# **SAMARIS final seminar**



Lausanne, 16 - 17 February 2006



# Information Bulletin No. 2 (final)

SAMARIS (Sustainable and Advanced Materials for Highway InfraStructures) is a 3 year project under the European Union's 5th Framework Programme for Research and Technological Development.

Its research has targeted two distinct topical areas, both of great importance for road infrastructure owners and the industries that serve them. One is the complex of questions surrounding effective use of recycled materials and industrial waste products when building and paving roads. The other is the equally significant issue of planning and executing critical maintenance and rehabilitation of our concrete structures in sustainable ways, taking benefit of the most recent advances in the field of assessment and rehabilitation techniques to keep them healthy for a long time.

In both subject areas we have produced what we expect that potential end users will see as very valuable results, which should prove to be immediately useful to the professionals who procure or conduct maintenance or new construction on Europe's highways. These results will be presented in the final seminar, which aims to show the practical implications of the project and how to bring these innovations into use in the immediate future.

Therefore, if new developments in cost-effective use of materials and techniques for the construction and maintenance of highway pavements and/or structures are your business, then read on and be sure that you don't miss this event!

# Seminar schedule

The programme will begin and close with plenum sessions. The rest of the time is assigned to two parallel sessions, each devoted to one of the two subject areas.



#### Thursday, the 16th of February 2006

1:00-12:30	Registration
2:30-14:00	Lunch
4:00-14:50	Plenum opening session: Welcome Addresses and Project Overview
5:00-18:00	Parallel sessions: see specifics below

Evening Seminar dinner. Details and location to be decided.

# Friday, the 17th of February 2006

08:30-12:30	Parallel sessions continued
12:40-13:10	Closing session: Facing the challenges of innovation (SP, JC)
13:20-14:20	Lunch
14:20-15:50	Optional guided visits to EPFL laboratories (see below)

# Parallel session programmes

The seminar is targeting end users with power to take decisions and the counsellors of such people. Therefore, after a necessary review of the background on which the project has achieved results, most of the time is spent on presenting and discussing their practical implications and implementation.



# (I) Advances in the rehabilitation of highway structures in Europe

The structures stream of the project has dedicated a major effort to provide end users and specifiers with (1) an inventory of the condition of structures in Central European countries, (2) guidance for optimal assessment of highway structures, (3) guidance on selecting appropriate rehabilitation strategies and (4) guidance for implementing specific promising innovative rehabilitation techniques. The seminar will focus on both, guidance for optimal assessment of highway structures, and practical implementation of new rehabilitation techniques validated during the project.





Day one:	15:00-15:05	Introduction (AZ)
	15:05-15:40	Integrated strategy for rehabilitation (MMcK)
	15:40-16:25	Coffee break and poster session
	16:25-16:35	The end users' perspective (End user)
	16:35-18:00	Optimised assessment (AZ)
		Ultra High Performance Fibre Reinforced Concrete (ED)
		Corrosion inhibitors (MR)
		Discussions
Day two	00.20 00.00	Arrival and poster cossion
Day two	08.50-09.00	Chairman John Biarrum (IR)
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	09:00-09:30	Case Studies A: Rehabilitation strategy with
		emphasis on structural assessment (AZ)
	09:30-10:30	Case studies B: Application of innovative solutions
		incorporating UHPFRC (ED, JCP)
	10:30-11:15	Coffee break and poster session
	11:15-12:00	Case studies C: Application of innovative solutions
		incorporating corrosion inhibitors (MR)
	12:00-12:30	Discussion, Summary and Perspectives (EB)

#### (II) Premium pavements from alternative materials for European roads

Construction and maintenance will increasingly rely on the use of recycled materials. However to be effective, recycling techniques must be safeguarded to ascertain durability, environmental harmlessness and safe worksite conditions. The pavement stream has provided a general methodology and some specific methods for the mechanical and environmental assessment of alternative materials with a life cycle perspective of pavement structures. A digest about the alternative materials and the recycling techniques most used in Europe as well as a prototype environmental annex to products standards will also be presented.





