



Conférence Européenne  
des Directeurs des Routes  
Conference of European  
Directors of Roads

**ON-AIR:  
Optimised Noise assessment and management guidance for  
National Roads**

Research project funded under the CEDR Transnational Road Research Programme

**CEDR Call 2012: Noise - Integrating strategic noise management into the  
operation and maintenance of national road networks**

CEDR Call 2012: Noise is a Transnational Road Research Programme organised by CEDR (Conference of European Directors of Roads). The funding partners for this programme are Belgium/Flanders, Germany, Ireland, Norway, Sweden and United Kingdom.

**Details**

Acronym:	ON-AIR	<b><u>ON-AIR</u></b>
Start:	Nov 2013	
End:	Oct 2015	
Budget:	€197.3k	
Co-ordinator:	Hans Bendtsen, DRD, Denmark	
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Partners:	Institute of Transport Economics (TOI), Norway LÄRMKONTOR, Germany	
PEB Project Manager:	Wolfram Bartolomaeus, Germany	
Website:	<a href="http://www.on-air.no/">http://www.on-air.no/</a>	

**Project summary**

The objective of the project is to develop tools and guidelines to facilitate the integration of noise abatement into the three most common planning and management situations of National Road Administrations (NRAs):

1. Planning of new roads and highways;
2. Planning of reconstruction and enlargement of existing roads and highways;
3. Maintenance and management of existing roads and highways.

A holistic approach will be highlighted by using the strategy of integrating noise considerations in the whole chain from strategic planning, environmental impact assessment and detailed project development to the management and maintenance of road infrastructure. The earlier in the highway road management planning process potential noise problems are discovered, addressed and solved, the better the solutions and the cost effectiveness of noise abatement will normally be. The planning

tools and guidelines developed in this project will be of a general type but can be adapted to different national contexts. The project stands on the shoulders of the important European research work on improved methods for noise abatement.

The ON-AIR project will use national highway expert's best practice and methods as well as results from relevant research projects as a foundation together with the results from national strategic noise mapping and action planning carried out in relation to European Noise Directive (END).

The project focuses on existing NRA's practice and experiences and on the noise action plans developed in relation to the EU noise directive as well as results from new research projects. Methods to evaluate noise exposure, the effect of noise abatement and economical assessment of noise will also be included. The methods used to retrieve this information will be expert interviews, literature studies as well as the knowledge of the project team. An in-depth-interview guidance will be developed and used for expert interviews with key planners in NRAs pointed out by the PEB. Based on the interviews a midterm workshop will be arranged with the PEB. At this workshop the inputs from best praxis and research will be presented and discussed. The results of the workshop will be important input for the development of the guidance book. At the workshop the PEB will also be invited to contribute with good examples that can be implemented as interactive cases.

Predicting noise levels in complex situations, such as highway intersections with flyovers, etc, can be difficult. Such complex situations will be addressed. In cooperation with the PEB typical complex noise situations will be identified and then analysed by the project team. The study will include noise measurement procedures can be applied to assist efficient noise mitigation. A guidance book with methods, planning guidelines and tools for noise abatement will be produced as part of the project. The guidance book will be supported by a series of predefined interactive examples available on the ON-AIR website. An interactive noise mapping tool will be used for these examples. The user can change traffic, speed, pavement, etc. and also chose several variants of noise barriers. The tool will quickly predict the results from different noise abatement strategies and show results as both noise maps and statistics on noise exposure. This interactive feature can support planners in quickly evaluating different strategies for noise abatement and selecting the right measures for noise abatement in given situations. The tool can also be used to facilitate political and public involvement in the actual planning and decision making process.

A plan for the dissemination of the ON-AIR results to CEDR members will be developed together with a Powerpoint presentation and a website with all the reports, etc., from the project.