

Commission on Travel Demand

Evidence Session Five

Planning, Infrastructure and Demand

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Commission on Travel Demand

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Summary

Planning for less car dependent cities

The work by Ralph Buehler and colleagues described the practical and political processes that had been followed to allow Vienna to achieve a reduction of 13% in car mode share between 1993 and 2013. The change has been achieved through a consistent long-term vision being applied which has allowed for a significant increase in public transport provision and quality whilst simultaneously managing the impacts of the growth in car ownership through expanded parking management and extensive area wide traffic calming. The Metro system has doubled in length since 1990 and the number of seat-kilometres provided has increased by 75% on all public transport. Fare income covers 55% of overall operating costs with the remainder provided by state subsidies to students and older users, a share of federal income tax and a city public transport tax per employee. An annual public transport pass has recently been reduced in price to €365. The expansion in parking management zones has been in stages and each area has been approved through local referenda. Parking is charged and limited to two hours for non-district residents. There is a large area of the city covered by 30km/hr traffic calmed zones.

Aud Tennøy presented the current policy position in Oslo. The largest Norwegian cities all have a target for zero traffic growth which has remained in place across different political administrations. Increased demand needs to be absorbed by public transport, cycling and walking. This is reinforcing the densification of land-use and the creation of 'nodal points' which have more intense development around public transport hubs further out from the centre of Oslo. Early evidence suggests that nodal points do reduce car based travel but not as much as more intense urbanisation of the central areas of Oslo. A recent development has been the establishment of the largest car free city centre area in Europe. This has removed street parking, restricted thoroughfare and set aside designated spaces for deliveries. There has been investment in improved urban realm. Overall there is a narrative of tackling traffic in Oslo but there remain tensions, particularly between the outer areas which campaign for improved car commute conditions into Oslo and central Oslo. The debate has been heightened recently by a set of enforced tunnel capacity restrictions for essential maintenance. What delays have resulted have been limited and quite tolerable to travellers. This has led to a plan to convert one lane of traffic to a public transport lane during normal operations. By contrast, there is also a stated commitment to a major capacity enhancement on one part of the highway network. It was suggested that planners have assumed that most people wanted a car based lifestyle but this seems less true now. It was also suggested that both the tunnels and the city centre restrictions showed that transport assessment tools are not able to deal adequately with capturing the impacts and benefits of capacity reductions. Whilst new planning goals exist, old car based planning logics persist with some practitioners and decision-makers.

Looking across the two presentations it was clear that, with sufficient long-term commitment, it is possible to plan for and deliver vibrant and less car dependent cities. In both cities there was good before and after data, transparency of the results and public involvement in some of the key decisions. The Norwegian national government is now awarding its funding to cities on the basis of what they see as necessary to achieve zero traffic growth. This is entirely different to the UK system of assessing the benefits of large schemes on a scheme by scheme basis. The examples suggest that deliberate planning for less car dependent cities is feasible and consistent with vibrant and growing cities.

There was a discussion of what these experiences told us about how to measure improvements in transport. It was suggested there remains a focus on congestion reduction. It was suggested that it is impossible to imagine a large city without congestion and so this metric is not really helpful or informative. Even those cities with congestion pricing schemes still have congestion. This means that the focus of policy might be better targeted to how best to accommodate the economic and social flows in the city. What sorts of metrics should we be using to capture what matters to travellers and to the overall health and well-being of cities?

Infrastructures and Demand

Three presentations were given on cycle infrastructure in London, the Strategic Road Network and experiences in forecasting rail demand changes. The aim of the batch of presentations was to understand recent evidence about how infrastructure provision was changing demand but also to look at common and distinct challenges in understanding demand change. The context of the presentation by Transport for London was the Mayor's commitment to increase travel by public transport, walk and cycle to 80% by 2041 from 64% today. Highways England shared their developing analytical capability and how they are approaching developing the case for investment for the Roads Investment Strategy 2. Jim Steer reflected on different types of assessments on the rail network over time and what the challenges were in the use of forecasting.

We observe that there exists a significant variation in what is known about the impacts of investments across different modes. Highways England (and the Highways Agency before) hold a significant database of assessments of pre and post scheme opening estimates and outturn data on traffic volumes. The rail sector also has significant data on investment projects and service improvements, although this is more fragmented and sharing is sometimes limited due to commercial sensitivities between franchises. Transport for London are early on in their programme of trying to understand the impacts of a step-change in provision of cycling infrastructure.

The experiences of Transport for London to date suggest that around a half to two-thirds of the growth in cycling can be explained by traditional push-pull factors such as convenience, costs and perceptions of safety. This leaves a significant proportion of the reasons for growth unexplained. These could relate to broader systemic adaptations such as better employer provision of facilities or general perceptions of cycling.

