Environmental Assessments of Transport Impacts

It can be argued that current guidance for the environmental assessment of transport impacts contained in Transport Analysis Guidance - Environmental Impact Appraisal, and Volume 11 of the Design Manual for Roads and Bridges published by the Department for Transport, is inadequate and frequently results in inconsistent, unclear and misleading assessments. This can lead to confusion for decision makers, leave the environmental assessments open to challenge and increases the likelihood that schemes incur unnecessary impact alleviation costs or are rejected.

The shortcomings of the current guidance include:

- Focused on road traffic, with limited advice for the assessment of other modes of transport;
- Insufficient advice on the definition and use of terminology, particularly the distinction between impacts and their consequential effects;
- Insufficient guidance on setting thresholds below which the consequential effects are not considered to be significant and should not, therefore, be subject to assessment;
- Lack of clarity on the relationship between significance of consequential effects and their severity in combination with their duration;
- Inadequate advice on the need to set absolute as well as proportional thresholds for assessment criteria;
- Insufficient guidance on differentiating between scheme wide and local impacts.

There is also significant overlap and duplication across the various scheme appraisals currently undertaken, often with the same effect quantified in different ways. For example, changes in journey time and accident risk that are given financial values and included in the business case, but also separately evaluated for the environmental assessment using non-monetarised criteria. This is unhelpful and potentially confusing for decision makers and stakeholders. Consequently, it is suggested that each effect caused by a scheme should be dealt with once across the suite of scheme appraisal documents to avoid the duplication of assessment of the same effects in different ways.

Furthermore, current assessments frequently do not clearly differentiate between the three principal categories of effects - economic (effect on the economy), social (effect on people) and environmental (effect on the natural environment), further adding to lack of clarity and transparency.

Consequently, there would seem to be significant scope to improve guidance on the environmental assessment of transport impacts that would lead to more consistent, robust, transparent and comprehensible assessments. This could include:

- Clearly segregate all scheme impact assessments and appraisals into economic, social and environmental;
- Remove duplication of assessment of the same effects using different methods across the suite of scheme appraisal documents;
• Provide clarity on the definition and use of terminology, particularly the distinction between impacts and their consequential effects;

• Provide clarity on the relationship between significance of effects and their severity in combination with their duration. As well as the severity of effects based on their magnitude and the number of people affected (receptor sensitivity);

• Define criteria for assessment of effects that are objective, quantifiable and largely remove the need for subjectivity;

• Set absolute as well as proportional thresholds for assessment criteria;

• Standardise the approach to the assessment of the significance and severity of effects across topics, including the durations for the assessment of temporary effects; and

• Simplify the approach to the quantification of temporary construction effects to reduce assessment burden and ensure robustness by allowing for uncertainty in construction programme.

Transport related impacts of a scheme include changes in; traffic volumes, journey distance, junction priority or operation, speed limits, public transport services, location of interchanges, space for transport users, accessibility to jobs and services and any resulting changes in air quality, noise and vibration.

The potential consequential effects of these impacts on people include changes in; journey times, levels of crowding, health and wellbeing, severance, availability of parking, financial and other amenity effects, such as visual intrusion and enjoyment of their environs.

To properly assess these effects requires a tiered approach where the severity of an effect is first evaluated as a function of the effect magnitude and the number of people affected (receptor sensitivity). The significance of the effects can then be evaluated as a function of the severity of an effect and its duration.

The benefits of incorporating these suggestions into improved guidance on the assessment of transport impacts are that future assessments should be less onerous and, therefore, potentially less time consuming and costly to complete. They would also be better aligned with other scheme appraisal documents, less open to challenge, more helpful to decision makers and more informative for stakeholders. Therefore, there would be a reduction in the likelihood of schemes being rejected or having to incorporate unwarranted and avoidable mitigation measures that unjustifiably increase scheme costs.

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