

CEO'S REPORT: AUSTSTAB PLANS FOR 2013 AND LOOKING AT PLANT ATTACHMENTS IN STABILISATION

BY GREG WHITE

Road authorities and councils are facing increased pressure to maintain their road network with reduced resources; at the same time having to contend with higher traffic loads. The reduced resources are not only financial but also experienced staff and suitable materials.

It is becoming more evident that there is a far lower number of experienced pavement staff available to maintain our road network. With the retirement of the baby boomer generation supervisors and engineers, there are just not enough experienced replacements.

The good news is there are now, and over the past few years, more young pavement personnel coming into the industry. The challenge is to give this generation the training and experience it requires to fill the void left by the inevitable, ever-increasing retirement of experienced practitioners.

COURSES

AustStab, together with CPEE, is continuing to run the successful series of courses on Stabilisation in 2013 in city and regional areas throughout Australia. There are 11 courses next year plus one in Townsville this year. The courses have been very well accepted and there have been many requests to add extra courses to cater for the growing demand.

SHORT-CUTS

One of the unfortunate aspects that I have encountered through speaking with people from our industry is too often short-cuts are made to rehabilitate pavements. Although the intentions are honourable, the result is the early failure of the repair with a resultant increased cost.

We regularly see advertisements and articles on plant that are portrayed as being "fit for purpose" stabilisers. AustStab has looked at many of these products and is appalled by their claims. Many of the products are add-ons to road plant which makes them even more unsuitable.

Stabilisation, to be successful, requires the following minimum standards:

- Accurate binder application to ensure achieving specified engineering properties;
- Complete and uniform mixing of the binder;
- Accurate depth control;
- Full depth compaction which requires accurate moisture control of the material;

and

- Proper curing.

On studying many of the claims made by these manufacturers, it soon becomes evident that their plant lacks minimum requirements to allow for a successful stabilisation result. The main weaknesses of these alternatives are:

- Little or no control of binder spread;
- Inefficient mixing capabilities;
- Lack of depth control particularly in varying hardness of pavement material; and
- No water metering, giving almost no chance of attaining optimum moisture for compaction.

Unfortunately we still see plant being used for stabilisation which is not fit for purpose;

the most common being the use of profilers or profiler attachments.

Profilers are specialised plant designed to mill pavements and differ greatly from stabilisers in that they do not have a mixing chamber or mixing arms; they are engineered to remove the material efficiently, usually to a conveyor, but have no ability to mix in a binder.

Profilers do not have an accurate water metering system. The differences are obvious when comparing the two machines – the major plant manufacturers having developed over recent years highly efficient plant for both applications of profiling and stabilising.

It is very discouraging to see plant being used to carry out tasks for which it is not designed.

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PRESIDENT'S MESSAGE

BY HEATH CURNOW

AustStab has staged a successful annual conference and AGM in Melbourne during August, which brings with it a continued progression of the association as we tackle the hot topics impacting the pavement recycling and stabilisation industry.

I am particularly interested in raising the awareness and understanding of stabilisation to the up-and-coming generation being thrust into the roles vacated by experienced baby boomers. Currently we are addressing this through university lectures and training courses.

As President, I look forward to working more closely with the current CEO of AustStab, Greg White, progressing the initiatives of the association and continuing to develop the association nationally by supporting the promotion of the industry with initiatives such as the Excellence Awards, our contributions to Roads Magazine and our monthly newsletters.

In 2012-2013, AustStab will continue to focus on the four key pillars for the association:

- Promote the stabilisation and road recycling industry by highlighting the social, environmental and economical benefits;
- Educate decision makers, surveillance officers, designers and the like, about the suitable application of stabilisation;
- Set national standards of performance; and
- Assist and coordinate research for continued progression and development.

We will continue to deliver regionally throughout Australia Insitu Stabilisation training courses in association with the Centre for Pavement Engineering Education (CPEE), the University Guest Lecture Program and will develop further specialised SRA (State Road Authority) specification training.

