

TRANSPORT PLANNING PAST PRESENT AND FUTURE

- GREETINGS

Good evening ladies and gentlemen and thank you Chairman for your kind introduction.

- SETTING UP THE SOCIETY

As the chairman has said, I was involved in the formation of the Transport Planning Society through chairing the Transport Planning Forum. This however was not a solo venture as Richard Cuthbert and Peter Stonham shared the task of setting the Society up; and I am delighted to see both Richard and Peter here tonight.

- SUPPORTING YOUNG PEOPLE IN THE SOCIETY

Many of you will not know me or at least not know me as an active member of the Society; and this is for a good reason. One of the challenges we faced in forming the Society was to get away from the traditional arrangements with the elder members of the tribe largely running the show - and for younger people to take the lead. To some extent this has been a success but clearly there are problems of getting younger folk, having the time and experience, to devote enough effort to running professional activities. I hope this will not discourage the Society from persisting in giving younger members of the profession leading roles in its direction; even if it requires

more senior people putting in the effort to support them – if necessary in subordinate roles.

- A SOMEWHAT PERSONAL VIEW

The rather grand title of my comments was chosen for me and, in a short after dinner address, it is not possible to cover such a major and important topic in a rigorous or comprehensive way. Nevertheless it gives me the opportunity to get a few thoughts off my chest; and I hope you will accept a partial and personal view of transport planning based on my particular experiences.

- THE TOOLS OF THE TRADE

One of the most important changes that has taken place in my forty odd – sometimes very odd - years in the business is the availability of technology as an aid to transport planning. In the 1960s transport planning software was limited to a few proprietary systems such as IBM's CAPRE traffic assignment program, general systems such as the BIOMED package for statistical analysis; and some fairly crude planning systems borrowed from the USA such as the Bureau of Public Roads package.

Today there is a wide range of software packages and the problem facing transport analysts is which to use for a specific task. This large number

makes it difficult for the planner to know exactly how a particular package works and therefore exactly how best to use it and interpret the results. The recent development of packages that focus on presentation rather than transparency of process makes this even more difficult.

These developments in software have been made possible by rapid improvements in computer processing speeds and storage capacities.

Moore's law – which envisages a doubling in processor capacity every eighteen months, seems set to hold for another ten years – so this trend is set to continue. And the recent ballooning of all types of data storage capacity is at more than matching this.

When the US Federal government started the Interstate & Defence Highway System back in the late 1950s the American Association of State Highway Officials – the equivalent of our County Surveyors Society - realised that it did not have an adequate set of standards for the construction of a major network of highway pavements and bridges suited to carrying the weights and volumes of traffic expected to use the system, so it set up a trial in Ottawa Illinois, between 1958 and 1960, to derive these. This involved constructing a twelve mile test track of roads and bridges (now part of the I-

80) and running over a million axle loadings over it. This project cost about \$500m at today's prices and the data processing was done on the largest available main-frame computer at the University of Chicago. This had a RAM capacity of 12k. A few weeks ago I bought a laptop for my granddaughter and this had a RAM capacity of 2 gigabytes – five orders of magnitude greater - and this is relatively puny when compared to today's super computers.

Whilst these developments in software and hardware have brought enormous advantages they have also created some dangers. The complexity of many contemporary models is such that it is difficult to follow their workings. The range of input data and assumptions required mean that the planner, too often, has to employ material from a range of sources - usually requiring advice from specialists who may not be familiar with the purposes to which it is to be put. One incorrect input can lead to errors in the results which may go undetected. I have seen this on more than one occasion and would be surprised if there are not others in this room who have had similar experiences.

I can give one example of this that is now in the public domain. In the study of extensions to the Jubilee Line a short walk link was inserted by mistake in a 'with extension' network, giving considerable artificial time savings that were reflected in a favourable benefit to cost ratio. This was then cited in the Parliamentary debate on whether the scheme should go ahead.

Subsequently this was discovered - by which time the scheme had been accepted by Parliament. When some years later I told the Minister at the time what had happened – one of the twenty three during my career - he replied that Maggie had decided she wanted the project to go ahead anyway and the transport analysis was of no real consequence. As you can imagine this produced a mixture of relief and disappointment. Relief that we had not contributed to a decision made on a false premise, but disappointment that all our hard work had carried so little weight.

