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Wednesday 19 June 2013

Simon Birkett
Director and Founder
Clean Air in London
[via email]

Dear Mr. Birkett,

TAG Unit 3.3.3c The Air Quality Sub-Objective

Thank you for your comments on the consultation on WebTAG unit 3.3.3c The Air Quality Sub-Objective attached to your email dated 17 May 2013. I am writing regarding the points you raise relating to the consultation on the WebTAG unit; colleagues from the Highways Agency will respond regarding the points relating to the M4 consultation.

Before responding to the specific points you raise it is important to make three general points. First, economic appraisal and cost-benefit analysis are tools used to inform decision makers of the value for money of policies, projects and programmes. The guidance in WebTAG on assessing air quality impacts for these purposes does not replace or reduce the requirements for assessing these impacts through other statutory processes, such as Environmental Impact Assessment (EIA). Where possible, appraisal methods are aligned with those in other stages of assessment.

Similarly, the outcome of the economic appraisal represents only part of the information provided to decision makers. Information from other elements of scheme assessment is also used to inform decisions.

Thirdly, the application of abatement costs in areas exceeding limit values in economic appraisal helps the delivery of our legal obligations by clearly reflecting both the need to deliver on the obligations and the costs associated to rectify any breach. It does not imply that limit values can be exceeded simply because higher costs have been included in the appraisal but ensures

that those costs reflect the additional abatement effort that would be required to attain the limit values if the scheme were to go ahead.

1. Assumes 'minimal impacts' can be 'scoped out'

Paragraph 1.1.4 begins "[scoping] should be carried out consistent with the scoping of the environmental assessment". Therefore the scoping requirements for WebTAG are consistent with those for other forms of assessment, such as EIA.

2. Assumes air quality impacts can be averaged out

Proportionality is an important consideration when undertaking economic appraisal for cost-benefit analysis purposes, balancing the costs of the detail required in the analysis against the accuracy of the results produced. The recommended approach strikes this balance by considering impacts, both positive and negative, on all households likely to be affected without requiring concentrations to be calculated for each household individually.

Economic appraisal is primarily concerned with changes resulting from a scheme or intervention, not levels, and the scope encompasses both improvements and deteriorations in air quality. Therefore, even if changes in concentrations were calculated for every household individually, it would still be necessary to net out the benefits to those experiencing improvements and the dis-benefits to those experiencing deteriorations. Calculating changes in concentrations individually for each household would significantly increase the time and cost of assessing air quality as part of the economic appraisal, without significantly improving the accuracy or usefulness of the appraisal results.

3. Assumes the year of impact is arbitrary

As mentioned above, proportionality is an important consideration in appraisal. Transport projects are typically appraised over a long period (up to 60 years) and it would be disproportionate to model the transport and air quality impacts for every year of the appraisal. Transport modelling takes into account planned developments so aligning air quality appraisals with the forecast modelled years will include the traffic-related air quality impacts of planned developments.

4. Assumes legal breaches can be weighed in cost-benefit terms

As noted above, the use of higher values for changes in emissions in areas exceeding limit values represents the costs of the additional abatement effort that would be required if the scheme were to go ahead and does not imply that limit values can be exceeded.

The HMT Green Book guidance[1] on appraising air quality impacts is clear that abatement costs should only be applied where legally binding obligations are breached. The abatement cost method is not applied to PM_{10} because the latest Defra modelling (from 2011) does not show any exceedences and any exceedences that might occur would be very isolated. Defra are developing tools to support the application of this method to PM_{10}.

The abatement costs for NO_x emissions are derived from modelling of the relationship between NO_x emissions and NO_2 concentrations using the oxidant-partitioning model, developed by Jenkins (2004)[2]. Therefore, while the costs are applied to changes in NO_x emissions, they are directly linked to changes in NO_2 concentrations. Defra are currently letting a piece of work which includes a potential review of the NO_x MACC tool and may update elements where necessary. Until this process has been completed the current tool provides the best available approach to assess these impacts.

5. Assumes equalities can be weighed on an arbitrary basis

The focus on income in Social and Distributional analysis is the result of a review of the evidence on how air quality impacts on different groups and where it is proportionate to focus the analysis. It should also be noted that the conclusion to paragraph 5.2.2 is that consideration should be "given to changes in air quality that are experienced by children".

6. Assumes less care is needed outside AQMAs

The paragraph you reference (5.4.9) refers to the Social and Distributional Impacts (SDI) stage of the appraisal. It does not mean that less SDI analysis is required outside of an AQMA but that where there are impacts within an AQMA this should be noted in addition to the required reporting described in paragraph 5.4.8.

[1] https://www.gov.uk/government/publications/green-book-supplementary-guidance-air-quality

[2] Jenkins, M.E. (2004). Analysis of sources and partitioning of oxidant in the UK-Part 1: the NOx-dependence of annual mean concentrations of nitrogen dioxide and ozone. Atmospheric Environment, 38, 5117–5129.

In several places throughout your response to the consultation you assert that the Department's approach to assessing air quality impacts in economic appraisal is "unlawful". The approach is based on, and fully consistent with, the latest Defra guidance (published in Supplementary Guidance to the HMT Green Book) and we are not aware of any reasons why the approach to economic appraisal should be considered "unlawful".

While some of the points you raise relate to elements of the guidance that have been in a place for a number of years, the intended focus of the consultation was the inclusion of the Marginal Abatement Cost (MAC) method for valuing emissions where legally binding objectives are exceeded, as recommended by the Green Book guidance. As this approach has been agreed across government before its inclusion in the Green Book, we intend to proceed with including the MAC method in the next update to WebTAG guidance. In the revised "in-draft" version of the unit we will make it clear that the use of abatement costs in economic appraisal in areas where limit values are exceeded does not imply that such exceedances can be permitted but that they represent the indicative costs of additional abatement effort that would be required if the scheme were to go ahead. As this will not constitute a significant change to the originally proposed method, we do not believe that it is necessary to re-consult on a revised version of the guidance, as you requested. In addition, it is worth noting that, due to the annual Orderly Release Process for updating WebTAG guidance, re-consulting would delay compliance of WebTAG with the latest Defra and Green Book guidance on appraising air quality impacts until 2014.

The evidence base supporting WebTAG is kept under constant review and any evidence you are aware of that could be used to further improve our methods would be welcome.

Yours sincerely,

Adam Spencer

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