

Strategic Alliance Board



Colin Jensen - new Chairman for 2005

After an extended two year stint as Strategic Alliance Board Chairman, AAPA's Stephen Wilson hands over to Colin Jensen for 2005. Colin has recently been appointed as Main Roads General Manager RS&E.

2004 has seen a full review of the Alliance direction, participation and strategy, which benefited from the Districts of Main Roads and AAPA field staff input.

Key outcome of the review was the confirmation that the Alliance should continue and have a long term vision.

STRATEGY FRAMEWORK Sets long term goals for the Alliance

This third year has seen the expansion of the goals and expectations of the workings and management. Starting early in 2004, and with the involvement of the Districts across Queensland, some specific outcomes and directions were developed into a 5 year strategy.

The interactive process has identified the following key systems needed:

- Performance data accessibility matched to product supplier systems
- Performance based specifications
- Products & applications chosen on performance characteristics
- Controls & rewards systems by project size and risk
- Industry systems providing confidence and building capability
- Performance based contracts

Also identified were a number of ongoing actions that are required to sustain the flexible pavements sector and the Strategic Alliance. They included:

- Knowledge and capability building
- Regionalisation and participation
- Project prioritization and funding
- Partner review and evaluation
- Project management system

Whilst these goals are bold, they do require adequate resourcing and commitment. If they are to be met the Strategic Alliance will have to move to a higher level of operation and start delivering even more than already achieved.

As a start the budget requires some \$200k per year—that's the first goal!!



Issue 2 of 2004



Seasons Greetings



*"Doc" Shardlow
Graham retires as
M(ID) Metro at the
end of 2004.*

*We salute his
leading role and
determination to
bring new ideas and
best practice in the
use of asphalt into
Queensland.
Graham has acted as
Project Manager in
the development of a
more durable SMA as
covered in this
edition. — EDITORS*

*Larry Michael
and Richard
Schreck viewing
SMA in the
South East*

Strategic Alliance NEWS LETTER

Developing superior flexible pavements



SMA BENCHMARKING Getting improved performance !

With the support of Director General Steve Golding, AAPA & Main Roads invited two leading experts in Stone Mastic Asphalt to visit Queensland in November 2004.

The experience has been rewarding and has really helped kick start a serious look to our approach to SMA.

The USA experts, Larry Michael from Maryland Department of Transport and Richard Schreck from the Virginia Asphalt Association have over 2500 lane/km of SMA in their States,

performing to the standards of the German originals.

They have led two trips to the SMA German heartland over the last eight years and have kept as close to the proven formula as possible.

Over a five day period they witnessed production, paving and went over a number of the contracts placed in Metro over the last few years.

That led the Bench Marking of our SMA and suggestions for even better performance.

Their observations and recommendations follow .



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<http://www.aapa.asn.au/docs/queensland.html>
Or Main Roads Intranet on <http://pmg>

Developing a more durable Stone Mastic Asphalt

After the field visits a number of sessions were held with the visitors reviewing the differences in the USA and Queensland approaches.

This was rounded off with a workshop facilitated by Ron Gordon resulting in a list of actions and proposed improvements to the Queensland approach to SMA's.

The USA visitors explained the difference between the various mix types. The two main stone on stone contact mixes are Open Graded Asphalt (OGA) and SMA. OGA is porous with voids >20% and SMA is impervious with voids less than 6%. If high voids are required in the mix then it was not an SMA.

An explanation of an SMA mix is included in the BOX below.

Their observations on our Queensland mixes were constructive and they proposed the following:

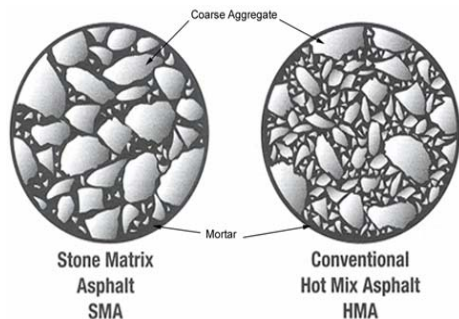
- Density better than 94%
- Less use of fly ash and lime
- Changed grading to increase V_{ma}
- Test sections before construction
- Mix approval based on production
- Use of less modified PMB's
- Use of V_{ca} as production QA/QC

The requirement for less than 6% voids was echoed in feedback from the AAPA Study Tour to the USA in June 2004 & local permeability tests.

Main Roads own laboratory investigations into various fillers had independently drawn similar conclusions on lime and flyash.

SMA is an excellent mix type for use as a surfacing layer under heavy traffic conditions, has good resistance to permanent deformation, relatively high durability and also better wet-weather skid resistance and noise reduction characteristics than densely graded mixes.

SMA mixes rely on a stone skeleton to provide stability. This skeleton is provided by a coarse, gap-graded aggregate structure, which is filled with a mastic consisting of binder, filler and fibres.



The figure on the right shows the greater "stiffening" effect of these two filler types.

Actions & Improvements

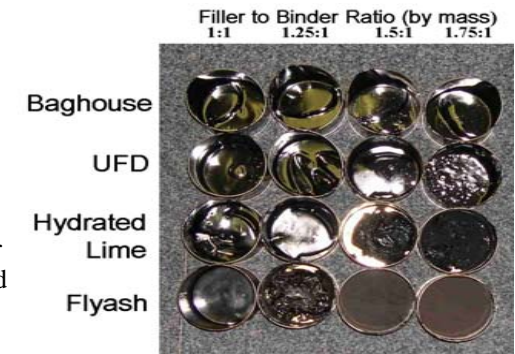
The Strategic Alliance project delivery system was rapidly put into action and a Project Charter developed to cover the goals and outcomes of "Trial demonstrations of a more durable SMA".

This has seen plans for a trial section with an updated specification involving most of the Asphalt Suppliers in South East Queensland.

The changes will address the observations of the USA tour party.

Through active involvement of Main Roads and AAPA Qld staff, the revised Trials Specification and a Supplementary to cover data gathering tests, will be available by late December 2004.

If the project is granted Ministerial approval, the trials will be conducted



as innovative fast track contracts on the Gateway Motorway south of Brisbane in the 2nd Quarter of 2005.

Sharing and comparisons

The support from Maryland and Virginia has included the testing of local SMA in their State DoT's and NCAT. Results covered mix design, gradings, materials and binder type.

We have received samples of their mix, fillers and binders which is providing better understanding and allowing Queensland to benchmark our Stone Mastic Asphalt with the leading SMA producers in the USA.



AAPA members, Main Roads staff and the USA experts exchanging views