can afford; and the regulatory regime under which they are operated may shift in response to political factors or public pressures. These concerns, coupled with a lack of know-how and imagination in implementing the policy, led to a slow start for the PFI.

But with further encouragement and persuasion, the Chancellor was able to announce [59] in his 1994 Budget speech that 'a list of nearly 700 projects….ranging from hospital scanners to the upgrading of the West Coast Main Line' was under development, with an alleged value of £21bn. Later the same year, he told the Confederation of British Industry 'In future, the Treasury will not approve any capital projects unless private finance options have been explored' Clarke [60]. For a time it became compulsory for public bodies to make a comparison between private funding and management of any new capital project with the alternative public sector option. Rules issued by HM Treasury had the effect of weighting the choice of options in favour of the private sector, even though in the longer term this might cost considerably more than using public funds. The argument was that gains in technical innovation, efficiency and speed of delivery would more than compensate for the additional cost.

Transport construction projects were at first seen as a promising area for private finance, because they could lend themselves to charging at the point of use. This creates an income stream against which financing can be arranged. A good example is the £45M bridge linking the Isle of Skye with the Scottish mainland, where an exclusive concession was granted to build and operate it in return for toll income, see Joseph and Terry [61]. Experience with the PFI over the past 15 years suggests however that, except in cases like estuarial crossings where exclusivity is key, the income from fares and charges is seldom sufficient to guarantee the viability of a transport project.

Nor has private finance proved anything like a panacea for investment in other transport infrastructure. After long debates over value for money, dating back more than ten years, a scheme for a toll motorway paralleling the M6 through the west midlands was launched in 1992. Midland Expressway Ltd (MEL), won a 53-year concession to build and operate the road, with the company recouping its costs by setting and collecting tolls. The concession period began from the start of construction (expected to last three years), plus 50 years of operation, before the road reverted to the public sector. Construction work did not finally begin until mid-2002, with the road fully opened in December 2003.

MEL reported an operating profit of around £16M in 2005, based on revenues of £45M, with staff and other operating costs amounting to £11.4M and depreciation £17.4M. However, taking into account net interest costs of around £43M, MEL was showing an overall loss of £26.5M in its first full financial year [62]. Following a change in ownership and a rise in toll charges, the future viability of the scheme seems uncertain. For the time being, government has decided against any further toll motorways other than the Severn bridges on the M4 and M48.

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Public-Private Partnerships (PPPs)

Recognising that there were defects in the PFI, the incoming Labour government in 1997 grafted on to it the idea of Public-Private Partnerships (PPPs). This was intended to adjust the balance of risk between public sector client and private sector contractor. Since the private sector seeks to avoid risk, except where the returns are commensurate, it is unrealistic for government to expect most or all of the burden to be off-loaded on to contractors. Such an approach leads to a hugely inflated cost or to the likelihood that the contractor will default.

In practice, PPPs in the UK have had a chequered career. Some commentators, such as Wolmar [63] and Shaoul [64] would say that they combine the disadvantages of privately-provided infrastructure with the disadvantages of public control. This was certainly the view of some commentators on the PPP established in 2003 for the modernisation of the London Underground (LU). The scheme called for the physical stock of trains, stations, tunnels and track to be transferred to two private sector consortia, Tubelines and Metronet, while the staffing and operation of the system remain with LU. Contractual specification of the maintenance and renewal requirements proved exceptionally complex, there were bitter disputes between TfL and the government, and repeated reviews by consultants, all of which inflated the set-up costs to well over £500M (see Wolmar *op. cit*).

The LU PPP, involving annual payments averaging £1bn over 30 years to the consortia, certainly counts as a form of MUTP, even though it will result in no major addition to the infrastructure. In round terms, 45% of the cost is to come from government grant, 30% from LU revenues, and 25% from the consortia (which is eventually to be repaid with interest and profits). The *Financial Times* commented 'First, the odds were stacked against the notional public sector alternatives; its costs were assumed to overrun by 11 per cent and it was also forecast to perform so badly that another 15 per cent of public inconvenience costs should be added. Second, the PPP bids are subject to a review after 7.5 years, giving the private infrastructure companies a strong incentive to bid unrealistically low for the remaining period…..' the paper added 'the government bears the risk of infrastructure company bankruptcy, but this contingent cost is ignored'.

Amid deep embarrassment it transpired in early 2007 that the Metronet consortium had run into financial difficulty and asked TfL for £551M of emergency funding. The Rail Regulator, as arbiter, awarded £121M which soon proved inadequate to prevent the company going into administration. While the tube modernisation has suffered delays in consequence, fresh tenders will be sought to replace Metronet. TfL has also mooted the idea of taking the work back in-house. Coming only a short time after the collapse of Railtrack into administration in October 2001, it seems that the appeal of private finance for railway infrastructure has been severely dented.

