CONFERENCE ON IMPLEMENTING SUSTAINABLE URBAN TRAVEL POLICIES IN RUSSIA AND OTHER CIS COUNTRIES

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DECISION-MAKING IN TRAFFIC MANAGEMENT

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INTRODUCTION

This note and presentation will explore the role of traffic management in overall transport policy in the UK, the way in which traffic management policy has developed in recent times, and the role of appraisal.

PART I: POLICY CONTEXT

In England both Local Authorities and the Highways Agency are responsible for the road network. The Highways agency is responsible for ‘national’ roads i.e. trunk and motorways, which account for about 3% of all roads in England but carrying a third of all road traffic and two thirds of all heavy freight traffic. Local authorities are responsible for all other roads.

Over recent years there have been a series of important White Papers and policy statements setting out developing ideas on transport policy. We will focus on their significance for traffic management issues. All of these documents are available on the Department for Transport web-page (www.dft.gov.uk)

“A New Deal for Transport” (1998)

A New Deal for Transport focussed on Integrated and Sustainable Transport, with an emphasis on reducing the need to travel and reducing car use. For road use it provided for improved management of the trunk road network to reduce delays e.g. Regional Control Centres, improved information etc. It introduced new Local Transport Plans covering a requirement for integrated strategies for local needs, as well as calling for local targets for improved air quality, road safety, public transport and local traffic reduction. The guidance on Local Transport Plans emphasised the need for greater use of traffic management in the achievement of the aims of policy.


Ten Year Plan was the first attempt to provide a coherent long run spending allocation for transport – recognising years of under investment

“Managing our Roads” (2003)

Managing our Roads again emphasis the need to make best use of available capacity both using new technology in the longer term and making use of other available means in the short term, as well as managing demand for road travel.

This most recent White Paper seeks to ensure networks to meet increased demand but also achieving environmental objectives. For roads it seeks a network providing more reliable and freer-flowing services with people able to make informed choices.

Three central themes are identified in the document as follows:

- Sustained investment
- Improved transport management
- Planning ahead

The plans for **sustained investment** reflect the latest spending review and will be supplemented by a detailed projection over 10 years, reflecting and building on the 10-year plan.

**Improved Transport Management** includes reorganisation of the national rail management and consideration of tolling new highway lanes and introduction of HOV lanes.

As part of **planning ahead** the Government will lead the debate on national and local road pricing and will explore information technology options as well as working more closely with local authorities.

**PART II: TRAFFIC MANAGEMENT**

From this range of documents it is clear that improved traffic management is of central importance for policy, both at the national and local level. In addressing the way in which this can be achieved we can consider the elements of management under three broad headings with a focus on some examples of specific issues where there have been recent research projects or policy initiatives which will be discussed in greater detail. These headings and examples are as follows:

- Reducing Demand through alternatives
  - Soft measures/Smart Travel Choices
  - Investment in Bus/Rail etc

- Restraining Traffic
  - Pricing for road space
  - Parking allocation and Pricing
  - Road space re-allocation

- Managing the Network
  - Basic network design (signs, etc)
  - Dynamic urban transport control
  - Red Routes in London
  - Highways Agency and Regional Traffic Control Centres
Issues related to the appraisal of public transport investment form a topic on their own (and one fairly well trodden) so we will not explore it in detail here, though some thoughts on appraisal methods below are highly relevant. Instead we will focus more on policies which are directly focused on travel and traffic management, including some which are more innovative.

**Reducing Demand: Smarter choices/Soft measures**

The aim of these policies is to help people choose to reduce car use through better information and opportunities. The range of policies include:

- Workplace and school travel plans
- Personalised travel plans, travel awareness
- Improved public transport information and marketing
- Car clubs and car sharing
- Teleworking, teleconferencing and home shopping

These measures are popular in principle among many analysts, but there is debate on their potential contribution to reducing car travel. It is recognised that there is no clear definition of what exact interventions constitute ‘soft’ measures but there will certainly be agreement that they include the elements listed here. One common aspect is that, in general, these are largely, or entirely, omitted from standard modelling and appraisal techniques and practices.

