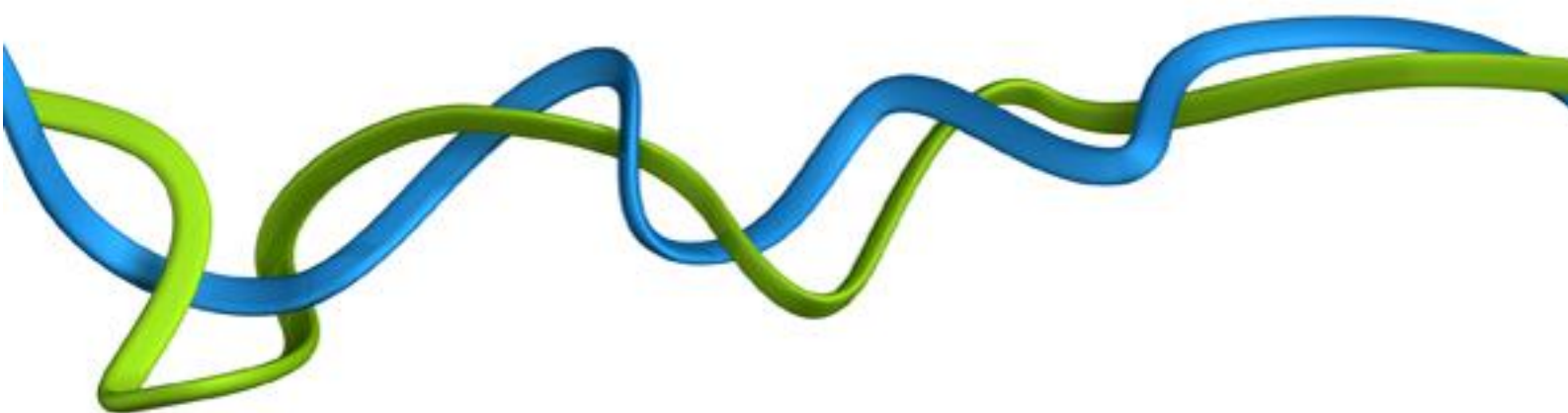


**Response to the inquiry on the Draft National Policy Statement
for National Networks**

House of Commons Transport Committee



This evidence is submitted by the Royal Academy of Engineering. As the UK's national academy for engineering, we bring together the most successful and talented engineers from across the engineering sectors for a shared purpose: to advance and promote excellence in engineering.

The views described in this response were assembled through consultation with our Transport Community of Practice, comprising transport professionals from industry and academia. The Academy is currently undertaking an extensive study into the problem of transport congestion in the period leading to 2030, taking evidence from experts on the range of engineered solutions and policy interventions that could help reduce the problem. Our report is due to be published in June 2014 and the emerging findings from the process have informed this response.

The response below reflects a submission made by the Royal Academy of Engineering to the Department for Transport on the same subject.

For more information about the report, or to speak to Academy Fellows about its recommendations, please contact joe.chapman@raeng.org.uk.

Has the government identified a compelling need for development of the national road and rail networks and of strategic rail freight interchanges?

1. The Draft National Policy Statement for National Networks clearly establishes a compelling need for the development of the UK road and rail network. The Royal Academy of Engineering recognises the problem that congestion and crowding on the networks cause now, and the extent to which the problem could become much worse as a result of population growth and increases in per capita GDP. As referenced above, the Academy is currently undertaking an investigation into congestion and the range of policy responses and engineered technologies that could help mitigate the problem.
2. The Academy recognises the role that good transport infrastructure plays in facilitating economic growth. In a competitive global economy, where financial and human capital are becoming increasingly mobile, we recognise that a good transport infrastructure becomes relatively more important as a means by which to attract inward investment from business.
3. The Academy recognises the other functions of transport infrastructure which are referenced in the draft policy statement: the role it can play in supporting societal wellbeing, through connecting communities, and the contribution which a more environmentally friendly transport system makes in reducing carbon emissions. The Academy supports a policy position which seeks to balance these concerns alongside the role transport infrastructure plays in facilitating economic growth.

Does government policy on the development of the national road and rail networks, and the investment programme relating to the road and rail networks, meet that need?

4. The need for government intervention in order to reduce the problem of congestion is well understood by the Academy. We concur that, on the basis of present research, it is not obvious that advances in information and communication technology are likely to replace the need for physical travel at a national scale. We therefore endorse a strategy that seeks, as part of its response, to manage forecast growth in the rail and road sectors by increasing their physical capacity to supply that demand.
5. However, the emerging findings from our study differ from the course set out by the government in the draft policy statement. Our comprehensive findings on this will be published later this year; however, the forecast level of growth and congestion on the national networks is likely to need to be met by a policy response incorporating demand and supply-side measures, the utilisation of technologies and government regulation. We question the existing position that forecast growth can be met purely by a combination of maximising existing capacity from technologies and investing in the additional supply of roads and rail track. We recommend that the government considers the potential for demand-side measures to contribute towards congestion reduction and plug the gap which we envisage will emerge from the action presently being proposed.
6. The Academy is concerned that the growth in congestion which is predicted by the government in the period to 2030 represents a severe problem in and of itself. Existing evidence points towards the UK already having comparatively worse congestion than a number of international competitors. It also points towards the nation's transport infrastructure being seen as comparatively less attractive than that of competitors – potentially making it a relative disincentive for inward investment in to the UK. Given this evidence, we question the implication of allowing a 71 per cent increase in congestion on the strategic road network to the country's economic prospects.¹
7. On this basis, and given the need to substantially reduce congestion in the period to 2030, we question a policy response which is based on a combination of building additional supply and maximising capacity from available technologies. The length of time it takes to implement projects such as High Speed 2 reveal that, irrespective of the long-term gains new infrastructure will yield, it will not be brought on stream quickly enough to make a difference in the short-term.

