Introduction to tour objectives
Australian Asphalt Pavement Association

Study Tour 2012

Europe & 5th E&E Congress
France, Belgium, Netherlands, UK, Germany, Turkey

2nd to 21st June 2012

GROUP REPORT

v2.0
AAPA 2012 Study Tour to Europe – Introduction to tour objectives

• 2nd to 21st June 2012
• Tour group 9 Australian roads people
• Six countries & 5th E&E
  - France / Belgium / Netherlands / UK / Turkey / Germany
• Five key topics
  1. Long life pavements
  2. High performance asphalt & binders
  3. Sustainability
  4. Health & Safety
  5. Procurement Systems
Study Tour Delegates

**Warren Carter**
Nation Technical Manager
Downer Australia
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**Why on tour:** To learn what is happening in Europe on Perpetual Pavements, WMA and RAP; to understand the future direction of binders regarding sustainability; testing regimes to assess quality; networking and establishing international contacts.

**Background:** 25th year in the industry and had exposure to bitumen emulsions, polymer modified binders, sprayed sealing, asphalt and slurry/microsurfacing. Originally commenced in a laboratory role. The majority of my career has been in a technical role but have also held project management roles.

**Qualifications:** B.Sc.(Industrial Chemistry), MBA

**Khar Yean Khoo (Dr)**
Research Scientist
Pavements & Surfacing, Sustainable Infrastructure Science
ARRG Group Pty Ltd
500 Burwood Highway VERMOUNT SOUTH, Victoria 3133
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E: khar.khoo@arrg.com.au

**Why on tour:** To broaden my knowledge, skill base, establish contacts and to learn about new developments in bituminous materials of importance to Australia, principally bitumen properties, polymer modified binders and sprayed sealing.

**Background:** Last four years with ARRG binders & sprayed sealing research team. Focussed on the chemical and physical properties of bitumen and the performance of polymer modified binders.

**Qualifications:** B. Eng (Chem), PhD (BioChem Eng)

**Graham Wilson (Dr)**
Technical Manager
BP Bitumen, BP Australia (Pty) Ltd
GPO Box 5222 MELBOURNE Victoria 3001
P: +61 3 8368 8740 M: +61 419 200 238
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**Why on tour:** Personal and professional development opportunity. Also, what is happening outside of Australia in the area of sustainability?

**Background:** Varied: 2 years Post Doctoral Research Fellow, Physics Department Monash Uni; 5 years with South Pacific Tyres (DunlopOlympic & Goodyear) working on real time data acquisition systems; 11 years at Kodak Research Lab as Research Scientist and then Research Group Leader; 6 years (and counting) with BP Bitumen, first as Bitumen Technical Projects Manager then as Technical Manager.

**Qualifications:** BSc(Hons), PhD In Chemistry

**Rob Vos**
Queensland Executive
Australian Asphalt Pavement Association
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Queensland 4066
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**Why on tour:** Learn about the status of the key issues in Europe. Meet the lead practitioners and share knowledge and contact. Seek details on Procurement systems.

**Background:** 13 years at Cape Provincial Roads (South Africa) 10 years Technical Director Sabita, last 12 years in AAPA in Queensland as State Executive.

**Qualifications:** BSc.Eng.Civil, Pr.Eng, C.Eng, MSAICE,MICE

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**Australian Asphalt Pavement Association**

2012 Study Tour to Europe and 5th Euraspalt & Eurobitume

2 to 21 June 2012

www.aapa.asn.au
John Lambert  
Chief Executive Officer  
Australian Asphalt Pavement Association (AAPA)  
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*Why on tour:* At E&E Congress to meet & further develop relationships and exchange key information with industry association colleagues. In Germany to capture their developments in HSE and recent fumes reports.  
*Background:* Previously in Government & the private sector as consultant & in management positions w.r.t. energy & petroleum products including their development and environmental norms.  
*Qualifications:* Mechanical Engineer & M.Env.Studies

Greg Stephenson (Dr)  
Senior Engineer – Civil Infrastructure  
Asset Management Branch, Brisbane Infrastructure  
Brisbane City Council  
GPO Box 1434, BRISBANE Queensland 4001  
P: +61 7 3403 9043 M: +61 423 417 326  
E: greg.stephenson@brisbane.qld.gov.au  
*Why on tour:* To understand trends in long life pavements, long term performance, sustainability, reuse and recycling to optimise the whole of life performance of our road network into the future.