There has been a lively debate in the UK on the potential role of such measures following a number of conflicting studies. The Government commissioned the Transport Studies Unit at University College London to survey previous studies, to carry out a number of case studies and to assess the future potential of such policies. It is recognised that it is still ‘early days’ for many of these policies and that, while information is accumulating, it must still be seen as tentative. However there is growing interest in ensuring these policies play their optimal use in meeting Government objectives and hence there is a need to ensure the best empirical information is freely available.

It is impossible to summarise the report in a short time, but it will be on the Department’s web-page during September. One important point in interpreting the results is that the report emphasises that the results presented for the potential impact of such policies are not a forecast, but a “cautious” assessment of “maximum reasonable potential scope” if there is “serious commitment and coherent general policy approach”

Having said that, the Report suggests that with such a high intensity scenario, over a ten year period:

- Urban traffic can be reduced by 21% peak and 13% off peak
- Non-urban traffic can be reduced by 14% and 7%
- Nationwide reduction of all traffic of about 11% can be expected

The Report suggests that with “current intensity” the impact over ten years would be a reduction in peak urban traffic of some 5% and an overall national reduction of some 2%-3%

The Report claims that “both low intensity and high intensity estimates appear in line with informed professional opinion”

However some remaining doubts must exist on our ability to transfer and roll out the results of existing experience. There may, for example, be an element of self selection of the best opportunities in the cases already in place.
The Report also contains detailed assessments of the impact of the different ‘soft’ measures separately, both in terms of impact and typical costs per trip reduction. Thus, for example, it suggests

- Workplace travel plans can reduce commuter car driving by between 10% and 30% at a cost to local authorities of £2-£4 per head
- School travel plans reduced school run traffic by between 8% and 15% with some achieving reductions of over 20%
- Individualised marketing pilots delivered reduction in car use of between 7% and 15% in urban areas and 2% to 6% in rural smaller urban areas. Costs of implementation likely to be less than £20 p

The Report concludes that “soft measures, in a favourable policy context, could be sufficiently effective in reducing traffic that they merit consideration for an important role in transport strategy, prima facia offering very good value for money and few disadvantage” It recognises that there will be a need to lock in benefits to avoid traffic generation offsetting the benefits, part of ensuring that soft measures are part of an integrated overall approach to policy

The Government recognises the significant value for money achievable from such policies, as set out in “The Future of Transport” White Paper. In recognition of this it will promote such measures by, for example,

- Ensuring every school has a travel plan by 2010
- Free consultancy advice for those creating work travel plans until at least 2006
- All Govt Departments to reduce their car commuting by 5% by 2006
- Supporting Local Authorities to build such policies into their Local Transport Plans, including setting appropriate targets
- The development of High Occupancy Vehicle Lanes

**Restraining Traffic: Road pricing**

We will say very little on road pricing as there is another presentation at this Workshop on this topic, given by Prof Tony May.

To summarise, powers were given to Local Authorities in the 2000 Transport Act to introduce congestion charging and/or workplace parking levy. An important element of the Act was that it introduced the possibility of allowing them to keep the proceeds for use in local transport for up to 10 years. While several have expressed interest in using these powers, none other than London have taken them up in practice.

Some possible reasons why the response has been poor may be concern at local economic impact, loosening of link to public transport funding (decisions on major scheme funding by Central Government were taken prior to charging decisions by local authorities), a common view that in many areas congestion not a real problem and, possibly, concern about public opposition despite the decision on retention of the funds for public transport.

A further element may have been the fact that local authorities do not have control of bus services in their areas, as a result of bus deregulation. In recognition of this, the latest White Paper has linked the introduction of road pricing by a local authority to possible changes to the bus deregulation regime to give greater planning powers over the network to local authorities.
In addition the UK Government has a plan for distance based charging for heavy goods vehicles, to be introduced by 2007. Planning for this is far advanced and, as well as being supported on its own merits, it is seen as a basis on which a more complete pricing system could be developed.

