NATIONAL INFRASTRUCTURE ASSESSMENT - PROCESS AND METHODOLOGY

CUSP Evidence Submission

Guildford, 25 July 2016

The methodology for carrying out the National Infrastructure Assessment is a crucial concern for anyone concerned with the achievement of sustainable development in the UK. We do not believe that the proposals set out in this consultation document fully take that on board. Infrastructure development in this country has been subject (as the document states) to a "fragile and incomplete political consensus."

The achievement of such a consensus is largely dependent on the taking into account of environmental factors, which are often the basis for successful and/or widely supported objections to infrastructure development proposals.

The Centre for the Understanding of Sustainable Prosperity (CUSP) is an ESRC-funded research programme concerned with sustainability and its implications, at all levels, from individuals' understandings of their own "prosperity" to global questions such as climate change and the implementation of the UN Global Goals for sustainable development (SDGs).

Responses to questions

1 | The Commission will need to consider 'big picture' global factors affecting the UK, such as climate change and food security, and not simply issues internal to the UK economy. In particular, it will need to explore fundamental questions for economic analysis and policymaking such as the challenges of "secular stagnation" and "limits to growth", rather than assume that OBR and Treasury long-run forecasts for GDP are necessarily reliable.

The Commission should also be aware that quality of life, international competiveness and economic growth are not synonymous. For example, there is a substantial body of research showing that economic growth is a poor indicator of quality of life, and may even undermine quality of life. Consequently the Commission will have to make decisions that trade these factors off against each other. Any methodology will need to be able to account for these trade-offs.

2 | We fully endorse the idea of a "whole system approach, understanding and studying interdependencies and feedbacks", which is the approach we adopt for our own research. The key question this raises is: what are the boundaries of "the whole system"? For infrastructure planning, this should include land and water availability, ecosystem services, and climate trends. Land, water, biodiversity and carbon should each be considered in terms of an "envelope", rather than the fiscal envelope providing the only sense of limits to development.

We suggest the Commission should explore whole-system frameworks for the analysis and operationalisation of sustainability, such as the Planetary Boundaries approach developed by the Stockholm Resilience Centre and other research institutes over the past decade. Infrastructure planning also requires a full and robust consideration of societal concerns that are broader than purely fiscal or economic issues. Such issues are highly contested and value based, and are likely to be the biggest source of complexity and uncertainty in the planning process. As a result broad societal concerns are often the issues that are hardest to incorporate into formal analysis. Nevertheless they should be an essential component of any future infrastructure plan.

3 | The Commission should avoid any methodology which automatically points to an emphasis on building new infrastructure when there are other possible responses to the trends being identified. Many of these focus on managing demand, for example through the use of economic instruments such as water metering or auctioning off a limited number of aircraft take-off and landing permits. We note that demand management is only mentioned once in the discussion of the sectors, and would stress that a broad range of demand-side strategies should be considered across all sectors.

In order to capture as many of the interdependencies between the sectors as possible the Commission should consider participatory methodologies. Different stakeholders have different experiences with each sector, leading to different perspectives. Exploring the sectors using diverse groups is likely to identify many more inter-linkages than a more highly focused and technocratic exercise.

4 | This question of infrastructure versus other options may cause difficulties for the Commission, because if there is a focus on waste disposal infrastructure, for example, that may lead it to not properly considering waste minimisation as an alternative approach; or if there is a focus on building power stations, the aim of improving energy efficiency may be played down. The Commission will need to find ways, through its methodology, internal organisation, and stakeholder engagement, to ensure that all significant options are properly explored.

5 | Infrastructure and housing are interdependent, and the Commission will need to take into account the widespread need for affordable housing, as distinct from luxury developments and housing as a form of investment for overseas buyers. The relative importance given to different varieties of housing will help to shape the pattern of infrastructure. The assessment methodology should be sensitive to this.

6 | The issue of "evaluation and appraisal methodology" should include a consideration of the way in which discount rates generally imply a relatively short-term time horizon for considering costs and benefits, rather than the 30-year horizon envisaged by the Commission. It is unclear how the objective of improving quality of life is captured in this outline of cross cutting issues.

7 | In the way that "governance and decision-making" is described here, there is too little emphasis on the rights, needs, and opinions of local people, and the roles and responsibilities of local planning authorities, with an implication that the Commission will be acting to increase the powers of central government. This question should be considered carefully and explicitly, particularly if consensus is to be sought.

8 | The approach outlined by the Commission appears to underplay the socio-economic nature of the infrastructure system. Socio-economic systems are value driven and often highly contested. Consequently modelling efforts should represent multiple perspectives, preferably through participatory scenario development. Ideally this would take place with a wider range of stakeholders and at an earlier stage than is outlined in this consultation document.

This would ensure that a broad range of values and system understandings are captured at the start rather than the end of the modelling process. We agree with the Commission that models are necessarily partial representations of reality. Alternative models make different assumptions and often emphasise different elements of complex systems. Therefore, using and contrasting multiple models often generates useful insights and allows for more robust exploration than a single model.

The central role of "drivers" in the approach outlined here implies that an assessment of the "need" for infrastructure can be derived from information about likely future trends. However, these trends are often the result of responses to existing infrastructure provision, relative prices, etc, at the level of individual firms and households. It would be mistaken simply to aggregate these responses and then derive total "need" for infrastructure from them. That would lead essentially to infrastructure development simply fuelling the continuation of existing trends. Relying on trend analysis alone risks missing the opportunity presented by the Commission's assessment process to step back and consider whether these trends are really what society wants and whether they are distributionally just or environmentally sustainable. This is a basic challenge for the Commission if it is to avoid a simplistic "predict and provide" approach.

9 | It will be important for the Commission not place too much reliance on existing methodology within the civil engineering sector, because (as we have argued here) it will need to take into account a much wider range of considerations. For example, it will be essential to include infrastructure-climate feedbacks in any model used. Likewise, the methodology must consider a range of worldviews and alternative system understandings. On this point we should note that orthodox economic forecasting has generally proved unreliable, and therefore a pluralistic approach to economic modelling is especially important. This should encompass a wide range of heterodox (e.g. post-Keynesian) models.

10 | The appropriate methodology is one which does not simply forecast trends and then propose infrastructure development to fit in with them, but one which helps to enable society to choose which direction it wants to take. As we have set out above, it would be useful for the Commission to run participatory workshops in which different scenarios are considered for the economic, environmental, and infrastructural future of the UK.

11 | See answers to questions 8 & 12.

12 | The issue of "evaluation and appraisal methodology" should include a consideration of the way in which discount rates generally imply a relatively short-term time horizon for considering costs and benefits, rather than the 30-year horizon envisaged by the Commission. It is unclear how the objective of improving quality of life is captured in this outline of cross cutting issues. Some very important factors are missing here. These include:

(1) Environmental issues such as air pollution, nature conservation, and biodiversity.

(2) The question of competing uses for the same piece of land: infrastructure development is usually an option which needs to be considered in comparison to other options for land use (e.g. housing, agriculture, green space).

(3) The distributional impact of different options for infrastructure on the incomes, life chances, and quality of life of different sections of the population.

13 | The range of organisations consulted should include ones which reflect the aspects referred to in our answer to questions 7 & 12 (i.e. local democracy, environment, land use, and distributional impacts). and provide" approach.