With the support of the multiple working groups we will continue to set national standards of performance with continued distribution of the stabilisation guide, contractor accreditation, technical papers and construction tips. We will continue to review SRA and local government specifications as necessary.

As an association, we will continue to drive for a strong participative body where members contribute to the healthy state of the association. I encourage both foundation



President Heath Curnow

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and newer members to maintain an active involvement in all aspects of the association.

AustStab remains as robust as the active contributions of the members. Members should recall what it was that motivated them to initially join the association and ensure that they are making the most of their involvement and getting as much out of the association as they put in.

This month's AustStab articles highlight some issues that I feel passionate about:

- A round-up of our very successful 2012 Conference;
- Contractor accreditation; and

- Proper process and application of road patching.

HERITAGE

Modern-day lime and cement stabilisation has a heritage that dates back to the Romans who built roads using the benefits of lime and cement.

Today's machinery and suite of binders gives way to an environmentally, socially and economically sustainable approach to pavement construction which means road materials are recycled and unsuitable materials can be treated.

STABILISED PATCHES REQUIRE UNIQUE TECHNIQUES, PLANT AND EXPERIENCE

AustStab delivers training on insitu stabilisation to regional and metropolitan locations throughout Australia approximately 10 times each year, in association with the Centre for Pavement Engineering Education (CPEE).

Delegates for these courses have varied experience and background. It is common for delegates' experience of stabilisation to be limited to skid steer stabilisers completing extensive patching works in pavement maintenance contracts.

As an association there is a clear understanding that local government agencies and state road agencies are continuing to experience reducing funding on an ageing road network. The network was often originally designed to carry far lower volumes of traffic with far lower axle loads with lower tyre pressures. Funding is also affecting the retention of experienced and qualified staff in all areas of road maintenance. The recent shedding of jobs in Victoria and Queensland road agencies is a sad but extreme example of this loss.

As Warren Smith, Stabilised Pavement of Australia, identified in his paper *A Review of Patching as a Pavement Maintenance Tool* for the ARRB conference in 2010, due to economic and technical considerations, there are, realistically, only a limited number of pavement maintenance options available to network managers. These include:

- Bitumen resealing or asphalt resheeting;
- Patching;
- Pavement overlays;
- Excavate and replace all pavements with new; and
- Recycling pavements using stabilisation techniques.

The present trend is to move away from traditional pavement maintenance options, overlays and full depth replacements to the use of patching of pavements in an attempt to continue to maintain networks under financial pressure.

The majority of patches fall into three main categories – granular patches, stabilised patches or asphalt patches.

Regardless of the category of patching that is completed, the limitations on the effectiveness of the patching are usually controlled by the depth of compaction that can be achieved by the relatively small compaction equipment that is used by the

contractor. The depth of patching is normally restricted to 150-200mm. In stabilised patches, the uniformity of pulverisation, moisture control and uniformity of mixing of additives is vital to ensuring the greatest success of treatments.

The *AustStab Construction Tips - Skidsteer Stabilisers* (2006) provides a detailed guide for investigating pavement distress; an outline of the process of patching with skidsteer stabilisers; a review of equipment used and limitations of plant and process are identified and guidelines for preparing specifications are included.

The size of the patches will vary from as little as 2m² for asphalt patches, through to 50m² for granular and stabilised patches.

"It is important that road agencies recognise the difference between stabilised patching and stabilised pavement reconstruction works."

Areas over 50m² are generally not considered as a patch, but are considered to be sections of reconstruction.

It is common for road agencies to identify the benefit that whole-of-life costing is achievable by joining up a series of patches to make one larger patch. This is the strategy that AustStab supports as providing a better whole-of-life cost strategy. It effectively provides a new pavement with a new effective life for the road agency. Often, in an attempt to save money, road agencies will employ patching contractors to use patching techniques, using skid steer loaders with stabilising attachments, to complete reconstruction works. This patching equipment has serious shortcomings, including limited

depth, inefficient mixing of binders and poor compaction, especially at edges.