In recognition of this, there has been a Feasibility Study of Road Pricing in the UK carried out this year for the Government and which included all key stakeholders including road users and environmental groups. This is also available on the Department’s web page. Its main conclusions are that such a pricing system:

- Will be technically feasible in 10 to 15 years, based on satellite technology
- Would be expensive but would provide surplus which could reduce other road, or general, taxation
- Could be used to lock in the benefits of other measures to tackle congestion
- Could contribute to more efficient pricing structures
- For success would need to tackle the key factor of the need to create public acceptability

The public response to the Report was very interesting. There seemed to be wide acceptance of the idea of full national pricing for highway use in principle and of its likely implementation at some point – but maybe this was influenced by a sense that it is a long time away!

**Restraining Traffic: Road space reallocation**

The SACTRA report on ‘induced traffic’ showed that new capacity almost certainly leads to new traffic and that there was a wide range of behavioural responses that needed to be taken into account in analysis impact. This has had an influence on both modelling and appraisal- as well as strengthening the belief that we could not build our way out of congestion.

The whole policy emphasis on reducing car travel and its negative impacts was, at the same time, creating pressure in some quarters for reallocation of road space to improve conditions for cyclists, pedestrians, bus users, light rail and other high occupancy vehicles. However this was often resisted on the fear that such reallocation would create major traffic chaos, and while it was seen as inevitable that there would be some loss to motorists, it was feared this would be excessive. This is part of the general debate as to how much it should be a policy objective to reduce traffic.

A study commissioned by the UK Government and London Transport by TSU/UCL looked at over 70 examples world wide and sought the views of over 200 experts, strengthened by follow up case studies and surveys.

The first main finding was that traffic ex post was rarely as bad as expected– and this seems a very robust discovery. However the Study reports that technical success does not always influence public opinion particularly if there are initial problems. Therefore there is a need to

- Get the scheme right from the beginning
- Monitor all issues of controversy to be able to debate fully
- Use press and consultation to prepare for any initial problems
- Implement in stages with focus on side effects

The second main finding was evidence of overall reduction in traffic. Of course there are major problems of defining the area over which the adjustment is measured. However there is sufficient evidence from good monitoring studies to suggest this unlikely to be the full explanation. There is also divergence between studies in the extent to which short term impacts are weakened or strengthened over the longer term.
Managing the Network: Dynamic Network Management

Traffic control using traffic signing measures is widely used. There are some 12,500 signal controlled junctions in the UK. Over 3000 are linked with other installations and are operated in a co-ordinated way to achieve a higher level of control and flexibility to satisfy local traffic management objectives. There are some 60 area wide Urban Traffic Control systems, in three quarters of which at least part is operated by SCOOT (Split Cycle Offset Optimisation Technique) system using “live” traffic information. Many authorities are extending the use of these techniques, some through the Department for Transport’s Urban Traffic Management and Control (UTMC) programme. That programme is to encourage new and open systems to help deliver traffic management and other objectives, including improved air quality. Integrated UTMC systems are being implemented as demonstrations in four towns at present and a number of other integrated traffic information and control systems are well established.

One challenge is to reconcile this with the needs of pedestrians. They are not so readily platooned as vehicles and can end up with longer waiting times than when signals are less well co-ordinated.

Managing the Network: Traffic Management Act 2004

We have recently seen the introduction of a major new piece of legislation to deal with traffic management. It is aimed at tackling perceived deterioration in congestion both on the national Trunk Road network and on urban roads.

There is, however, no universally agreed definition of congestion. This creates problems for setting and monitoring national and local targets. The original measure used was “time lost per vehicle km”. As well as technical issues of measurement (for example in measuring what base against which to measure the loss?), there is also the view that this measure does not reflect motorists’ perception of driving.