Perhaps in the light of these experiences, the private sector has shown a marked reluctance to tackle new transport projects except on the most favourable terms. The government's Ten-Year Plan [for transport], see DETR [*op.cit.*], set out a package of spending totalling £180bn in cash terms and designed to fulfil the ambitions of the 1998 White Paper. The plan included some £60bn of railway investment, made up of roughly equal shares from the public and private sectors. Yet the private sector

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showed no sign of investing anything like this amount. Most recently, official policy has played down the 'value' of private finance, and it is no longer presumed *ipso facto* to be the better option. Other techniques such as 'early contractor involvement', where the public sector client chooses a preferred partner from a list of qualifying bidders, and negotiates the allocation of functions and costs bilaterally, are being used instead.

One further mechanism deserves mention under this heading. A form of public-private partnership that holds some promise is to establish a reliable method of converting into cash the substantial increases in land and property values which frequently follow in the wake of successful urban transport projects, see Riley [65], [66]. In the case of the Jubilee Line extension, Riley argues that if the uplift in value could be captured in cash terms, it would virtually repay the capital cost of a project within a few years. Recent work on transport funding, see Enoch *et al* [67] and Potter and Parkhurst [68] has indicated that there is a range of financial mechanisms used in other countries which could be applicable in a British context if the doctrinaire views of the Treasury were relaxed.

Summary of project approvals: the current position

Insofar as it is possible to generalise, construction of an MUTP in Britain is likely require:

- Planning approval, which may be subsumed in an Order made by the Secretary of State under the Transport and Works Act (there are exceptions, for example widening a motorway within the existing curtilage); or
- A separate Act of parliament if the project is considered to be of national significance or has other sufficiently novel features.

Funding will likely come from a combination of sources, including:

- centrally-awarded resources (either permission to borrow or direct grant). The TIF and LTP are two current channels for this;
- locally-raised income, such as congestion charges;
- revenues from fares and charges at the point of use;
- contributions from EU structural funds; and
- private sector partners, for example developers who may stand to benefit from the construction of a new transport link or the manufacturer of equipment for the scheme concerned.

Note that, unlike the situation in the USA for example, bond issues are not seen as an appropriate mechanism by the Treasury (although TfL has succeeded in making one by special arrangement).

The railways generally fall outside these arrangements, although they can receive support (especially in the conurbations) through the medium of LTPs. Following privatisation, the railways separately receive grants and subsidy at around three times the level that was available in the nationalised era, under the watchful eye of the Rail Regulator. The infrastructure operator, Network Rail (NR), is also empowered to

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raise loans in the financial markets against income from track charges. Unfortunately, critics would say, e.g. Shaoul [69] that much of the spending on railways is mis-directed, as money is pumped into maintaining an absurdly inefficient and unpopular structure for the national network.

Concluding observations

Planning

A review of the past fifty years' experience in Britain seems to confirms that the lead role in planning and promotion of MUTPs necessarily rests with the public sector as it does in all other countries. From the early post-war period until the Thatcher era, this was an uncontested proposition, although shortage of public finance meant that for the decade from 1945-55 it was largely an unrealisable one. Major projects were sponsored by local authorities (albeit with help from the centre, as with the Dartford tunnel) or by the nationalised industries and, with the coming of the motorway programme, by agencies working on behalf of central and local government. Thereafter, for the next 20 years, the priority given to long-distance highway construction consumed the largest part of what governments were prepared to spend on transport.

From 1976, severe restraints on public spending, for macro-economic policy reasons, acted as something of a brake on major projects, while the powers and resources of local authorities and regional bodies were greatly diminished as part of a commitment to 'rolling back the frontiers of the state'. Not until the mid-1990s was it considered necessary for government to take a more interventionist stance on transport policy, reflected in the 1996 Green Paper and the 1998 White Paper. Even then, there was little mention of any change required to the institutional machinery, nor the importance of co-ordinated infrastructure planning, and no commitment – financial or otherwise – to major projects.

From around the turn of the century however, there have been some potentially significant developments. Regional planning has returned to favour, especially in the transport context, and there are proposals for enhancing the role of PTEs. London government has been reconstituted and has rapidly assumed a highly positive role in transport planning. Planning of infrastructure, hitherto a divided responsibility between local, central and private interests, may become more co-ordinated as a result of the current Planning Bill.

Project delivery

But there is no certainty in this, partly because so far as operations are concerned, the division of responsibilities between what public authorities are empowered and resourced to do, and what the private sector is alternatively encouraged to perform seems likely to remain a British characteristic. This is despite the difficulties experienced by Eurotunnel, the Metronet debacle and the need for government guarantees in order to complete the CTRL. Official policy continues to favour a strong – if not a leading – role for the private sector, even though this has proved no guarantee against project delays, overspending and poor performance. It has also proved expensive, in terms of the additional funds that have had to be raised either

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from private investors or the public purse. Thus the boundary between these two domains continues to remain fluid in political terms and there is no suggestion of a return to the model of the BTC with a comprehensive remit for promoting transport projects.

Related to this fluidity is the difficulty in Britain of linking transport planning with resource allocations, while responsibilities for project delivery seem to be allocated *ad hoc*. As Glaister [70] has argued, the diversity of structures in British government, the mixture of public and private interests that have to be reconciled, the planning and legislative processes – all constitute a formidable challenge to launching any new project. The CrossRail project in London is a prime illustration of this institutional problem, which has only been overcome through creation of a special-purpose vehicle under the supervision of TfL, and hardly constitutes a model for developments elsewhere.

