



# Department for Transport

From the Permanent Secretary

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4 March 2019

**Professor Greg Marsden**  
**Chair of the Commission on Travel Demand**

Dear Greg,

## Commission on Travel Demand recommendations

Thank you for your letter of 24<sup>th</sup> January. I very much enjoyed meeting you and discussing the work of the Commission on Travel Demand at ITS Leeds last autumn.

My Department welcomes the Commission's work published in the All Change report as a valuable contribution to the debate about future travel demand and how transport planning and policy making should tackle the increasing uncertainty about the future of transport. These are issues of real importance to the Department and, as you note, since All Change was published we have taken a number of steps in forecasting and appraisal which have made progress in areas highlighted by the Commission.

In particular, we published a new set of Road Traffic Forecasts<sup>1</sup> in September 2018, which has built on the approach taken in the previous 2015 forecasts to extend the use of scenarios to capture a broader range of uncertainty about the future of road travel. The forecasts also presented initial exploratory work to understand the potential impacts of Connected and Autonomous Vehicles (CAVs) on road traffic demand using our existing modelling tools. During summer 2018 we also consulted on a new Appraisal and Modelling Strategy (AMS), with one of the main themes focused on Reflecting Uncertainty over the Future of Travel. Responses to the consultation confirmed that this is regarded as an area of considerable importance across the range of our external stakeholders.

I attach our response to the recommendations made by the Commission, focusing on those within DfT's remit. We recognise that the recommendations are not made to DfT alone and that there is an important role for us in working with other organisations to take forward work in these areas and we welcome your offer to work with us in doing that.

We very much look forward to contributing to and engaging with the work of the Commission as you take forward further inquiries into areas of mutual interest.

Regards,

**Bernadette Kelly CB**  
**Permanent Secretary**

<sup>1</sup> <https://www.gov.uk/government/publications/road-traffic-forecasts-2018>

## **DfT response to the Commission on Travel Demand recommendations**

The Department welcomes the Commission on Travel Demand's 'All Change' report and its contribution to the wider debate around how we forecast future travel demand and take account of uncertainty in transport policy and planning.

We particularly welcome the report's focus on the existing evidence around drivers of travel demand and its identification of the gaps in our understanding that still exist. Some of these gaps we are already working to fill, for example through current research underway on ageing and transport; while others, such as the importance of better modelling of freight movements, have been identified as longer-term priorities. We have also recently published quantitative analysis of the key drivers of car travel 'Car Travel Econometrics'<sup>2</sup> which presents internal analysis we have done in this area. While we continue to work to fill gaps in the evidence base around travel demand, we would also welcome new evidence and research commissioned externally in this area.

The Department published a new set of Road Traffic Forecasts<sup>3</sup> in September 2018 (RTF18), which has built on the approach taken in the previous 2015 forecasts to extend the use of scenarios to capture a broader range of uncertainty about the future of road travel. RTF18 also set out the results of modelling tests which explore the potential impacts of Connected and Autonomous Vehicles (CAVs) on road traffic demand using our existing modelling tools. This was a first step in understanding the capability of our current models in capturing impacts of future technology and considering which drivers of road traffic may be affected by uptake of CAVs, and the forecasts acknowledged that we will need to update our modelling capability as the evidence base around new technology develops in order to better forecast its impacts.

In summer 2018 we also published a consultation on a new Appraisal and Modelling Strategy (AMS) which included a chapter on Reflecting Uncertainty over the Future of Travel. Responses to the AMS reinforced the importance of developing a better understanding of the drivers of future travel demand and developing tools and methodologies for reflecting uncertainty in appraisal and informing decision making. Our forthcoming response to the consultation and the resulting strategy will set out how we intend to take forward work in this area, focusing on actions we will take in the short and longer term, and areas where we hope to work further with our partners and external stakeholders to fill evidence gaps and develop new tools and methodologies.

We recognise that the Commission's specific recommendations are not aimed at DfT alone and in considering these further we will need to work closely with other organisations which have a role in these areas. As such the responses below provide the DfT perspective on the recommendations and suggest areas where we consider further engagement with our stakeholders will be required. We would be keen to work further with the Commission to engage with those organisations identified to explore the potential for taking these recommendations forward.

### **Recommendation 2: Travel demand futuring tools should be open source**

We recognise the need to ensure our forecasting methods are transparent and the benefits of making the Department's tools more transparent were also highlighted by respondents to the Appraisal and Modelling Strategy consultation. In particular, it was felt

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<sup>2</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/751449/car-travel-econometrics.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/751449/car-travel-econometrics.pdf)

<sup>3</sup> <https://www.gov.uk/government/publications/road-traffic-forecasts-2018>

that opening up the data in our national models would help authorities better understand the assumptions underpinning them and support more detailed scenario analysis. As part of our strategy, we will consider the options for improving access, including the possibility of making models open source, and the associated potential benefits and issues.

In 2017 we took delivery of a recalibrated version of the National Transport Model and we are currently undertaking a work stream with the intention of making this model much more transparent to our stakeholders. The emphasis of this work is to test the model through techniques such as stress-testing and back-casting, in order to fully understand the strengths and weaknesses of the model. This is intended to make the articulation of model uncertainty more refined, and to allow transparency as to the analytical assurance of different types of analysis required of the model. We have also commissioned a peer review of the model, which we shall publish, in order to better describe how the model operates and provide assurance as to its quality.