To deal with this the Government has been developing improved indicators based on what road users say they want from the road network. These include delay, time below some threshold speed and reliability of journey times. They will publish congestion ratings for key routes which will form the basis of setting and assessing performance targets.

There are four main parts in Act

1. Traffic management on trunk (i.e. national) roads
2. Network management by local authorities
3. Measures relating to street and highway works
4. Traffic and parking enforcement

1. Trunk Roads

Looking first at the main national, or trunk, roads, the Government wants the Highways Agency to improve the capacity of the existing road network as set out in the White Paper. It also wants to focus police on ‘crime’ needs which can only be handled by them. With this in mind it set up a Review involving all the main stakeholders to assess the optimal allocation of resources and activities between the Highway Authority and the police. This Review proposed the transfer of certain traffic management tasks from the police such as

- Control office functions
- On-road activities
- Central planning and control functions
They are already in the process of establishing Regional Control Centres which will be operated by the Agency and the police. These Regional centres will monitor and manage traffic on the network and direct on-road resources.

The new legislation will establish Traffic Officers in the Agency. The role of these Traffic Officers is to help and support road users not to enforce the law. The aim will be to keep traffic moving by managing incidents and programmed events using these officers rather than needing to involve the police. They will have powers to stop traffic, divert traffic etc. However, the police will still have primacy in serious cases.

There has been, and continues to be widespread consultation on the precise terms of these new arrangements and there will be detailed monitoring of impact.

2. Local Authorities

The efficient operation of urban networks is of crucial concern to the economy and to society. Local authorities have a range of powers under existing legislation under which they carry out their functions.

Local authorities have roles as:

- Highway authority dealing with road infrastructure
- Street authority principally dealing with utility street works
- Traffic authority principally regulating the use of the road by different classes of users

They carry out a wide range of activities such as:

- Co-ordination and management of utility and local authority works
- Co-ordination and management of planned activities ‘taking out’ road space
- Utilising urban traffic control systems, information etc
- Dealing with incidents and their aftermath

There is evidence that performance varies between authorities, with some giving the traffic management roles inadequate priority or failing to integrate it into wider responsibilities. Government is aware of, and concerned by, these differences in performance levels between authorities. This led Government to seek to raise overall standards. The new Act will seek to ensure all authorities manage their network in a holistic way and in the interests of users.

The new measures in the Act related to local authorities come in three parts:

- Enhanced network management duty for movement of traffic
- Appointment of Traffic Manager in each authority as part of this duty
- Reserve powers for Sec of State to intervene by appointing a Traffic Director for the area

In association with this new duty, the Secretary of State will be able to issue statutory guidance on exercising this duty.

The aim is to underline the importance of pro-active co-ordination and management across the network by creating an explicit new duty on authorities to secure the expeditious movement of traffic through appropriate arrangements for, and carrying out, of network management – but qualified in terms of practicability and other responsibilities. This duty is NOT confined to any one role of an authority– it applies to all that it does which affects roads and their users.

One point of interest is that the Act specifically states that “traffic” includes pedestrians and cyclists.
The Act does not specify a precise structure around the Traffic Manager; this will depend on how authorities choose to manage their affairs. It does not need to be an additional post but the person nominated will act as the focal point for all activities dealing with, and affecting, movement by road.

The Statutory Guidance to be issued by the Secretary of State could include guidance on performance indicators by which authorities can be assessed. Any such indicators will be drawn up in consultation with authorities.

### 3. Street Works

There has been longstanding concern about disruption by statutory undertakers - utilities - street works. There has also been similar concerns about unnecessary disruption caused by highway authorities. Over recent years there have been some high profile examples in London in particular.

Existing legislation (New Roads and Street Works Act 1991) is seen to have failed to anticipate the impact of utility deregulation, which has lead to a large increase in the number of organisations with the right to dig up the roadway. It was felt that there is a need for legislation to achieve better balance of control between highway authorities and the utilities.