Such problems arise because too little time is spent digesting and interpreting the results of computer analyses. We systematically allow too little time for this stage of a project and this has been exacerbated in recent years by the shortage of experienced transport planners with the time and experience to check the work of their juniors.

As an example I have just finished a piece of work for which the modelling was completed in June and, after four months, we are still unearthing interesting and valuable information - and there is yet more to come. Both clients and consultants must recognise the importance of allowing sufficient time, not just to correct mistakes but explore issues revealed in the course of the main analysis and to digest and interpret its results: after all the purpose of these complex analyses should be to teach is something new – not just put numbers to our preconceived conclusions.

Looking back to the AASHO trials in the early 1960s, the problem then was huge amounts of data and limited computing power. Today we have the opposite problem and consequently limited data sets are used over and over again. This is slowly changing with the growing automation of the collection of some kinds of data through ANPR, vehicle tagging, GPS, electronic ticketing, electronic payment, and mobile phone tracking. These are developments that the profession should take a keen interest in, to ensure that these databases can be effectively mined without infringing personal data protection requirements.

Most technical work is carried out by consultants these days; and we can be proud of the fact that we have a very good set of transport planning consultants in the UK. However the best consultancy *projects* have high quality clients - as well as good consultants. The move to outsourcing by the public sector has resulted in a weakening of public sector client competence. This has meant that the traditional checks and balances of client and contractor have not been as effective as they could be. I find, as both a client and a consultant, that too much effort is spent by the consultant in helping the client to work out what it is they really want from a project and too little time is spent by the client in scrutinising the results of the consultant's work.

In future the profession must put more effort into quality assurance both within the project programme and through the relationship between client and contractor. If a bridge designer made the kind of mistakes to which I have just alluded - he or she would soon end up in court. That, fortunately, rarely happen to transport planners but there is a price of poor quality control to be paid - in reduced esteem by politicians and public scepticism.

- THE SUBJECT MATTER

In my lifetime the period of greatest strain on the country's transport system was during the Second World War. Petrol rationing reduced the number of cars on the road by two thirds. The railways and ports were bombed and had to handle unprecedented levels of military traffic, the embryonic civil aviation industry came to a halt and, for a long period, pretty well all transport had to operate in darkness between dusk and dawn. Whilst essential repairs were carried out, the need to service the war effort meant that there was virtually no replacement and renewal of equipment and infrastructure. The result of this was that, at the end of the war, the national transport system was in a poor state both physically and financially. The government's response was to set up the British Transport Commission to oversee the newly nationalised railways, London Transport, Docks and Inland Waterways and road haulage – much of which was nationalised as British Road Services. This was the country's the first great venture into multi-modalism.

It is difficult to see quite what impacts the BTC had, as the post war imperative was to repair war time damage and to restart the renewals and replacement programmes. There was some transfer of assets between BR

and LT and, no doubt investment patterns would, to some extent, have been different without the Commission. Perhaps the main impact was to regulate freight traffic in favour of carriage by rail - but this continued after the Commission's demise in 1962 until Barbara Castle's 1968 Transport Act.

However, despite the existence of the Commission, what transport planning there was during this period was essentially modal. The railways produced their own plans for post war development without regard to the prospective growth in car and lorry transport. In 1948 the MOT sketched out what became the bones of the national Motorway system and, in the absence of any real civil aviation planning; Heathrow was selected as London's new international airport. Local authority highway planners developed plans to carry future traffic growth and public transport operators struggled valiantly with managing ridership decline, deteriorating finances and, in the case of buses and trams, coping with the effects of growing road traffic congestion.

The 1968 Transport Act started to change that; and with the formation of the PTAs/PTEs and later the metropolitan counties, at least in the large cities at least local transport started to be looked at in the round. Also, for the first time, arrangements were put in place to systematically provide public funds

to support local public transport. This gradually developed until multi-modality and integrated transport became the touchstones of respectable transport planning. Whilst in many respects this was a healthy move; it brought with it some dangers. One was the widespread use of high sounding terms such as 'integrated' and 'sustainable' for which there were not generally accepted operational concepts - but rather they were too often used as mantles of respectability in which a wide range of policies – soundly based and otherwise – were dressed. This allowed too much sloppy thinking about policy objectives and the value of individual policies and schemes; and this was not helped by the introduction of NATA appraisal summaries which allowed a high level of subjectivity, and consequently ambiguity, to be introduced in scheme evaluation – an aspect of transport planning where the UK, through the development of cost benefits analysis, has lead the world.