It is important that road agencies recognise the difference between stabilised patching and stabilised pavement reconstruction works. Often applying stabilised patching techniques to stabilisation reconstruction works results in premature failures, and this leaves the road agency feeling the stabilisation process failed, when realistically it was never properly executed. Reconstruction works should always be completed in accordance with the methods outlined in the Pavement Recycling and Stabilisation Guide and as taught in the AustStab CPEE Insitu Stabilisation Course.

AustStab recognises that this short-term focused maintenance patching trend exists within local and state road agencies. They believe that asset managers must consider whole-of-life costing for the network, when assessing a patching program for a road network. Patching should be considered as a short-term solution rehabilitation of distressed areas of pavement; not a long-term reconstruction of pavement.

Proper road maintenance requires an education process for the executive within an organisation as well as the end road user; the community, so that they can understand the long-term strategies that need to be adopted that extend beyond a political term in managing the road network asset. Many local governments are actively choosing to educate their local members on the benefits of long-term planning. This is a long process and requires a strong executive management structure with a clear direction for the future maintenance of the road assets.

Proper patching techniques, plant and equipment, materials and experience are required to ensure that any short-term pavement patching solution is the most sustainable outcome for a road asset manager. Stabilised patching is a specialised treatment. Operators should be properly educated. Asset managers should have realistic expectations for what they are likely to achieve by adopting a heavy patching program in lieu of a proper rehabilitation or reconstruction program.

All of the papers referred to in this article are available free to download from the AustStab website. The Pavement Recycling and Stabilisation Guide can be ordered on the website. www.auststab.com.au. ●

AUSTSTAB 2012 CONFERENCE ROUND-UP

Meetings, field visits, golf and awards dinners

The 2012 AustStab Annual conference was held in Melbourne in August 2012. Delegates from 20 organisations attended the three-day conference and annual general meeting.

The annual AustStab conference commenced at the ARRB Group facilities at Vermont South, Victoria. Michael Moffatt, Principal Research Engineer, ARRB Group, was pleased that AustStab delegates were updated on the latest developments in stabilisation research that has been conducted by ARRB. Michael facilitated an open discussion relating to the foam bitumen modulus research and the recent advances in lime stabilisation in subgrades.

Dr Didier Bodin, ARRB Group, demonstrated the new wheel-tracker 'Austrack' to the group. The new equipment has been recently developed by Austroads, ARRB Group and IPC Global for rut resistance characterisation of base materials.



Austrack - A slab in tracking mode on the latest tracking equipment at ARRB Group.



2012 AustStab Golf Cup Winners - Nigel Preston (Shell Australia), Mark Pilgrim, Warren Smith (SPA) and Allen Browne.



Tom Curnow, Stabil-Lime Group- Honorary Member 2012 and Heath Curnow, Stabil-Lime Group - President 2012 - 2013



2012 - AustStab Awards of Excellence Award Winners: Scott Young – out-going AustStab President J. Piratheepan Mahdi Miri Disfani, Arul Arulrajah, Richard Yeo, Mahbub Hossain, AJ Lee, Bill Hodgson, Darren Sampson, Chris Smith, Justin Lowe and Greg White CEO AustStab

The morning session was followed by a cold and windy, and competitive nine holes of golf at the Albert Park course. The course was quite wet following a short rainy period in Melbourne in the days preceding the annual meeting. Warren Smith (SPA), Nigel Preston (Shell Australia), Mark Pilgrim and Allen Browne were the quiet and determined winners of the annual Golf Cup in a hotly contested competition.

Day two and three of the conference included working group meetings, the annual general meeting, ordinary meeting and a meeting of the newly elected executive council. All meetings continued to focus on the four pillars of the association: promotion, education, setting standards and assisting and coordinating research.

A new executive was elected with Heath Curnow, Stabil-Lime Group, successfully gaining the role of President for 2012-2013 and David Berg, Stabilised Pavements of Australia, accepting the role of Vice President for 2012-2013. The current executive committee has representatives from all over Australia, including Tasmania, Western Australia, Victoria, New South Wales and Queensland.