The New Roads and Street Works Act gave powers to Highway Authorities to charge statutory undertakers whose works overrun an agreed deadline. The Transport Act 2000 made the details more practicable. The Transport Act also introduced powers allowing authorities to charge undertakers from day one of the work (i.e. lane rental). These powers are currently being tested in pilot schemes in Camden and Middlesborough ahead of a decision whether to toll out the scheme across the rest of the country.

The new Legislation reflects a Consultation exercise in 1999 and the recommendations of a joint Working Group of all those concerned in 2003. It covers such areas as:

- Permit schemes

  A present there is a wide range activities for which there are bodies with rights which disrupt street use e.g. utilities, highway authorities, transport authorities (eg lrt construction) skips, etc. A Permit scheme would provide a more comprehensive and standardised system of controls on how and why these activities are carried out than is currently available. The Act allows certain bodies, such as local highway authorities to apply for permission to operate permit schemes from the Secretary of State.

  Legislation allows for the following conditions to attach to a permit:

  - When – both days and times
  - How long activity can last
  - Precise location and range
  - Reinstatement of surface
  - Measures to protect other apparatus in road
  - Measures to reduce disruption caused
  - Measures to avoid damage to environment

  Precise details of operation will be set down in regulations including pricing of permits issued

  - Powers to direct

  At present street authorities can direct utilities on times of work to reduce disruption – but exact powers of direction in respect of not working on given days unclear. This power will be made clear. Also new powers are given to direct route of work different from utility preference, thought Act sets several restraints on this.
power. The powers of enforcement are also enhanced with an increase in maximum fine for each offence, up to £5k as well as the introduction of Fixed Penalty Notice scheme to reduce need for courts, and a list of new offences

- Restricting work where recent work

Act will extend the one year embargo available under the legislation of 1991 and will extend the circumstances in which an embargo could apply to cover work by utilities ie not just major road works as at present. In addition there are provisions concerning the following, which we will not discuss in detail:

- Skips and scaffolding
- Clarification of existing duty to inform on location of apparatus
- Resurfacing of streets
- Miscellaneous changes to existing regime

4. Traffic and Parking Enforcement

The Road Traffic Act 1991 paved the way for decriminalised parking enforcement, which was linked to retention of penalty charge by local authority There was wider extension of enforcement powers in London by 2000 legislation, going beyond parking alone and including such issues as bus lane enforcement and moving traffic regulations. The new Act will provide single legislative base for a range of such enforcement issues.

While many local authorities have taken up these powers, some have proven to be reluctant to do so. The Act will give reserve powers to Govt to direct local authorities to apply for civil parking enforcement powers

PART III: APPRAISAL

The White Paper “A New Deal for Transport” set out the basis of the New Approach to Transport Appraisal. This was more fully developed in the Guidance on Methodology for Multi-Modal Studies (2000). It is essentially a Multi-Criteria approach with five main criteria, (economy, environment, accessibility, safety and integration) for each of which there is a range of sub-criteria. For each of these there is detailed guidance on definition and measurement. An important element of the process is the requirement to provide an Appraisal Summary Table on a single sheet to aid decision makers, covering the five main criteria and the sub-criteria.

In addition there is a requirement to complete reports on Supporting Analysis which deal with such issues as equity/distribution, public acceptability etc etc.

The impacts can be reported as monetary values, quantified impacts or in descriptive terms. While this imposes problems in application,(see below) it does allow all relevant information to be recorded and taken into account, moving away from what was previously seen as an unduly narrow focus on the standard elements of cost benefit appraisal.

Rather than go through the complete approach in detail (it is available at the Webtag location on the DfT website) it may be of interest to discuss a number of specific issues which arise in the production and use
of appraisal, with special reference to Traffic Management. We must recognise that in many ways, appraisal is less well developed in the assessment of traffic management than it is in such areas as road and other major investment schemes.

Some pertinent issues for carrying out appraisal

Bias in Appraisal

The first such issue I would like to raise is that of systematic bias in transport appraisal. The main area where this manifests itself is, as widely recognised, in the estimation of costs. There is a large body of evidence and wide appreciation of the issue but little progress in dealing with it over a very long period of years as shown in the work of Bent Flyvbjerg and colleagues.

