

Interim Advice Note 54/04

Revision to “GOMMMS” Local Air Quality Assessment Procedure in DMRB 11.3.1

Summary:

This document advises of the changes made to the “GOMMMS” local air quality assessment that is carried out for the Appraisal Summary Table and is incorporated into the Design Manual for Roads and Bridges, Volume 11, section 3, part 1.

1. Introduction

This Interim Advice Note advises of revised guidance for carrying out air quality assessments. This revised guidance should be used instead of the “GOMMMS” local air quality assessment guidance published in DMRB Volume 11, section 3, part 1 (February 2003).

The “GOMMMS” local air quality assessment procedure calculates the overall change in people’s exposure to concentrations of nitrogen dioxide and PM₁₀. This is required for the Appraisal Summary Table (AST). GOMMMS has now been superseded by the Transport Appraisal Guidance (web-TAG) and is available at <http://www.webtag.org.uk>. The local air quality assessment in Web-TAG has been updated from that in GOMMMS. The purpose of the revision is to improve the accuracy of the assessment, particularly where the scheme involves road widening.

2. Changes to the Assessment Procedure

The local air quality assessment procedure for the AST is described in web-TAG. However, the changes made are summarised below together with a comparison with the “GOMMMS” procedure that is incorporated into DMRB 11.3.1.

The changes are:

1. Properties should be counted in 50 m bands from the road centre rather than roadside for both the do-minimum and scheme scenarios. By having separate property counts for the scheme and do-minimum scenarios, the effect of off-line widening and property demolition can be taken into account in the assessment. (DMRB 11.3.1 page 3/1, para 3.6 II)
2. Pollutant concentrations should be calculated using the DMRB screening method at 20m, 70m, 115m and 175m from the road centre for the scheme and do-minimum scenarios rather than at the roadside (which changes position with some schemes) as was done previously. By using average concentrations in each distance band, there is no need to apply the weighting factors to property counts to allow for the change in concentration with distance. This should improve the accuracy of the assessment as the decrease in concentrations with distance is variable and depends on the proportion of the pollution originating from the road and background sources (DMRB 11.3.1 page 3/2, para 3.8 b).
3. The total exposure to each pollutant is calculated for the scheme and do-minimum separately by multiplying the concentration within each band by the number of properties within that band and then adding these together for the four distance bands. The do-minimum exposure is then subtracted from the scheme exposure to give the change in exposure due to the scheme. A positive number denotes an increase in concentrations due to the scheme and a negative number a deterioration. Previously the roadside concentration with the do-minimum was subtracted from the scheme roadside concentration and then multiplied by the weighted property count. (DMRB 11.3.1 page 3/2 para 3.8 c).

4. A qualitative comment must be provided in the AST if the scheme leads to an increase in annual mean PM_{10} concentrations of at least $1 \mu\text{g}/\text{m}^3$ at 20m from the road centre (previously $2 \mu\text{g}/\text{m}^3$ at the roadside) or an increase in NO_2 levels of at least $2 \mu\text{g}/\text{m}^3$ at 20m from the road centre (previously $4 \mu\text{g}/\text{m}^3$ at the roadside). A comment should also be made if there is a change to the number of properties due to the scheme. (DMRB 11.3.1 page 3/3 para 3.8 e).
5. An Excel spreadsheet is available from the web-TAG site to carry out this assessment. The user needs to enter PM_{10} and NO_2 concentrations at 20m, 70m, 115m and 175m from the roadside and property counts for each scenario for each affected road. The spreadsheet will then calculate the change in exposure for each route and the overall change for input into the AST.

The remainder of the air quality assessment procedure described in DMRB 11.3.1 remains unchanged.