Highways England pointed to the continued growth in traffic on the Strategic Road Network (SRN). 2015/16 had seen growth of 5.7% in van traffic, 1.1% in HGV traffic and 2% in car traffic. The majority of journeys on SRN are long distance with 20% of trips that access the SRN spending less than 5km on a motorway. 68% of all lorry miles driven were on the SRN. A significant amount of the growth in car traffic on the SRN has been long distance leisure traffic. Assessments of different types of scheme openings (widening, junctions and bypasses) in recent years has shown that 15% of schemes had some induced traffic compared to 39% of schemes where that had been forecast.

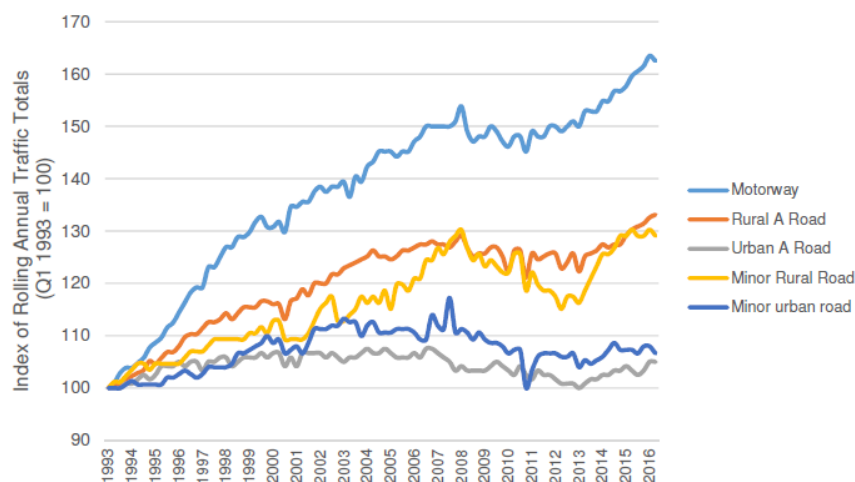
Jim Steer summarised the key points from his [written submission](#) to the Commission. Over a thirty year period it is possible to reflect on a variety of factors that have changed substantially but which our approaches to forecasting pay little attention to. For example, the significant reductions in rail travel by service personnel, the change in use of rail for business across a wider segment of the

population and the growth in long-distance leisure. Over a period of 11-12 years from 1995 for example, the rail market share of all travel over 25 miles grew from 8% to 14% which had not been anticipated. There are real difficulties in reconciling some forecasts with outturns because they are predicated on land-use change (e.g. new housing) which might not appear or fail to take account of major land-use changes which occur through the new schemes. There are also some uncertainties which are difficult to incorporate but which will matter significantly. Two areas where evidence is now difficult to interpret are the impacts of fares due to the sheer complexity of the fares system and the impacts of investments where the network is over capacity.

Looking across the three presentations the following key discussion points were raised about what knowledge on change:

- Freight remains a major blind spot. Our understanding of freight flows both in the light and heavy goods market is limited. The HGV market could be significantly impacted by Brexit. The LGV market is growing rapidly yet it comprises a very diverse set of uses.
- There is growth in long-distance travel on road and rail. Our understanding of long-distance travel through the National Travel Survey is however relatively limited. Factors such as seasonality become still more difficult to understand. Leisure and visiting friends and family are quite broad categories of trips which do not help in understanding what is changing.
- There appears to be a need to better understand how people adapt to situations of overcrowding and significant congestion.
- Some types of investment are likely to make sense in a wide range of futures (e.g. urban rail) whilst others might be more sensitive to trend changes.

It was observed that the understanding of demand change across sectors and at the interface between local/regional and national networks felt disjointed. The chart below demonstrates this at the urban-motorway level as seen in other evidence from [Transport for Greater Manchester](#) and [Bristol City Council](#).



DFT, Road User Statistics 2016

It was suggested that the National Trip End Model may not be best suited to understanding these kinds of regional differences. At a national scale the NTEM was seen to be a valuable tool but a more

disaggregated approach to understanding demand at a regional level within some kind of overall national framework was suggested to be important.

The implications for understanding travel demand in the future were also debated. The Department for Transport's scenario with no future association between income growth and travel growth per capita still shows significant growth in road traffic as there is substantial population growth and forecast reductions in the cost of motoring as technological improvements play through the fleet. There was discussion as to how the scenarios are derived and what they represent. Falling motoring costs from technological improvements is, for example, a policy choice but appears in all scenarios as a core assumption. It was noted that there remains a bias within decision-making to focus on the outcomes from the 'central forecast' so what that comprises still matters a lot despite arguments around the additional use of robustness and uncertainty testing.

There is a critical distinction to be made between sophisticated trend based extrapolation of demand futures, possible future scenarios and policy led visions. It was noted that, in the Oslo case where the policy objectives are set for zero road traffic growth, the question becomes what needs to be done to achieve that and the actions are about how to deliberately steer demand. This is similar to the London sustainable modes target. This is quite a different approach to that which is adopted at a national scale in the UK currently.