The other danger was a belief in an unrealistic substitutability between modes. Whilst there are sections of the travel market that can be served by a choice of modes, most are strongly associated with a particular form of travel and can only be diverted to another at considerable cost and/or inconvenience.

I give one example - how often have we heard that most car trips are short and therefore could go by foot or bicycle? Yet about four out every five journeys under a mile *are* on foot or by cycle and almost three out of five journeys up to two miles in length go by these modes – little changed from fifteen years ago. Many of those who use motorised transport for short journeys do so because they are short of time, have something heavy to carry, or find walking or cycling too much effort and, even if the proportion of these short trips by foot or cycle could be increased by 50%, the reduction in road traffic would be about 3% - useful - but hardly the solution to traffic congestion which proponents of such a switch sometimes claim.

A more useful approach is that of co-modality in which the relationships between the modes and their markets is recognised and the focus is to get the best out of each mode for what it can do; and not try and distort the natural modal offer to serve markets to which it is poorly suited. So I see us having moved from modal apartheid to multi-modality and on to co-modality in which the interaction between modes is approached by seeing how they can be made to better complement each other rather than trying to make one mode do a job better suited to another.

Traditionally transport planning has focussed on infrastructure, because this has to be developed over a long period and provision of infrastructure has been seen as perhaps the most important type of public intervention in the transport system - and many of our modelling systems have been developed around this. This has however been changing – not just recently but back as long ago as in the 1970s - when the first oil crisis triggered widespread interest in Transport Demand Management. It was at this time that the first congestion charging scheme was developed for central London - but London was not then ready for it.

The scope of transport planning in future has been recently listed in the government's sustainable transport paper as:

- Behavioural change
- Better management of existing infrastructure
- Transport technological change
- The use of pricing
- Transport regulation
- Service planning

- Small infrastructure schemes and
- Large infrastructure schemes

Whatever one thinks about the respective roles of these, they must all be within the compass and competence of tomorrow's transport planning professionals and planning techniques. To this I would add that we need to increase transport planners' competence in management, governance and financing so that the policy development process takes place in a fuller recognition of what is required for the results to be executed successfully.

- FUNDING

The funding of transport both for investment and operations has been an enduring problem over the length of my time in the business. In the early sixties there were insufficient funds to modernise public transport and build the road capacity needed to accommodate traffic growth. At that time the national railways were operating a deficit, despite Dr Breeching's attempts at cost cutting; local buses were moving into deficit and failing to replace plant and equipment. London Underground was one of the few enterprises to operate at a profit - albeit a slim one. Road taxes however handsomely exceeded spending - as has been the case ever since. Since then we have seen the arrival and demise of Transport Supplementary Grant and a range

of special funding initiatives from both Westminster and Brussels and during the 1990s the emphasis switched to the use of private finance - with uncertain and changing rules; and mixed outcomes.

It seems that the main advantage of the use of Private Finance Initiatives and Public Private Partnerships has been to protect these elements of transport spending from the well known uncertainties of public expenditure; by locking the public sector obligation into a contractual arrangement with private sector partners - and in bringing greater transparency to what is needed and what is provided. This has served some aspects of the transport system well – particularly rail. This can be seen in comparing the balance of spending at the beginning of the 1990s, before this approach became widely used in transport, with today. In the early 1990s annual spending on roads was about £6bn a year and on public transport just over £2½bn. In the mid 2000s the roads figures had grown to £8½bn and the public transport figure to over £10bn. This cannot be because of the relative growth in public transport use; as its share of personal travel has remained much the same at about 13%. The obvious explanation is that the changes in funding arrangements - for rail in particular - have resulted in greater and more stable funding for public transport.

The recent government paper on Sustainable Transport promises a long term spending guideline of a real 2¼% growth over the next ten years. Until 2012/13 most of this will be absorbed by expenditure on Crossrail and, inflation in the construction industry allowing, what the remainder will be available for is uncertain. It seems likely that much of this will be allocated through the Transport Innovation Fund with its emphasis on as yet, outside London, untested congestion charging schemes.

A better arrangement would be to introduce a national road pricing scheme with congestion charging proceeds devoted to road congestion relief initiatives. This would ensure that appropriate funding for transport schemes was available and would also suppress excess road travel, with both congestion and environmental benefits. A policy of this kind would secure not just more stable but more 'adequate' funding for road operations and improvements – as is being provided for rail - and could relieve the government of a public expenditure headache by getting roads spending off the public sector balance sheet.

