

AustStab – continuing to set standards for the industry

AustStab History

The Stabilisation Industry Association was established as a not-for-profit association in 1995 to promote stabilisation of pavements in Australia.

In 2010 the association was renamed AustStab as this was its most common name in the industry. The association members originally included contracting members but now includes all state government road authorities, private contractors, material suppliers, equipment suppliers and design consultants.

At that time of inception minimal information was available to the engineering community relating to technical specifications, research and advancements that had been made in stabilisation since its introduction into Australia in the 1960's. AustStab's inaugural CEO George Vorobieff with the assistance of the early pioneers of the industry set about developing standard specifications, delivering numerous papers and writing many technical and construction notes. During this early period AustStab developed a rapport with road authorities and councils across Australia where new processes, products and plant were tried and tested.

The results of this collaboration were outstanding with specifications and procedures developed for many of the products available today including:

- Deeplift stabilisation;
- Foamed bitumen;
- Lime stabilised subgrades and working platforms; and
- Environmentally friendly binders using slag and flyash.

AustStab thanks many of the pioneers who have used their engineering judgement and

taken risks to enable pavements to be recycled in an economical and sustainable process. Our industry still fosters many engineers who think outside the square to advance the uses of stabilisation to improve the environment.

The introduction of industry awards for excellence has allowed AustStab to continue to encourage and reward new developments in education. It encourages research by establishing funds for real world field trials and publishes the findings. The promotion of the benefits of road stabilising and recycling is important to AustStab. Through initiatives such as ARRB/AustStab Contractor accreditation, AustStab continues to set standards for the stabilising and road recycling industry.

AustStab operates with a series of working groups addressing key areas that the association places importance on. The working groups provide a forum for road authorities, contractors, industry suppliers and consultants to discuss new products and plant as well as incorporate innovations into specifications and procedures. We are keen to encourage new members to join to add to our talent pool. There are not many opportunities to discuss pavement design and innovation with such diverse and knowledgeable groups in a friendly and cooperative atmosphere. Should you wish more information in joining AustStab please contact Greg White (greg.white@auststab.com.au).

By awarding honorary membership to worthy recipients AustStab recognises the contribution individuals have made to the industry. These members include Tom Willmot, Robert Andrews, Paul Ritchie, Errol Jones, Phil Walter, Greg Murphy and our latest recipient Warren Smith.

Members eagerly await the newest awardee to be announced at the Annual Conference to be held in Sydney in August 2011.

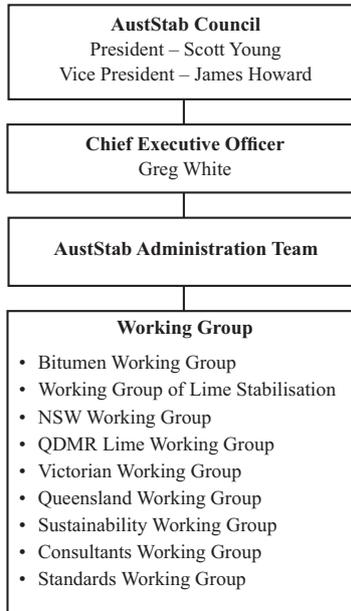


Figure 1 – Structure of AustStab August 2011

Educating and training industry

AustStab is engaging the professional and academic community with a number of education programs. Two of these programs include:

1. The Centre for Pavement Engineering Education (CPEE) and AustStab combined two day Insitu Stabilisation course; and
2. Australian Universities Guest Lecturing Program

The CPEE/AustStab course is being delivered in metropolitan and regional centres. The course is designed for designers, engineers and field technicians in mind. Public and private sector members have attended the course. This course is facilitated and delivered by recognised practitioners in the field and is of such technical content that the number of hours involved are fully acceptable toward continuing professional development (CPD) standing.

The Australian Universities Guest Lecturing Program is an exciting development for AustStab. Greg White, AustStab CEO and industry members such as Scott Young, AustStab President have begun delivering an introduction of stabilising to undergraduate engineering students in a number of universities. Students have been shown how to link their studies of field material testing, binder material properties and design theory to achieve a pavement design incorporating insitu stabilisation. The lecture content is a shortened version of the content presented in the joint CPEE/AustStab two day insitu stabilisation course.

By introducing these students to the most recent developments in the stabilising process AustStab hopes to provide potential thesis and employment opportunities. Student editions of the Pavement Recycling and Stabilisation Guide will be provided for all students attending the lecture program.

More information about the course and registration details are available on the AustStab website: www.auststab.com.au

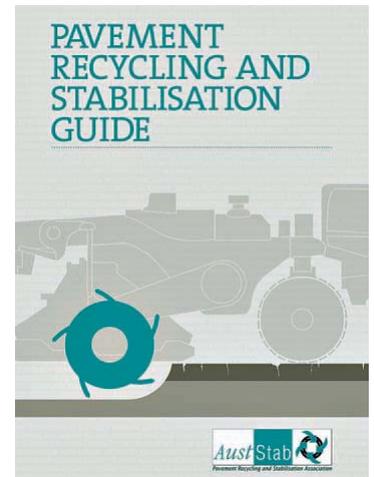


Warren Smith Honorary AustStab Member 2010

The new release of the bible - Pavement Recycling and Stabilisation Guide

AustStab has received permission from Austroads to republish, the now out of print stabilisation "bible", The Guide to Stabilisation in Roadworks. Austroads also kindly allowed the use of material in their current Pavement Technology Series. The resultant text provides the latest information on stabilisation including information on the sustainability and is an essential book for all pavement designers and builders.