It is important to recognise that this issue is not really dealt with by risk analysis as conventionally understood, and to address why it is so prevalent and sizeable.

The approach in UK Treasury’s Green Book on appraisal methods was to require the application of an ‘optimism bias’ factor to all cost estimates, with the default values based on research into public sector projects which have been carried out over a number of years. The coverage of transport in this research was limited so we carried out further research to devise factors more appropriate to Transport.

One interesting idea to emerge is the concept of separate ‘inside’ and ‘outside’ views being recognised in setting cost estimates. In general the estimates and their risk assessment are dealt with by people who are close to the project, or to similar projects, and they fail to reflect the clear empirical evidence of systematic over-runs, which persist even when such ‘inside’ assessments have been carried out. The research suggests that there is a need to relate any estimates of bias to the precise process of decision making and also to recognise that while separate from Quantified Risk Assessment the two may be interconnected in practice.

What is clear is that this bias in cost estimation is a crucial factor which must be given more prominence in applications. We must recognise the forces which operate to encourage analysts to produce bias in their estimates.

In addition to bias on the cost side, there is clear evidence also from experience of systematic bias on the demand side, particularly in the case of public transport/rail appraisals.

Impacts and their valuation

Forecasting and valuing environmental impacts, and health effects, in particular, are major issues for appraisal. Also there are difficulties in respect of economic development and “regeneration” impacts. There is a great deal of work on these issues going on, not least in the EU research programme. I would like to discuss a few issues in relation to health, noise and wider economic impacts.

Health

The health impacts of traffic management, and of urban traffic in general, have received a great deal of attention. Values for prevented fatality and injury from accidents are well established and widely used. However there are questions on direct applicability of such ‘values of life’ for use in the assessment of pollution health impacts. This is due to a range of issues, for example:

- Acute air pollution deaths mainly among old
- Also among those in poor health
- Pollution may shorten life expectancy due to chronic (ie long term) effects
• May be different assessments of the level of ‘controllability’, which can affect peoples’ valuations

There are also many issues to do with epidemiology rather than economics

*Noise*

The noise effects of traffic are a factor in many traffic management assessments. There are in existence significant numbers of hedonic price studies (which estimate a value for noise impacts through their impact on house prices) but limitations exist at their transferability as the implicit values derived are contingent on the housing market being studied.

Thus there is a need to estimate demand function for quiet per se if possible if we are to be confident on being able to use values from one study elsewhere. A recent study in Birmingham did attempt to do so, with an element of success.

For road noise the Study estimated that a 1dB change ranged in value between £19 p/a for low income household in quiet areas to £105 p/a for high income households in noisy area.

*Wider economic impacts*

It is increasingly being recognised that congestion will impede the economic development of an urban area. More generally there is interest in the extent to which improved transport facilities can assist development of new areas or regeneration of deprived or socially excluded locations. However, I think it fair to say that there is no robust accepted relationship between improved accessibility and economic change – but no shortage, in applications and bids for funding, of what can only be seen as wildly optimistic forecasts.

Following the major report on Transport and the Economy by the widely respected Standing Advisory Committee on Trunk Road Appraisal we have put in place a requirement for appraisals to carry out an Economic Impact Report.[details are available on the DfT Webpage ] This is effectively a methodology for providing more robust employment forecasts in relation to transport proposals. It is recognised as a first step but it seems to have introduced some improved element of rigour into the process. An evaluation of its use is planned once the system has been in place for a couple of years

In addition there has been a great deal of study on “agglomeration” impacts of major transport spending and of their impact on property prices.

