

# Australasian Chapter

## Newsletter

### IECA (Australasia) Presidents Report.

Michael Frankcombe



I'm very pleased to tell you this years conference was a huge success – not just in a fiscal sense but in terms of networking, the quality of presentations, the passion of the presenters, the consistency of messages and innovation. I've been getting emails from conference delegates in the weeks since the conference telling me how impressed they were with the event and urging us to do it again.

This year we recorded the most applications ever for our Environmental Excellence Awards. The judges told me that the task of choosing a winner this year was made that more difficult simply because of the high quality of the projects. Congratulations to the Northern Gateway Toll Road Project who are the winners of the project category and the Karuah to Bulahdelah Upgrade project who picked up the highly commended award. Well done also to Hiway Stabilizers Environmental who won the best product award for the Wilton Collieries Road Slip Remediation. Thanks very much to the judges Tony King, Bill Gardyne and Graeme Ridley. It's not an easy task and it takes a lot of time.

This Newsletter will give a brief overview of

each of the winning projects and a more comprehensive Newsletter will be published later this year that details each winning project.

It's always a pleasure to work with the New Zealand Institute of Highway Technology and we've pledged to do it again in June 2011 in Queenstown. Mark that in your long term planning calendar.

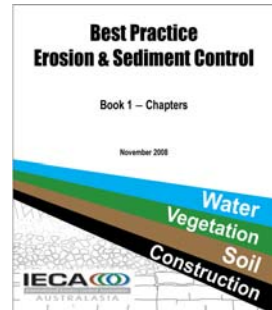
We're well overdue to run a conference in Australia and we've commenced discussions with the Sunshine Coast Regional Council (SCRC), Department of Environment and Resource Management (DERM) and Environment Institute of Australia and New Zealand about having an event on the Sunshine Coast in June next year. It's appropriate to have the conference in South-East Queensland next year as SEQ is a bit of 'hot bed of activity' for erosion and sediment control. By June next year DERM should be close to releasing its new water policy, SCRC will have implemented improvements to their successful and innovative water quality policies and the outcomes from the Queensland Local Government Chief Executive Officers Natural Resource Management Urban Stormwater Quality Working Party should have completed its charter and commenced implementing its recommendations.

I'll keep you informed on the progress with this conference as the event evolves.

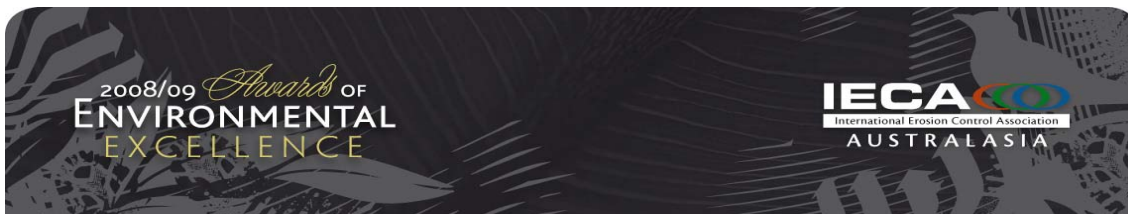
**Michael Frankcombe**  
IECA (Australasia) President.

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### Emerald Members



**2009 WINNER**  
New Product or Innovative Use of Existing Product  
**Hiway Stabilizers Environmental**



**Environmental Excellence Award Winners For the Project Category**  
Winner - Northern Gateway Toll Road Project  
Highly Commended - Karuah to Bulahdelah Upgrade  
Finalist - Cooperook to Herons Creek Upgrade

# Winner

## Northern Gateway Toll Road Project -

Northern Gateway Alliance

The New Zealand Transport Agency (NZTA) engaged the Northern Gateway Alliance (NGA) in March 2004 to design and construct the Northern Gateway Toll Road, an extension of State Highway One, 30km north of Auckland. Six Alliance partners and two sub-Alliance partners make up the Alliance with each member playing a critical role in ensuring the project was innovative, efficient, and cost-effective.



embraced the opportunities presented within this complex setting to realise its vision "to create a visual showcase of environmental and engineering excellence."