With the help of our sponsors AustStab has decided to distribute this guide free of charge initially to the road authorities and councils around Australia. To take up this introductory offer send your name, email and postal address to inquiry@auststab.com.au.



Cover Pavement Recycling and Stabilisation Guide Published 2011

Contractors step up to the mark

AustStab In joint venture with the Australian Road Research Board (ARRB) has initiated a revolutionary scheme to accredit stabilising contractors. There was real need for such an initiative because with the expanding use of stabilisation in Australia it was found that there was inexperienced contractors using poorly designed plant and untrained staff to construct critical pavement structural layers.

The result was poor quality which critically affects the life of the pavement. This problem is exacerbated by the fact the stabilised layer is below other often more expensive layers. This could result in early pavement failure and the need to do major rehabilitation works at considerable costs. The accredited contractors not only ensure the road is built to specification but are able to advise on the most suitable construction techniques.

Non-members of the association are eligible and encouraged to apply for accreditation.

The accredited contractor register will be placed on the AustStab website (www.auststab.com.au) in October 2011.

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From this Front end loader mounted mixer in 1973 (right) to purpose built insitu stabiliser in 2011 (above).



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Lime - an old and trusted friend for road builders

Lime has been used in road construction to stabilise the aggregates since Roman times. However there is still confusion about the types and uses of lime and gypsum.

Many engineers are still surprised when they learn the major advantages of lime when constructing pavement with poor clay subgrades. The previously very poor base for pavement construction can be converted to strong water resistant layer that not only acts as a sound platform the build and compact subsequent layers but also can significantly reduce the pavement thickness.

AustStab has just release a Technical Note "What is Lime" which together with previous publications explains the uses and advantages of lime which can be found on the website www.auststab.com.au

With the expected La Nino cycle forecast to continue until at least the middle of next year, AustStab suggest that project managers consider including a provisional item for stabilising subgrade in their next contracts. This will allow civil contractors to make contact with their local stabilising contractor before works commence on site.

If the site is wet with poor subgrade material then stabilising the site may be an option. Utilising stabilised pavements in subgrades can often save civil contractors weeks of lost time, and costly site oncosts as a result of unworkable subgrades.

Savings confirmed regions

AustStab successfully gained grant funding in 2007 from Department of Transport and

Regional Services (DOTARS) for research into recycling unsealed roads using insitu stabilisation. The purpose of the research was to:

- substantially reduce dust generation from unsealed roads;
- reduce maintenance frequency and hence maintenance costs to Shires;
- provide safe all weather access on unsealed roads; and
- incrementally improve the structural strength of roads.

The roads were stabilised with lime, cement blend or Polyroad depending on the existing pavement material.

The other surprising saving was the initial cost of stabilising was often less than a granular overlay, this is due to the diminishing availability of suitable aggregates near the construction sites.

The approximate costs vary as a function of the proximity of raw materials to the construction site and the thickness of the stabilisation or overlay. The costs in the table are for 150mm layer in both cases.

This research revealed that maintenance costs have been reduced drastically, confirming AustStab's previously contended myth that stabilised roads are cheaper to maintain. Stabilised roads in southern NSW have been studied over a three year period and the need for regular maintenance has been reduced from a typical 6 monthly interval for a granular road to over 18 months often exceeding 2 years before any intervention is required for a stabilised pavement.

More details about the research findings are available on the association website.



Above: Two year old stabilised pavement which has no maintenance.

Findings DOTARS 2007 Pavement Trial: Stabilised pavement costs compared to granular overlay

	Stabilised	Granular Overlay
Initial cost / km	\$17,000	\$13,000 - \$20,000
Life of pavement before replaced	12 years	8 years
Resultant cost pa	\$1,400	\$1,600
Minor maintenance schedule	Once per year	2-3 per year
Cost per maintenance / km*	\$1,000	\$1,000
Cost pa	\$1,000	\$2,500
Total cost pa	\$2,400	\$4,100

*Assumes maintenance crew of grader, 2 rollers and water cart at a cost of \$2,500 / day. Productivity 2-3 km/day.

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RPQ - a leader in asphalt and road rehabilitation technology



RPQ has always been a leader in asphalt and road rehabilitation technology here in Australia, with over 25 years' experience.

RPQ are pleased to announce the addition of the Wirtgen KMA 220 mobile cold mixing plant to its fleet, to support its foamed bitumen stabilisation team.

With the new mixing plant virgin and/or reclaimed materials can be processed using emulsions, foamed bitumen, lime, cement, polymer additives, fly ash and other materials at a mixing capacity of 220 tonnes per hour. Milled reclaimed asphalt pavement, excavated road base and crushed recycled concrete aggregate can be incorporated up to 100% to produce a cold Green Mix.

The small footprint, easy transport and fast setup results in time and cost benefits for clients.

With the continuing emphasis on green & sustainable processes, foamed bitumen stabilised pavements are the future of road building and rehabilitation. RPQ own and operate Plant Mixed Stabilisers due to their superior mixing capability and tighter tolerances on stabilising additives. Virgin products can also be easily metered in where needed. The added ability to inspect the subgrade for failures and rectify any problems prior to placement of the stabilised product leads to high quality, longer lasting pavements.

With its wide range of services on offer including profiling, spray sealing and asphalt production and laying, the RPQ Group can provide the full service on any size project.