But must guard against double counting, as many of these wider benefits may simply be a reflection of time saving and other benefits already included elsewhere in our appraisal. But where there is an explicit objective for social or economic reasons to favour a given area or group this may modify this limitation

*Appraisal of traffic management*

The relevance of most, if not all, of the criteria in the Appraisal Framework is clear. In fact, a major critique of conventional appraisal has been that many of the benefits that are the objectives of traffic management are not included in standard appraisal. So, the argument goes, the appraisal is unbalanced as what is included is the main dis-benefit of time loss to road users. What the new approach to appraisal attempts to do is to provide a framework within which all such impacts can be reported, and that their inclusion is not constrained by our ability to value, or even measure, their precise impacts. This ensures both that such factors are taken into account and that this is done in as rigorous a way as possible, thus avoiding general claims that something is “good for the environment” or “good for the quality of urban space” or that it
“contributes to economic development”. Instead it requires a robust and, where possible quantified, estimate of the wider benefits in this case.

Thus, for example, in the Regulatory Impact Assessment of the Traffic Management Bill, in addition to the benefits of time savings and pollution reduction from better management, consideration was also given to wider non-quantifiable benefits including driver information. Also the Assessment makes clear that a fuller more detailed appraisal will be carried out for future regulations under the Act addressing all the relevant impacts.

As an illustration of the successful working of the NATA framework as applied to traffic management we have successfully presented to Ministers a number of completed Appraisal Summary Tables for Local Transport Major Schemes which have a dominant element of traffic management in their definition.

But we recognise that there are still limitations in our appraisal of traffic management proposals. Thus, for example, we do not have a model of the complete benefits from use of SCOOT and UTMC, though work has been carried out and current further research is going on. The main issue is, as mentioned above, the problem of getting ‘robust’ input to appraisal of those impacts which are not easily quantified and valued.

Some issues in use of appraisal for decision-making

Traffic Management policies are important for both National and Local strategies. Both policy and appraisal decisions therefore often involve different levels of Government as well as different levels of responsibility within them. One issue for appraisal is the extent to which the tools developed can be delegated within organisations and between levels of government.

Traditional ‘cost benefit’ provides such a tool in principle so there is a great advantage in getting maximum ‘monetisation’ of benefits. This will produce an incentive to enhance availability of such values. But there are limitation of coverage and timing will always persist and make direct comparison very difficult when drawing up a spending programme or even deciding on an individual project. And of course there persists the problem of getting agreed values for use both technically through research and philosophically among those who claim some impacts are not capable of being valued ‘in money terms’.

The position is even more complicated when the private sector is involved – something which is increasingly likely in the area of traffic management. One area where the future involvement of the private sector is likely to loom large is the provision of driver and other information. This raises many interesting economic and other issues for analysis, but that is a separate issue.

Evaluation

It always seems a sensible and desirable step to evaluate policies and project ex-post. However such studies can be very expensive. Also, many major evaluations lack a clear focus on why exactly they are being carried out. Among the possible objectives can be;

- to pass judgement on the original decision or policy?
- to provide evidence for future appraisals?

These different focuses can have implications for the structure and content of the evaluation study and for its cost.

Very often, even when the focus of attention is on the provision of parameters for future use, in reality many evaluations fail to provide robust or rigorous parameter estimates and by the nature of the studies may be unable to do so. Thus not only will they mainly produce ‘single values at best, but there is also the problem of creating a ‘counter factual’ basis, both in principle and in practice.
The Jubilee Line Extension Impact Study was extremely expensive and, while it produced some very interesting results there are remaining concerns about wider applicability.

We are less well supplied with thorough evaluations of traffic management policies, though there have been a number of “impact studies” (such as the London Red Route initiative) and a very extensive analysis of the impact of Congestion Charging in London is being carried out by Transport for London.

CONCLUSION

The wider approaches to appraisal which are represented by multi-criteria analysis do have the potential of improve our appraisal of traffic management proposals in a way which reflects the kinds of social, environmental and economic objectives and perceptions which lie behind much of the policies aiming at achieving a more balanced structure of demand across modes.

The challenge is to continue to improve our ability to define, measure and value those impacts which are often the main objectives of traffic management but which are not part of the conventional cost-benefit analysis of transport.