We are also in the process of developing the next version of the National Transport Model (NTMv5). The new model is being developed on an industry standard platform which should help facilitate greater understanding of the model itself.

In the meantime, the recent Road Traffic Forecasts provided an evaluation of previous forecasts as well as clearly setting out the assumptions underpinning the new set of scenarios. We will continue assessing how the tools and assumptions we use can be made more transparent, including the potential to develop open source futuring tools in future.

### **Recommendation 3: There should be greater devolved input to demand futures**

We recognise that local areas want to reflect local conditions and uncertainties in the analysis which supports scheme appraisal and TAG Unit M4 currently enables schemes to undertake local scenario analysis in their appraisal work. The Department's forecasts of trip ends produced using the National Trip End Model (NTEM), and accessed through the TEMPRO software, are anchored by projections for key inputs produced by national bodies, and are used to ensure scheme appraisal is undertaken on a consistent basis.

We will continue to work with our external partners to understand the key uncertainties that they wish to test, and where relevant, to drive greater consistency in the assumptions underpinning scenarios used in scheme appraisal across the country. We will also consider how we might draw data better from local authorities to feed into updates to the assumptions in the model.

### **Recommendation 4: A longer term ex-post evaluation database should be established**

As the Commission's report acknowledges, we have developed a Monitoring and Evaluation Programme to increase the quantity and quality of ex-post evaluation evidence for our activities. The latest annual update of this covers 28 priority programmes and projects. While the first five years post-opening is the main focus of this work, as this is when the main impacts of schemes tend to be observed, the option of looking at longer-term impacts will be considered where it is clear that there is more to be learned.

Our evaluation work will also help us to learn early lessons to support adaptive policy making, especially where new technologies and mobility services are involved. We are also working to build stronger links between appraisal and evaluation so that appraisal learns from and builds towards better evaluation evidence.

### **Recommendation 5: There should be a shift to adaptive decision-making approaches**

We are working towards embedding the use of different futures tools, including scenarios, during the different stages of scheme development, and more rigorously testing and reporting the impact of uncertainty on scheme appraisal. As part of that wider work during 2018-19 we are piloting the use of a common set of scenarios which can be used to test the robustness of strategic transport schemes.

Responses to the consultation on the Appraisal and Modelling Strategy also highlighted alternative approaches to decision making under future uncertainty. This is an area which we will consider over the longer term. We are keen to learn from local experiences of more adaptive decision-making processes to understand how these can be applied in practice.

Our work to consider future uncertainty in modelling and appraisal work is closely aligned with our central programme of futures work within the Department, which aims to ensure uncertainty is rigorously assessed at all stages in the life-cycle of policy and delivery across DfT. It will enable DfT to be in a position to take advantage of the opportunities and benefits offered by new and emerging technologies and business models, whilst understanding the risks and how to avoid them.

### **Recommendation 6: Assessment tools and methods need to be simplified**

Following the publication of Road Traffic Forecasts 2018 we will also consider what tools are most appropriate for better understanding uncertainty and exploring 'what if' scenarios, both for strategic forecasting purposes, but also in the appraisal of transport schemes. We believe this is particularly relevant at the early stages of the decision-making process and when options are being developed. We are keen to learn lessons from the work of others in this area and to consider what guidance may be required to ensure simpler tools and models are sufficiently robust to inform decision making at those early stages.

### **Recommendation 7: The Carbon Budget implications of different futures should be published**

The Government set out its plans to meet the first five carbon budgets in the Clean Growth Strategy. This showed how improvements in vehicle technology and the uptake of ultra-low emission vehicles could reduce emissions from the transport sector despite growth in demand.

While the Department's published Road Traffic Forecasts present the emissions impacts associated with different demand futures under specific assumptions about fleet composition, they are not directly used to consider carbon budget implications of policies which are analysed in the context of emission reductions across the whole economy. We recognise the importance of understanding the implications of different demand forecasts

on the reductions needed to meet our carbon targets and will work with the CCC to consider how best to do this

**Recommendation 9: A set of ‘green growth’ city futures should be established**

The Department agrees that integrated planning is required to ensure housing developments promote green and active lifestyles. Pilots are a good option for doing this. Lessons can also be learned from London, where authorities are planning for 1 million more inhabitants. We have also launched the £2.5bn Transforming Cities Fund to tackle congestion through improved public and sustainable transport across English cities.

**Recommendation 10: A new accounting procedure should be established to make the transport implications of non-transport policies transparent**

The Department is committed to working across government to ensure the transport impacts of policies are taken into account. This is reflected in how we have worked together with MHCLG to ensure that sustainable transport considerations come through much more strongly in the revised National Planning Policy Framework, encouraging planners to think about sustainable transport at an early stage and to engage with the right infrastructure providers so that it can be carefully considered and reflected in their plans.

The Housing Infrastructure Fund (HIF), is also a good example of our work with MHCLG to share intelligence and expertise. DfT have been involved throughout the development of HIF schemes, and assess the transport implications of each business case to support investment decision making. We are in the process of designing the evaluation for HIF, which will provide further useful evidence on the transport implications of new housing.