Greg Stephenson  
(continued)

*Background:* 32 years experience working for local government authorities, federal government and consulting engineers mostly in the road and airport construction and maintenance areas.  
Before joining BCC, I spent 5 years at Queensland University of Technology in a range of pavement and asphalt research related activities.  
*Qualifications:* B.Eng-Civil, M.Sc, Ph.D in Civil Engineering

Hugo van Loon  
Senior Asphalt Engineer  
Spatial Intelligence & Road Assets Section,  
Transport Services Division: Department of Planning, Transport & Infrastructure, South Australian Government  
PO Box 1533 ADELAIDE South Australia 5001  
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E: hugo.vanloon@sa.gov.au  
*Why on tour:* Investigate the ‘rules’ for addition of RAP, understand high modulus asphalt, SMA mix design and fatigue of asphalt.  
*Background:* Hugo has been asphalt engineer for the state road authority in South Australia for 17 years.  
*Qualifications:* B Eng, Civil from Uni SA

Ian van Wijk (Dr)  
Technical Director, Competency Leader: Roads  
Aurecon  
Locked Bag 331, BRISBANE Queensland 4001  
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*Why on tour:* To gain a better understanding of European and UK structural pavement design systems and performance inputs such as material properties and fatigue. Also to get additional info new technologies, new binders and their inclusion in structural design procedures.  
*Background:* Pavement design for 30+ years, practiced in Africa, Middle East, India, Malaysia and Australia. Previously 4 years in a South African Provincial Roads Authority and 5 years at Purdue University, USA (from which MSCE and PhD were obtained). Worked in academia, and for consulting engineers Van Wyk & Louw, Africa and now Aurecon.  
*Qualifications:* BEng, MSCE, PhD, Pr Eng, MIAUST CPEng, RPEQ
Australia & its roads

BIG, FLAT, DRY/FLOODS, MINERAL RICH, FOOD BASKET, LUCKY COUNTRY

“Icon” & loads

Seals vs. heavy pavements

Poor materials
## Statistics

<table>
<thead>
<tr>
<th></th>
<th>Europe/EEC</th>
<th>Australia</th>
<th>ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land area (km²)</td>
<td>4 324 782</td>
<td>7 741 220</td>
<td>X 0.6</td>
</tr>
<tr>
<td>Population (June 2010 est)</td>
<td>502 486 499</td>
<td>21 766 711</td>
<td>X 23</td>
</tr>
<tr>
<td>Unemployment</td>
<td>10%</td>
<td>5.0%</td>
<td>X 2</td>
</tr>
<tr>
<td>GDP US$ purchasing power (b)</td>
<td>$15 821</td>
<td>$911</td>
<td>X 17</td>
</tr>
<tr>
<td>GDP / person</td>
<td>$35 116</td>
<td>$40 800</td>
<td>X 0.9</td>
</tr>
<tr>
<td>GDP growth rate (2011)</td>
<td>+0.7%?</td>
<td>+1.8%</td>
<td>X 0.4</td>
</tr>
<tr>
<td>Roads total length (km)</td>
<td>818 356</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Roads paved (km)</td>
<td>341 448</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Asphalt (million tonnes/annum)</td>
<td>309.2 (Europe)</td>
<td>7.5</td>
<td>X 42</td>
</tr>
<tr>
<td></td>
<td>0.6 t/pop</td>
<td>0.4 t/pop</td>
<td></td>
</tr>
<tr>
<td>Bitumen (tonnes/annum)</td>
<td>14 492 000</td>
<td>750 000</td>
<td>X 19</td>
</tr>
</tbody>
</table>
2012 Study Tour
Key Topics
& Questions
Key topics 2010, 2011, 2012

1. Perpetual Pavements / Long life pavements
2. Warm Mix Asphalt
3. Recycled Asphalt Pavements
4. Accelerated Pavement Testing

1. Surface Treatments
2. Binders
3. Improving Pavement Performance
4. Sustainability

1. Long life pavements
2. High performance asphalt & binders
3. Sustainability
4. Health & Safety
5. Procurement Systems
2012 Study Tour Key Topics

1. Long life pavements
   - Experience, design systems, use, durability & performance

2. High performance asphalt & binders
   - High modulus asphalt (EME, HiMA), modifiers

3. Sustainability
   - RAP/WMA, bitumen substitutes, carbon calculators & energy analysis
     - Climate change impacts, societal concerns

4. Health & Safety
   - Construction of road works, health considerations for bitumen and asphalt products

5. Procurement Systems
   - Proprietary products (Avis Technique, HAPAS, etc.), “green” procurement,
     - REACH, responsible sourcing, PPP and contract models
AAPA 2012 Study Tour to Europe – Introduction to tour objectives

Paris, France
Brussels, Belgium: Eurobitume & Eurasphalt
Netherlands, Amsterdam: Andre Molenaar & Kraton

Netherlands, Delft: DVS & VBW-Asphalt
UK, London: TRL
Germany, Cologne: bast
Germany: Construction site
Germany: traffic lanes cleared for construction
STUDY TOUR 2012
5th EURASPHALT & EUROBITUME CONGRESS ISTANBUL

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GROUP REPORT
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Click here for the report

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The latest versions of the presentations will also be updated on the web – if yours is older then download the newer version and save it to your AAPA ST2012 USB drive in the “FB” folder.

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