Planning for growth

The final three presentations focussed on how planning for housing growth occurs in England. Stephen Joseph shared an overview of what is known about the relationships between accessibility and mobility. More mixed use developments with good public transport accessibility and permeable and high quality walking and cycling links are all known to contribute to reducing reliance on the car. Higher densities also support more people being able to access public transport. These factors are well known but have become deprioritised since the development of the National Planning Policy Framework. Jenny Raggett presented preliminary findings from the Transport for New Homes project which was examining what actually happens in new housing developments. This includes factors such as the quality of build, urban realm, accessibility and car access. The study involves talking to people about what it is like to live in these areas. Some headline conclusions included:

- Development funds are channelled into improving road capacity around the site;
- There are very low levels of amenities and local employment;
- Very large supermarkets which are primarily accessible by cars are the nearest food stores with local centre shops being very poor or absent;
- Developments are located in places that are very hard to reach walking or cycling. Cycling facilities are disconnected from the main network; and
- Analysis by University College London shows that they are mostly located where people use their cars the most.

Whilst not all of these were true of all developments, the findings suggest that many of the factors known to contribute to reducing car dependence are missing from the new sites.

Keith Mitchell shared his insights from working with many developers in different contexts around the UK drawing on his [written submission](#) to the Commission. His evidence highlighted that whilst there is significant pressure from government to deliver more houses and economic growth that

development planning is failing to deliver good growth. Keith suggested that current guidance and practice essentially hardwires in a view that transport in new developments is essentially about accommodating increasing demand for car. Whilst it would be better to provide less opportunity for car dependency this does not happen to the degree it could or should. It was felt to be important to acknowledge the limits to the financial contributions which developments might put in to transport improvements. However, when faced with an either/or car/sustainable transport dilemma the decision-makers were often pushing for the car based option. Keith highlighted a need, across the profession, to gather better knowledge about less car dependent developments that work for both the users and the developers and to [share these lessons](#) more widely with politicians.

The discussion explored the reasons behind why so many housing developments were not delivering less car dependent outcomes. It was noted that some developers took a longer term view of creating value for their development sites and were more open to building better communities. There were however too many sites being made available to development which were likely to lead to more car dependent communities. There were many hidden costs to the public sector beyond transport of planning car dependent developments.

There is an increasing divergence between urban cores, where there are strong signs of growth with lower car use and peripheries that are still operating in a car dependent way. Greater thought as to how to deliver the transport needs of the more peripheral areas in a more sustainable way is needed.

Summary Reflections

Three areas emerged from the overarching reflective discussion. The first relates to how planning is done. Here, there was significant support for the planning task to be much more firmly connected with outcomes rather than being driven by process. There was a perceived need for planning to be about having a clear vision and using the vision to shape things to make life better for the community.

However, there are some important institutional, cultural and skills related barriers to be overcome to make different kinds of decisions. As the Vienna and Oslo examples showed, a long-term approach can deliver a different and less car dependent pathway for growth. But it requires political commitment and a willingness to experiment. This does not mean disposing of analytical tools and techniques but using them to inform analysis rather than as a constraint on decision-making and the Commission was asked to reflect on these.

A final related point relates to the processes of knowledge generation and what gets accepted as knowledge. Doing new things produces different and often surprising outcomes (e.g. there was more bike traffic from new infrastructure than traditional factors would have suggested in London, closing roadspace in Oslo did not create unacceptable chaos). Some longer term trends have changed markedly (e.g. travel in urban centres becoming less car dependent and rapidly rising leisure travel, new road schemes have created less induced traffic than had been expected). The theme of how to treat changing travel demand trends and their importance to decision-making is also something the Commission will return to in its final deliberations.

Acknowledgments

The report was assembled by Greg Marsden based on the rapporteur notes provided by Ersilia Verlinghieri. The workshop participants are gratefully acknowledged for their contributions. The report is agreed as a summary of the meeting by the Commissioners and we are responsible for any omissions or factual errors.

In attendance at Evidence Session Five:

Alice Crossley, Group Leader - Performance Analysis and Modelling, **Highways England**

Aud Tennøy, Chief Research Planner, **TØI Norway**

Elaine Seagriff, **CH2MHill**, Commissioner

Ersilia Verlinghieri, **University of Leeds and Oxford University**, Commission Rapporteur

Professor Greg Marsden, Institute for Transport Studies, **University of Leeds**, Commission Chair

Greg McClymont, Urban Transport, **National Infrastructure Commission**

Jenny Raggett, **Campaign for Better Transport and Transport for New Homes**

Jim Steer, **Independent Practitioner**

John Dales, Director, **Urban Movement**, Commissioner

Julian Laidler, Senior Development Officer, **Transport for Greater Manchester**

Katherine Blair, City Planning, **Transport for London**

Keith Mitchell, Chairman, **Peter Brett Associates**

Mark Ledbury, Deputy Director, Transport Appraisal and Strategic Modelling, **Department for Transport**

Dr Nicola Spurling, Institute for Social Futures, **Lancaster University**, Commissioner

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