



RTA PAVING 2011 CONFERENCE 21 September 2011

This was the 2nd of such Conferences that RTA has run in recent years. Industry attendance was by invitation only.

The following is a listing of papers presented with a short note of mine as to what they covered. If anybody is interested in any of the papers, please give me a call.

1 Development of Heavy Duty Flexible Granular Pavement for Pacific highway Upgrade at Glenugie.

Granular pavements have serviceability limit to support heavy traffic. The paper discusses low volume traffic options and characteristic improvements under the new RTA 3051 Specification.

2 Remaining Life and PSMC Experience

(PSMC = Performance Specified Maintenance contract)

The paper describes the STEP (Structural Testing Evaluation of Pavements) process in estimating the remaining life of flexible pavements.

3 RTA Pavement Management System

I cannot quite figure out what this hotchpotch is all about!

4 The Next Generation Concrete Surfaces

The paper covers various texturing systems tried in US and the development of NGCS texturing. A good overview of the research and the noise improvement qualities of diamond grinding. It only compares dBAs and not the noise frequencies.

5 Design of Foamed Bitumen Pavements

It describes foamed bitumen use in stabilizing. Still requires cement or lime. Bitumen requires one year to "cure". Academic. No arguments re advantages or costs. No details of design considerations required.

6 Triaxial Testing of Elasto-Visco-Plastic Constitutive Model of Asphalt

If you can figure out what this means – Good luck!

7 Characterisation of Subgrade Clays for Pavement Design in Western Sydney Region Based on its Swelling Potential.

A very extensive, expensive academic exercise of looking at clay subgrades of long completed roads in Western Sydney. It comes up with a spreadsheet on how to calculate predicted swell (rather than measure).

It also notes that there are no failures in the roads investigated that could be attributed to the swelling of subgrades.

8 Innovative Laboratory and Field Assessment Techniques for Roadbase Materials.

The paper describes techniques that may be applied to marginal gravels. It is based on a "semi-empirical" theory. The requirement up front is to "develop innovative laboratory – field techniques".

9 Enrichment/Rejuvenation Trial

The paper describes an enrichment field trial of a sprayed seal. It also provides some suggested application rates for existing surface texture depths.

10 Climate Based Binder Study

The paper suggests that higher than C170 Grade bitumen will be required (in NSW) for spray seals in the future.

11 Non Standard Subsurface Drainage Details

The paper describes locations where non-standard drainage treatment is warranted. Suitable sketches are provided.

12 Asphalt Pavement Solutions – For Life

A background to the proposed design of asphalt pavements with top down failure model is described. The philosophy is still in the research stage.

13 Use of Manufactured Sands in Australia.

The paper analyses and suggests what should be the required characteristics for manufactured sands for concrete.

14 Mine Subsidence Effects on Pavements

The paper provides a detailed analysis of the measurements of the ground movements resulting from long wall mining under Hume Highway at Douglas Park. The methods of measurement are illustrated and the management of potential impacts is discussed.

15 Experimental Design to Study Environmental Salt Movement and Accumulation within Roads

The paper looks at some 50 years of research and explains the movement and concentration of salts within road pavements and the likely damage to thin bituminous surfaces.

16 Axle Pilot Study – Semi Trailer Wheel Load measurements

The paper looks at the effect of the proposed introduction of the 27 t quad axle groups on selected roads in NSW.

17 Rehabilitation Design of Victoria Road for Barrier Transfer Vehicle

The study relates to the severe pavement overloading by the vehicle shifting the Quick-Change Median Barrier. (This has a wheel load of 10.5 t compared to normal design load of 4.1 t).

18 Effect of Asphalt Modulus Variation on Pavement Performance

The paper lists a lot of historical design information as well as variations in asphalt modulus depending on absorbed binder, air voids and binder content. In summary, it shows that asphalt composition has a significant influence on pavement life.

19 Iron and Steel Slag Use in Pavement Applications

It describes the processes from Steel Furnace and Blast Furnace slag and the use of the products in various pavement situations. The paper also lists all the Standards and Technical Guides.

20 Coal Combustion Products (CCPs) Use in Pavement Applications.

The paper provides statistics of Australian and World production of these waste products. It also draws attention to the fact that currently there is a surplus of 300 Mt of ash that cannot be used because of various specification based barriers that have been introduced.