- ORGANISATION AND INSTITUTIONS

Intimately linked to financing is the matter of organisational arrangements for transport planning and implementation. To be effective, transport plans require suitable institutional arrangements for their implementation and maintenance. It is difficult to believe that present arrangements are fit for purpose. In the large cities, metropolitan government was introduced in 1974 by a Conservative government and done away with in 1986 by another Conservative government - because the Mets had become Labour strongholds. Fortunately the PTAs/PTEs survived, but these have to rely on a measure of consensus amongst their constituent members which is not always forthcoming on contentious issues. The gap left by the abolition of the metropolitan counties has been dealt with in London by the creation of the GLA but, even there, the area is too tightly drawn for transport planning purposes and much of the commuter rail network lies outside the control of the Mayor – at least for the time being.

During this period we have seen changes in status of individual local authorities and the creation of a regional tier of governance, with RDAs, Regional Assemblies and Regional Government Offices – none of which are directly accountable to the local electorates. Below that we see Local Strategic Partnerships and Local Area Agreements. Whilst local transport

funding is supposed to be determined through Regional Funding Allocations there is, as yet, little sign that central control of what is to be spent has been eased. Even if, with the RFAs, the use of funds could be determined at the regional level it would be beset by a myriad of targets laid down by central government. Moreover the Regional Assemblies, which are responsible for the RFAs are to be wound up in a couple of years following a failed attempt to establish elected regional assemblies. This confusion of accountability, coupled with uncertainties of funding, needs to be addressed for the development of effective transport plans and programmes to take place.

Quite how this situation should be resolved I do not know, but it should be guided by providing a sound balance between responsibilities, powers, resources and accountability. In my view this would lead to local government being given revenue raising powers in its own right and, as far as transport goes, the buoyant source of funds from road user taxes, whether they be reformed into a road pricing regime - or left as they are, is the obvious source for local transport revenues. If coupled with the new Integrated Transport Authorities proposed in the Local Government Transport Bill this could provide really effective transport planning at the

local level. In the absence of revenue raising powers however there must be reservations about how much difference these new bodies will make.

- RESEARCH

Finally I want to say something about transport research – which after all is essential to improving our understanding of the subject matter with which we are dealing. We are lucky here in the UK in having a strong academic research community and also considerable competence among consultants and some public sector bodies. In the 1960s and 70s research activity was spread quite widely between local government, the universities and consultants. In part this reflected the development stage of transport planning as a legitimate professional activity; and the need to establish a sound and relevant knowledge base. The worsened fortunes of planning in the 1980s reduced research in local government, and to a lesser extent in consultancy. By the time the improvement in planning's fortunes took place in the late 1990s the profession was suffering from a shortage of high quality young planners – who are so important to research activity, the internet had arrived and the volume of published material – not all of high quality - had ballooned.

Prior to the 1990s, desk research was a hard copy based activity involving the accumulation of books and reports and access to library facilities. In the late 1990s it had started to become internet based – a development that has continued with great benefits. However the switch in the principle research medium, from hard copy to the internet, coupled with the diminished research capacity of the practitioner sector of the profession has been that much of the early research work associated with the development phase of the profession was overlooked by contemporary researchers – being confined to dusty bookshelves and record cabinets rather than being within the grasp of the omnipotent Mr. Google.

This problem remains today and valuable, if elderly, research is still overlooked; although clearly this problem will shrink as the years go by, as more and more research is accessible via the world wide web and Mr Google digitises historic texts, as he is doing presently at a rate of ten million books a year. {In this vein it would help the profession if the Department for Transport would digitise its older statistical series as it has done for the 1986 and 1996 editions of Transport Statistics Great Britain.} However I urge today's researchers to spend a little time at the outset of their projects

looking at pre- internet material, and recognise that not all useful results were presented in refereed journals.

- IN CONCLUSION

I won't try to summarise what I have already said but just wind up with one thought. Transport planning in Britain over the last three or four decades has been as creative as pretty well anywhere else in the world – at least in my well travelled experience. But transport development has lagged behind that in many other developed countries – sometimes by a large margin. This indicates to me that in future we must concentrate improving our performance in developing the 'whys' and 'hows' of transport policies and projects as much as the 'whats'.

Thank you for inviting me to speak to you and your attention. The society has come a long way in the last ten years and I would like to wish continuing success over the next ten.