Introduction to tour objectives

Itinerary

- 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
AAPA 2012 Study Tour to Europe – Introduction to tour objectives

Australia & its roads

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

“Icon” & loads

Seals vs. heavy pavements

Poor materials

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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>0.6</td>
</tr>
<tr>
<td>Population (June 2010 est)</td>
<td>502 486 499</td>
<td>21 766 711</td>
<td>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>X</td>
<td></td>
</tr>
<tr>
<td>Roads paved (km)</td>
<td>341 448</td>
<td>X</td>
<td></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>Bitumen (tonnes/annum)</td>
<td>14 492 000</td>
<td>75 000</td>
<td>X 19</td>
</tr>
</tbody>
</table>

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Key topics 2010, 2011, 2012

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

Key Topics & Questions

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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
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

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2012 Study Tour

Paris, France
Introducing the tour objectives

Paris, France: USIRF, IBEF, Colas

Paris, France: Colas Lab

Brussels, Belgium: Eurobitume & Eurasphalt

Netherlands, Amsterdam: Andre Molenaar & Kraton

Netherlands, Delft: DVS & VBW-Asphalt
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