MARKUS SCHÜTTE:
„*Merkblatt für die Übertragung des Prinzips der Entwurfsklassen der RAL auf bestehende Straßen* (M EKLBest, Diskussionsstand vom 14.03.2017) der FGSV – Anwendungsbeispiel Ausbau der L670 zwischen Soest und Berwicke“
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Abstract

The “Merkblatt für die Übertragung des Prinzips der Entwurfsklassen der RAL auf bestehende Straßen” (M EKLBest) is intended to be used in the reconstruction, widening and maintenance of rural roads in the existing road network. This technical bulletin is hierarchically subordinate to the RAL specifications and will be used in well-founded exceptions where it is not possible to comply with the RAL specifications. The first draft was produced in 2009, but after the introduction of RAL in 2012 it was adapted to the specifications, and its usability was subsequently tested on pilot sections of road throughout Germany. The findings from this procedure were prepared by working group 2.2.2 of the FGSV and compiled in the technical bulletin. After completion of the research work in 2016, further modifications became necessary, and work is currently being carried out on these. A final version of the technical bulletin is therefore currently not yet available.

The objective of the Bachelor dissertation was to examine M EKLBest (in the version of 2013), and to elucidate the new findings from the research work and apply them to an example road, the L 670 between Soest and Berwicke.

The first step was to describe the technical bulletin and to compile the findings gathered from the research work. The aim of M EKLBest is to standardise the existing road network so that a road can be assigned to the appropriate design class even if compliance with RAL specifications is not possible due to local conditions. The basis for assignment to the different design classes of a road category is the characteristics of a road as perceived by a road user in order to adapt his or her driving style to the road and therefore to increase road safety. The design and operational characteristics of Design Classes 1 to 4 are different, and the M EKLBest makes recommendations on how to proceed if there is no compliance with RAL specifications. In this respect, the research work has resulted in modifications to the 2013 version of M EKLBest, and these have been compiled in the Bachelor dissertation.

In the second step, the current state of knowledge was applied to sections 13 to 18 of the L 670 road. The road is in need of repair, and due to the presence of the “Hellwegsbörde” bird protection area, it seems appropriate to apply M EKLBest, as it is not possible to make major specification. An examination of the existing road was carried out for this, with the accident statistics as an important aspect. The road category was also determined in order to derive the resultant design class. After the design classes had been determined, cross-section variations for the options were compiled. Their evaluation led to recommendations for the present project. However, it must be observed that the recommendation made here and the resulting measures cannot be carried out on the basis of M EKLBest without further investigation because the final version of the technical bulletin is not yet available and might contain possible modifications. Nevertheless, M EKLBest provides suitable

assistance in assigning existing roads to design classes and approximating them to the RAL specifications. The user is given clear specifications and minimum requirements that have to be complied with for each design class in order to classify it and represent the characteristics of each section of road with the objective of increasing road safety for the road user.