Finance

In funding too, a key role for the public sector appears inescapable. In the 19th century, the revenue potential from fares and charges may have been strong enough to attract entrepreneurs to build toll roads, railways or other projects that were self-financing; but that is not so now. Higher labour and material costs, superior engineering standards and increased regulation (to name a selection of factors) all mean that income directly generated by a major project is likely to be less than the value of the perceived wider economic and social benefits. In retrospect, the Channel Tunnel episode has shown convincingly that the risks associated with a wholly private sector MUTP are virtually insupportable. Government on the other hand has the capability to operate outside the market if it wishes.

Nevertheless, for a decade after the PFI was launched, government insisted that major projects should wherever possible be taken forward by the private sector. They were disappointed to find that private investors usually have access to more attractive propositions than investment in urban transport. Substantial delays have resulted while project promoters have explored the possibilities for private sector participation, notably in connexion with light rail schemes for example, and where this has eventually been achieved the extent of risk transfer has been relatively small. Government hopes that the private sector could be drawn into funding transport projects on a large scale have indeed proved to be quite unrealistic. The *Ten-Year Plan* for Transport posited a private sector contribution of £30bn - a figure so speculative that it rapidly lost all credibility.

Given that a prospective MUTP must receive something more positive than a mere nod of approval from government, what is the appropriate scale and form of support? The sunk costs involved in transport projects mean that a long-term view of benefits needs to be taken. In the UK context, a political consensus on this seems difficult to achieve, or to sustain. Perhaps for this reason, we find that governments over the past 50 years have been strongly reluctant to invest in urban transport infrastructure and where they have done, the investment is pared to minimum. This risks compromising reliability and passenger convenience, while over-stretching the assets.

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The short-term view is also reflected in the anxiety over running costs which capital projects entail, see Bowker [71]. All transport operators – bus, rail and light rail – are consistently under pressure to maximise income from fares, making British public transport among the most expensive in the world. There is a continuing anxiety on the part of HM Treasury that public sector projects will go wildly over budget or, once built, will become a continuing drain on public subsidy. The symptoms of this anxiety are the inclusion of 'optimism bias', which over-states project costs in place of realistic budgeting, and the repeated demands for technical studies, financial studies, alternative studies, feasibility assessments and so on, until it seems that studies and research have almost become an end in themselves.

Wider policy issues

Certainly, the full economic and social benefits available from properly planned and executed MUTPs are seldom easy to capture directly in revenue terms; but they undoubtedly exist. Again, the Treasury has typically taken a narrow view of this situation, driven by the political imperative of keeping taxation low, and tending to regard expenditure on capital projects almost as a net loss to the Exchequer, rather than as an investment in the nation's future. In consequence, by comparison with other major European Union (EU) countries, Britain has a weak record of investment in MUTPs. Between 1990 and 1995, in round terms, Germany invested 66% more in transport infrastructure than the UK and the French government 50% more (Commission for Integrated Transport [72] [73]).

Related to this narrow view of economic benefits has been a tendency towards an excessive concentration of effort and resources on the pre-decision phase; yet once a decision has been made, the funding available has been pruned to the point where it risks undermining the success of the project or has been hedged about with restrictions that cause lasting operational difficulties. The original section of the M1 (built as a dual two-lane highway), the DLR (built with wholly inadequate capacity), the London Underground PPP (unworkable structure) and Manchester Metrolink (insufficient rolling stock) are examples. There may be some truth in the argument that fine minds are useless if they are associated with blind ignorance of how things actually work – or don't – in the real world.

The emphasis on planning and 'feasibility' has not been matched by a related competence in implementation when it comes to MUTPs. The UK has historically been weak in cultivating the skills of effective project management, running from a clear statement of objectives, through financing and political support, to good project control, commissioning and operation. This may be seen as partly a reflection of institutional structures which, unlike those on France or Germany, have not sufficiently nurtured British talents in these disciplines, and partly as a function of the career structure available for qualified engineers – evident in that fact that many of them have gravitated to consultancy work or appointments overseas. The problem here is perhaps one of degree rather than omission: the realisation of the motorway network, pursued over a sustained period since the 1950s, may have been slowed in times of financial stringency but the overall conception was robust. The loads placed upon it, often amounting to many times the original forecasts of traffic, have generally been coped with surprisingly well; and where they have not, the processes of adaptation and improvement have been skilled grafted on.

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The success of such 'incremental' approaches – keeping transport networks going by sweating the assets and improvising solutions – shows considerable ingenuity, but diverts attention from tackling fundamental questions about the growth of motor traffic, see Banks, Bayliss and Glaister [74]. The tendency to defer consideration of such questions is, paradoxically, not helped by an era of economic prosperity which has allowed a modicum of public expenditure to be provided for major projects (so long as the private sector also contributes and plays a leading part in project management and delivery). Current public spending levels have also allowed government to maintain subsidies and relatively generous contract payments to private sector operators of projects and transport services. Whether this policy can survive an economic down-turn must be doubtful. If it does not survive, government may be forced to reconsider the institutional arrangements again.

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