The NGA incorporated environmental considerations on the project from a very early stage, including implementing various erosion and sediment control meas-

ures to minimise the impact of construction and maximise the end benefits to road users. These measures included partnering with the Auckland Regional Council and NIWA to undertake sediment retention studies, employing specialist project staff, empowering project engineers to manage issues themselves, and communicating to staff the importance of protecting and enhancing the environment wherever possible.

The toll road passes through a historically rich and diverse landscape containing steep topography, large tracts of native bush, regionally significant streams and estuaries and areas of pastoral farmland, making it one of New Zealand's largest and most challenging roading projects. The NGA has

# Winner

## Wilton Collieries Road Remediation Project

Hiway Stabilizers Environmental

Landslides and debris mudflows are common in many parts of New Zealand and result in millions of dollars of damage annually to properties and infrastructure assets.



More recently, the additional effects of climate change have resulted in an increase in both the intensity and frequency of winter storm events. Both 2007 and 2008 saw near record-breaking flood events occurring in many regions.

One of the worst affected regions was Waikato. Faced with a large number of landslides on its road network, Waikato District Council (WDC) examined the possibility of utilizing launched soil nailing (LSN) technology on some of the sites.

One such example was the large landslide at Wilton Collieries road. The initially preferred option involved

a substantial road realignment. However, given the scale of the required earthworks and associated environmental issues WDC, following submission of a proposal from Hiway Stabilizers Environmental Ltd., opted for an LSN-based solution.

The advantages of this technology to remediate the site were numerous. Firstly, the cost was substantially lower than a road retreat option. Secondly, as the LSN option massively reduced the required amount of natural resources the environmental benefits were significant. Finally, the work could be carried out in a fraction of the time.

The project was awarded to Hiway Stabilizers Environmental in January 2009 and was successfully completed within three weeks.

### FOUNDATION MEMBERS:

MACCAFERRI





## Karuah to Buladelah Upgrade - Pacific Highway, NSW.

Abi Group, NSW RTA

The Karuah to Buladelah Sections 2 & 3 Upgrade of the Pacific Highway was awarded to Abigroup Contractors Pty Ltd by the Roads & Traffic Authority of NSW in September 2006.

This \$214m contract involves the construction of 23km of separated dual carriageway fundamentally along its existing alignment, including new intersections, two new rest areas and a total of seven twin-bridges over various creek crossings.

Abigroup was contracted to design, construct and maintain this major improvement of the highway for a period of 10 years. Construction is scheduled for completion in October 2009.

Excellence in environmental management and innovation in erosion and sediment control on the pro-



ject have been achieved through the Abigroup team's innovative approach, planning and characteristic technique of simply "thinking outside the square".

Key features and achievements to date have included:

- the approved use of an alternative basin flocculant;
- the use of the *Bedminster* by-product in soil conditioning;
- application of sugar cane mulch within hydromulch mixes; and
- use of a desalination plant.

Abigroup's consistent application of best-practice techniques in erosion and sediment control on this crucial section of the national highway has resulted in positive outcomes for the environment and local communities.

## Cooperook to Herons Creek Upgrade - Pacific Highway, NSW.-

NSW RTA, PB, Theiss

As the largest single highway upgrade undertaken in NSW, the Cooperook to Herons Creek Pacific Highway project has a number of significant environmental implications and constraints.

Narrow corridors, construction through environmentally sensitive areas and a lengthy construction timeframe all have significant environmental implications.

To overcome these challenges, the Project has adopted principles described in the Department of Environment and Climate Change of New South Wales', *Managing Urban Stormwater; Soils and Construction* Volumes 1 and 2 (Landcom 2004b, 2009b). Basic management principles including water diver-



sions, land stabilisation and controls maintenance, have been adopted to significantly reduce the risk of environmental impacts.

