

## **ACOUSTICS2008/1887 optimized thin layers for urban roads**

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In the EU project SILENCE work has been carried out to optimize the noise reduction of different types of pavements for urban roads. The Danish Road Institute (DRI) participated in this work together with the Swedish National Road and Transport Research Institute (VTI) and BAST in Germany. Joint international development work has been carried out including laboratory experiments. The objective was to find pavements with promising noise reduction. It was decided to carry out a full scale field testing in some countries.

DRI has in cooperation with the municipality of Copenhagen and the Colas road construction company tested series of SMA pavements and open graded pavements, optimized for noise re-duction by using small aggregate size of 4 to 6 mm and by constructing a relatively high built-in air void. Eight different pavements were constructed in June 2007 on Kastrupvej in Copenhagen. DRI has conducted SPB and CPX noise measurements. An initial noise reduction for passenger cars of 4.3 dB in relation to a DAC 11 reference pavement has been achieved. It is planned to continue the measurements in the coming years in order to be able to analyse the long time acoustical and structural performance of these test pavements.