



**2011
STUDY TOUR**

**Closing:
Recommendations**

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AAPA 2011 Study Tour of South Africa and CAPSA'11

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Session Details	Start Time
Registration	10:00a
Introduction to tour objectives	10:30a
Binders	11:00a
Surface Treatments #1	11:30a
Surface Treatments #2	12:00p
Lunch (Tea in NSW)	12:30p
Improving pavement performance #1	1:00p
Improving pavement performance #2	1:30p
Sustainability	2:00p
CAPSA'11 & General	2:30p
Close and Wrap Up	2:50p

Australian Asphalt Pavement Association

Study Tour 2011

South Africa & CAPSA'11

Cape Town, Stellenbosch, Pretoria, Durban, KNP

3rd to 19th September 2011

GROUP REPORT

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Key Issues

- A. Surface Treatments
 - o Sprayed seals | Slurry seals | Surface rejuvenation
- B. Binders
 - o use of bitumen rubber in sprayed seals and asphalt wearing courses, availability and specification requirements including quality control measure to ensure compliance.
- C. Improving pavement performance
 - o modelling, accelerated testing, design methods & models, foam bitumen stabilisation and bitumen treated base experience and transfer of high modulus asphalt technology to RSA
- D. Sustainability
 - o recycling, warm mix asphalt, efforts to reduce carbon footprint, carbon calculators and impacts for road asset management

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A: Surface Treatments

- Preventative maintenance practiced rather than on a worst first basis.
- Successful use of crumb rubber spray seals on heavily trafficked roads.
- South African seal types may provide benefits in Australia
- Rejuvenation is a widely accepted practice that can extend the life of a seal by 3 – 4 years.

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B: Binders

- Increased use of CRB for improved performance
 - o Only high speed field blended CRB use in spray seals
 - o On-site measurement of viscosity before use
 - o Augers in digestion tanks & sprayers
 - o >20 % rubber crumb used
 - o Use of preblended CRB for asphalt wearing courses

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B: Binders

- Increased use of emulsions
 - To allow construction of new seals in winter
 - Dilute sprays used to enriched aged seals to extend service life
- Development of PG specs for binders
 - Use of DSR to measure binder properties across temperature spectrum
 - More suitable for measuring PMB degradation after RTFOT



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C: Improving pavement performance

1. Maintain contact with SANRAL
 - Identify advantages of new SAPDM to Australia
2. Key research Areas to develop asset management towards commercial lines
3. Pavement performance prediction data to allocate funds
 - Asset preservation & maintenance
4. Promote benefit of APT and LTPP
 - Instrument, monitor, study & document



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C: Improving Pavement Performance

5. Promote improvements to materials and use of new non-standard materials
 - High Modulus asphalt
 - UTFC
 - Warm mix asphalt
 - Reduced binder content foam and etb' s
 - High quality granular bases

!!! Research required & taking managed + calculated risks !!!
6. Assessment system for non standard products



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D: Sustainability

- Promote the sustainability concept of the “road materials bank” where construction materials in the road network remain in the bank and are sustainably management, improved and reused.
- Evaluate and report on the legislative and policy implication of the Australian Carbon Tax on road construction, surfaced seals and asphalt production.
- Identify and share carbon reduction strategies for road surfacing and asphalt manufacturing in Australia.



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D: Sustainability

- Promote the sustainability credentials and benefits of road building materials including:
 - Recycled Asphalt Pavements including cold in-place, cold in-plant and Warm Mix Asphalt
 - Bitumen Stabilised Materials for improving granular material properties
 - Warm Mix Asphalt as a temperature reducing, asphalt worker friendly and energy efficient asphalt product
 - Ultra Thin Friction Courses for the preservation of high standard surfacing aggregates
 - High modulus asphalt Hi MA for reducing pavement thickness and saving on construction materials used in the pavement
 - Bitumen Rubber binders for their role in reducing the environmental impact of used motor car tyres
 - Very long life or perpetual pavements (>50 years) where bottom up cracking of asphalt pavements is eliminated and long term maintenance requires only renewal of the wearing course



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CAPSA'11

1. Review the CAPSA conference style promoting sharing and learning between the delegates.
2. Develop streams for the Australian conferences designed to position the sector to accommodate changes in the operational environment
3. Disseminate the CAPSA'11 papers to promote knowledge transfer
4. Support the growth and functioning of SHSSA



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GROUP REPORT CONTENTS

- EXECUTIVE SUMMARY
- INTRODUCTION
- OVERVIEW AND RECOMMENDATIONS
 - Surface Treatments
 - Binders
 - Improving pavement performance
 - Sustainability
 - CAPSA'11 & General
- SURFACE TREATMENTS
- BINDERS
- IMPROVING PAVEMENT PERFORMANCE
- SUSTAINABILITY
- CAPSA'11 & GENERAL
- APPENDICES
 - Detailed Itinerary
 - Study Tour Delegates
 - AAPA 2011 Study Tour Questions List
 - South African Acronyms, Abbreviations & Quotes
 - References

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README.pdf version 1

This USB drive contains all Report in electronic (search) and printable PDF (high quality) form.

All of the references, presentations and links to CAPSA'11 papers are included on the USB drive and a website is available to download updates to the Report and the presentations made at the Feedback sessions.

www.aapaq.org/g/2011st/2011str.html NAME: TOUR & PASSWORD: aapa.

USB File Structure is as follows:

Directories

- _PRE
- _TOUR
- _POST
- _REF
- _CAPSA
- _FEEDBACK (put Feedback Seminar presentations here)

Files: (replace these files with the newest downloads)

- 2011_AAPA_Study_Tour_Report_vX-XE.pdf
- 2011_AAPA_Study_Tour_Report_vX-XP.pdf
- 2011_AAPA_Study_Tour_USB_handout.pdf
- README.pdf

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www.aapaq.org/
2011st/2011str.html
TOUR aapa

REFERENCE MATERIAL

Date	Event	Location	Notes
03/09/2011	Arrival in Cape Town	Cape Town	...
04/09/2011	Visit to Stellenbosch	Stellenbosch	...
05/09/2011	Visit to Durban	Durban	...
06/09/2011	Visit to Pretoria	Pretoria	...
07/09/2011	Visit to KMP	KMP	...
08/09/2011	Visit to Cape Town	Cape Town	...
09/09/2011	Visit to Stellenbosch	Stellenbosch	...
10/09/2011	Visit to Durban	Durban	...
11/09/2011	Visit to Pretoria	Pretoria	...
12/09/2011	Visit to KMP	KMP	...
13/09/2011	Visit to Cape Town	Cape Town	...
14/09/2011	Visit to Stellenbosch	Stellenbosch	...
15/09/2011	Visit to Durban	Durban	...
16/09/2011	Visit to Pretoria	Pretoria	...
17/09/2011	Visit to KMP	KMP	...
18/09/2011	Visit to Cape Town	Cape Town	...
19/09/2011	Departure	Cape Town	...

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AAPA 2012 Study Tour

DESTINATION **ISTANBUL**
EURASPHALT & EUROBITUME 5TH EAC CONGRESS 2012

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EURASPHALT & EUROBITUME
5th CONGRESS 2012 13 to 15th June
Istanbul, Turkey
Leave first week June 2012

- UK / France / Spain / Germany / Turkey
- Conference
- Equipment & site visit post conference

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Feedback Seminar

Thanks for being here

Share the learnings

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