Correct and prompt implementation of these fundamentals, in addition to development of new procedural and engineering

innovations for the management of erosion and sediment controls and other domains of environmental responsibility, has resulted in recognition from the client and regulatory agencies regarding positive environmental outcomes and a strong relationship with the surrounding community. Outcomes have also benefited the Project in the areas of project timeframe, budget and facilitated the adoption of

environmental management across the project.

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### 2009 IECA (Australasia) Board and Committee Members.

**Michael Frankcombe**  
President and Chair CPESC committee,  
Education committee.

**Bill Gardyne**  
Vice-President, Education committee

**John Wood**  
Secretary

**Ben Starr,**  
Treasurer

**Bill Leggatt,**  
Director

**Graeme Ridley,**  
Director,

**Tony Rees,**  
Director,

**Luke Nichols,**  
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**Wayne Walshe,**  
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**Ian Kiernan, OA, OAM**  
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## Presidents Technical Tip - Gully Pit and Curb Inlet Traps, Michael Frankcombe CPESC.



#### Description:

Gully pits and kerb inlet traps are a range of temporary geo-fabric and gravel structures designed to prevent coarse sediment entering stormwater drainage entry points.

#### Application:

Due to the limited permeability and effectiveness of these measures, their use should be considered very carefully and not relied on as a primary control measure. Source control of erosion and sediment is preferable to use of these structures. They will not trap fine clays nor large quantities of sediment.

#### Design/Construction Aspects:

A maximum catchment area of 0.1ha is suggested for a highly disturbed site. Refer to IECA, 2008 for design/installation of various measures. A range of proprietary products are available that either prevents sediment entering kerb inlets and gully pits, or trap the sediment in the structure. Be aware that these products are designed to either divert or reduce the volume the amount of water that enters stormwater drainage structures therefore the potential safety and/or flooding problems associated with the diversion of stormwater must be considered. Refer to manufacturers specifications when using these products.

#### Problems:

Due to limited capacity, the majority of measures trap very small quantities of coarse sediment and are largely ineffective and reducing turbidity in contaminated water. Water tends to flow around most of these measures often causing drainage/flooding problems.

#### Contributions to the Chapter Newsletter.

If you have or know of a case study you feel others in the industry would be interested in, and feel it would be an appropriate item for the Chapter Newsletter. Please forward it to [admin@austieca.com.au](mailto:admin@austieca.com.au).

### President's Technical Tips.

Over the last 7 years Michael Frankcombe has written a Technical Tip for each Newsletter. These are a great reference source. The accompanying table lists the topics covered and the Newsletter in which they were printed. Past Newsletters can be found on the Chapter website.

Vol	Issue	Topic
8	#2 - Dec 2002	Bonded Fibre Matrix
9	#1 - April 2003	Update on Bonded Fibre Matrix
9	#2 - July 2003	Sediment Fences
9	#3 - December 2003	Erosion Control Blankets & Mats
10	#1 - April 2004	Sediment Basin
10	#2 - August 2004	Turf & Reinforced Turf
10	#3 - Dec 2004	Rock Filled Wire Baskets
11	#1 - April 2005	Hydro Mulch Tackifiers
11	#2 - Aug 2005	Composted Mulches
12	#1 - April 2006	Dispersive Soils.
12	#2 - Aug 2006	Compost filled filter tubes
12	#3 - Dec 2006	Erosion Mats
13	#1 - April 2007	Check Dams
13	#2 - August 2007	Concrete Lined Channels
14	#2 - July 2008	Construction Exits
14	#3 - December 2008	Clean Water Diversion Drains
15	#1 - May 2009	Amelioration of problem soils

**As IECA Australasia is an Association with the environment as its focus the Board have decided that the Newsletter will now be circulated to members in electronic format only. If you require a hard copy please contact the Chapter office.**