The annual dinner was an eventful night for the Curnow family and Stabil-Lime Group with Tom Curnow being recognised as an honorary member of the association for his strong contributions and leadership in stabilisation in Victoria and his roles within AustStab.

During the annual dinner the first annual AustStab awards of excellence were presented. ●

AUSTSTAB ARRB CONTRACTOR ACCREDITATION REGISTER AVAILABLE ONLINE

According to Transport and Main Roads (TMR), Queensland's road network received more damage than any other state government asset during the flood and cyclone events in 2010/2011.

One hundred per cent of the state was disaster declared in 2011 and 28% of roads were damaged in the 2010 and 2011 disasters.

Transport and Main Roads (TMR) worked hard in the recovery phase to open roads and reconnect communities, and is now undertaking the massive task of reconstructing Queensland's transport network as part of Operation Queensland.

TMR has worked actively with AustStab since the disasters commenced to ensure that all stabilisation contractors supplying to support *Operation Queensland* comply with TMR and AustStab's standards, specifications, guidelines, tips and other technical information.

In July 2006, AustStab introduced the *Insitu* and *Pugmill Stabilisation Accreditation Scheme*. In April 2011, AustStab established a partnership with ARRB to accredit insitu stabilising contractors or plant mix operators.

To be eligible for certification under the scheme, organisations must actively carry out pavement stabilisation works or supply plant mix stabilised materials in Australia.

The technical requirements for pavement stabilisation and the risks and variables involved in the associated processes necessitate careful consideration of the suitability of organisations that seek Contracting Accreditation.

Organisations which gain Contracting Accreditation are entered into a register that is available to parties with an interest in the pavement stabilisation industry through a public register displayed on the AustStab website at www.auststab.com.au/accreditation.

Applicants may be listed in the register in accordance with the categories displayed in Table 1. AustStab retains responsibility for maintaining the register and making it publically available.

An interim accredited contractor is a newly appointed contractor on a probationary period of 12 months before progressing to the accredited status.

The probationary period is a period in which the Contractor must demonstrate to AustStab that it carries out works and general operations in compliance with AustStab's standards, specifications, guidelines, tips and other technical information, as well as abiding by the AustStab code of ethics.

On demonstration of compliance, AustStab may decree at the end of the probationary period that an Interim Contractor progress to an unrestricted Accredited Contractor, the application may be rejected or the probationary period may be extended.

The assessment of the organisation will initially include:

- A review of submitted application documentation;
- A review of references and past jobs; and
- An interview with the organisations key representative(s).

The assessment of the organisation's application may include:

- Inspection of the relevant plant and equipment;
- Summary of the approved/accredited systems; and
- An audit of a current job.

Assessment panels shall comprise:

- Representative from ARRB; and
- the Chief Executive Officer of AustStab.

A recommendation from the Audit team will be presented to the AustStab Standards Working Committee for action.

AustStab is a not-for-profit industry association. The costs associated with conducting the accreditation system are borne by the Contractor. They are charged on an at-cost-basis. A quotation is available prior to the accreditation process.

Contractors are not required to be a member of AustStab to be eligible for certification under the Scheme.

AustStab is in negotiations with the state road agencies and local government authorities to recognise the scheme.

AustStab believes contractors who are accredited in accordance with the scheme will provide a consistently higher quality product than non-accredited contractors as too often, shortcuts are taken by operators who do not have a complete understanding of stabilisation process and theory.

Additional information is available from the CEO AustStab at www.auststab.com.au.

REGISTER LISTING

Certified Category	Insitu stabilising contractor	Plant mix contractor
Highlighted abilities	Binder types - powder or liquid	Foamed bitumen stabilisation
Status	Interim Accredited Contractor	Accredited

REGISTER DETAILS

Name	Representative name	Contact details
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Table 1 - Details retained in AustStab ARRB Accreditation Register