¹ See, for example, the INRIX U.K. Traffic Scorecard, CBI/ KPMG infrastructure Survey (2012 and 2013), and the World Economic Forum's Global Competitiveness report (2012)

8. Moreover, our own assessment of the available technologies in the period to 2030 is that they are likely to make a contributory rather than transformative impact; they will need to be harnessed as part of a comprehensive policy response which supplements their impact with demand and supply-side measures.
9. In the long term, the Academy supports a systems approach towards the development of the national networks, which considers rail and road infrastructure as part of an integrated national transport strategy incorporating aviation and shipping. However, we also recognise the deficit in time which exists between implementing this long-term vision and the short-term measures needed to reduce the urgent pressure from congestion.
10. Presently, the draft guidance makes only general reference to the technologies the DfT thinks will play a substantial role, referring on page 24 only to "improvements and innovations in travel data and information systems, intelligent traffic management and increasing levels of vehicle automation". We would welcome a full appraisal of the technologies and systems the government feels will be able to help substantially reduce congestion and stand by to share our own findings and provide further advice to the government should it be requested.
11. The statement is similarly non-specific in its reference to the new infrastructure that could be built to enhance the strategic road network. In order to develop a more compelling strategic vision for that network, the Academy feels that specific proposals should be laid out by the government as soon as possible, and discussed in terms of their ability to reduce congestion. Please refer to points 16 and 17 on the need for a more strategic vision.
12. We question the rationale behind a policy which simultaneously rules out the introduction of national road pricing to manage demand on the existing strategic road network because of "deliverability and public acceptability grounds", while still "(considering) tolling as a means of funding new road capacity on the strategic road network".
13. We question whether the public will draw any distinction between the 'acceptability' of tolling existing roads compared to the acceptability of tolling new roads, and seek greater clarification on the inclusion of this statement in the government's strategic position.
14. We repeat our earlier assertion that a package of measures is likely to be needed to reduce congestion: a package that incorporates the benefit of demand-side measures at a national scale in order to close the deficit which we envisage will otherwise be left by the impact of the existing response.
15. The Academy's position is that congestion (whether on the roads or

expressed as crowding on the rail network) is fundamentally an economic problem where demand for a given service exceeds supply. In this scenario, demand-side measures have to – in theory - be able to play a significant technical role in resolving the problem. Ruling them out on the grounds of external factors will result in a negative consequence from the cost imposed by their absence. We believe this should be properly calibrated into the government’s long-term vision and calculations over the financial sustainability of this plan.

16. The Academy supports a full investigation into the technical feasibility and economic impact of road pricing and the consequence which omitting pricing from the problem of congestion will result in. By reducing congestion, a high-performing transport infrastructure can facilitate greater productivity by improving the speed and reliability of journey times for people and freight. It is important that any such investigation into road pricing - and its ability to reduce congestion - distinguishes between the economic function of speed and reliability in journey times. The Academy believes that improving the reliability of journey times, in particular, could yield real economic gains through enhanced business efficiency.
17. Without this evidence, and a full account of the true costs of the course of action being proposed, the strategic and technical robustness of the policy position being advocated becomes susceptible to criticism. This in turn runs the risk of inviting criticism over the statement in the document, that “strategic alternatives (to substantial enhancement to the roads and rail network) do not need to be assessed by the Examining Authority when examining a project or the Secretary of State when taking a decision”.
18. On the point about the Examining Authority not needing to consider alternative models for developing the national networks, the Academy appreciates the need for swift action to deliver on infrastructural requirements, in order to ensure the physical sustainability of the networks and to enhance the country’s international competitiveness for inward investment. However, we are concerned that the present position lacks the technical soundness and robust strategic vision capable of suppressing criticism that alternatives should be pursued.
19. As part of its sustainability criteria for the national networks, the government has set out the need to encourage active modes and a commitment to “invest in developing a high-quality cycling and walking environment”. The Academy recognises the benefits of encouraging active modes, such as promoting healthier living and helping to reduce emissions.
20. However, if the government’s overwhelming strategic priority is to reduce congestion because it inhibits economic growth, it is not obvious how this can be easily reconciled with the promotion of active modes. Encouraging mixed use of road space, for example,

could limit the optimal flow of freight traffic and risk hindering mass transit forms of passenger transportation required to provide the high capacity capable of accommodating rising demand.

21. The Academy would like to make ourselves available to the House of Commons Transport Committee, should it be considered necessary, in order to discuss our own work pertaining to the technologies which can help reduce congestion. As set out above, our report is not expected to be published until the summer. However, we stand by to feed into your own inquiry at the appropriate time.