Day one:	15:00-15:40	Part 1: Introduction to recycling Keynotes (JMP) What is the situation? (FS) The need for environmental assessment to promote sustainability (KK) Discussion
	15:40-16:25 16:25-18:00	Coffee break and poster session Part 2: Assessment of recycled materials (CN) General methodology to select best usage of alternative materials (DF + KP + HS) Environmental assessment • Prototype environmental annex to product standard (SB) • Health and safety assessment (BK) • Including reaction to fire (SC)
Day two:	08:30-09:00	Arrival and poster session
	09:00-10:15	<ul> <li>Part 2: Assessment of recycled materials (continued) (EN)</li> <li>Mechanical assessment; towards functional specification irrespective of type of material. (Modelling)</li> <li>Unbound materials (PH)</li> <li>Asphalt materials (RB)</li> <li>Implication for standardisation (CN)</li> <li>Discussion</li> </ul>
	10:15-11:00 11:00-12:00	Coffee break and poster session Part 1: Digest on recycling techniques General presentation of the Technical Guide (FS) Specifics of Recycling Plants (EUROVIA) Discussion
	12:00-12:30	Conclusions and perspectives Perspective for assessments (DF, JMP)

# Speakers

All presentations will be given by members of the international SAMARIS research team and invited guests with close relations to practice. The initials used in the programmes above translate to the following individual names:



- AZ: Ales Znidaric, ZAG, Slovenia
- BK: Burgard Koenders, Shell Global Solutions, France
- CN : Cliff Nicholls, TRL, UK
- DF: Denis Francois, LCPC, France
- EB: Eugen Brühwiler, EPFL, Switzerland
- ED : Emmanuel Denarié, EPFL, Switzerland
- EN: Erik Nielsen, DRI, Denmark
- FS : Francisco Sinis, CEDEX, Spain
- HS: Hans van der Sloot, ECN, The Netherlands
- JMP: Jean.-Michel Piau, LCPC, France
- JCP : Jean-Christophe Putallaz, SRCE-VS, Switzerland

#### JC: Jørgen Christensen, Road Directorate, Denmark KK: Prof. Klaus Krass, RUB, Germany

- KK: Prof. Klaus Krass, RUB, G KP: Knud Pihl, DRI, Denmark
- MR : Mark Richardson, UCD, Ireland
- MMcK: Malcolm McKenzie, TRL, UK
- PH: Pierre Hornych, LCPC, France
- RB: Ronald Blab, TUVienna, Austria
- SC: Sarah Colwell, FRS, United Kingdom
- SB: Sabine Boetcher, RUB, Germany
- SP: Steve Philips, Secretary General, FEHRL

# Documentation

Participants will at the seminar receive prints of all presentations. These will be based on power point dias with ample written text notes. Finalised reports will be on display along with guidance and demonstration on how to download these reports from the project's web site. Also, all participants will receive the project's summary report including a CD ROM with the full text of the most significant and instructive reports.

#### Venue

The seminar is held in the École Polytechnique Fédérale de Lausanne (Swiss Institute of Technology in Lausanne), Switzerland. This technical university is located some 5 kilometres west of the city of Lausanne with very efficient and frequent public rail transport to the city. Lausanne is located on the shore of lake Leman, 50 minutes by train from Geneva International Airport and 2½ hours by train form Zurich International Airport.

# Seminar language

All presentations and discussions will be made in English.

# Laboratory visits

After lunch on the second day there will be an opportunity to visit two of EPFL's renowned laboratories: professors Andre-Gilles Dumont and Eugen Brühwiler have very kindly opened the doors to the respective laboratories: the LAVOC road research laboratory and the MCS laboratory for the maintenance, construction and safety of structures.

# Hotel accommodation

Advance block reservation have been made for about 250 rooms at the hotels in Lausanne, which are listed in attachment 1. Rooms can soon become a scarce commodity and participants are urged to secure early booking.

# **Registration** fee

To cover the costs of the seminar there is a registration fee, which is 225 euro until the 1st of February and 300 euros from that date. Participation in the seminar dinner will cost 80 euros.

# Cancellations

Until the 1st of February 2006, payments will be returned with a deduction of 50 EUR. In the case of later cancellation the payment will be retained for its intended purpose.

# **Registration procedure**

The registration form is found in the annex to this information bulletin. Please fill it out at the earliest opportunity and mail it to <u>samaris@vd.dk</u>. You will then receive a confirmation by e- mail. If you have any questions, please ask them to:

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