

Motorway Alliance drives performance improvement

MAIN Roads features in one of a series of innovation case studies developed by the Building Research, Innovation, Technology and Environment (BRITE) Project of the Cooperative Research Centre for Construction Innovation.

The case studies demonstrate the benefits of

innovation in the Australian building and construction industry. MR is also a project partner on the BRITE Project.

MR played a major role in the project alliance to design and construct the works for the Port of Brisbane Motorway (POBM). The alliance comprised of Queensland Motorways Limited, Leighton Contractors, Parsons Brinckerhoff Australia and Coffey Geosciences. It achieved reductions of:

- ❑ 10 per cent in project cost
- ❑ 30 per cent in time required for project completion
- ❑ 10 per cent in traffic management costs
- ❑ 40 per cent in the lost time injury frequency rate.

Alliance parties were willing to trial and implement new technology and procedures,

resulting in a project of greater functionality, quality and aesthetic value than was contractually required.

The POBM Alliance delivered 5km of four-lane motorway and 12 major new bridges, to carry an expected 8000 trucks per day by 2011, for an estimated cost of \$112 million.

The project was completed early and under budget, after a one-year construction program.

Innovation on the POBM project centred around the alliance itself, but also involved:

- ❑ three-dimensional GPS to control machinery – first time on a construction project in the southern hemisphere
- ❑ third party certification for safety, quality and environment – achieving triple-certification for the first time on an Australian road project
- ❑ slip-formed, reinforced bridge barriers – first time in Queensland
- ❑ water quality design – won an Australian award
- ❑ elevated tri-level motorway interchange – first designed and constructed in Queensland.

For more information, contact BRITE Project Leader Dr Karen Manley on 3864 1762 or visit www.brite.crci.info



The innovative Port of Brisbane Motorway

Toowoomba engineer cream of the crop

A Southern District engineer has taken out the top academic award at the University of Southern Queensland (USQ) in Toowoomba.

Nadia Rohde, 23, was awarded the University Medal in April, recognising her outstanding grade point average of more than 6.6 (the highest possible is 7).

Nadia graduated in September last year with a Bachelor of Civil Engineering (First Class Honours).

The University Medal adds to a series of awards and scholarships Nadia has won including a Main Roads scholarship, a USQ regional scholarship and an Australian Students' Prize in 1998 (awarded to the top 500 high school students across the nation).

As an area engineer for Cambooya, Pittsworth and Jondaryan shires, Nadia looks after construction, maintenance and network administration issues in these areas.

Nadia said she chose engineering as a career as it combined her love of the outdoors with maths and science.

"I love the variety of work and not being at a desk all day, being outdoors and talking to people whether they're farmers, property owners or from local government," she said.

"I also worked with high school kids at the recent Science and Engineering Challenge at USQ and had a really good time."

Budding scientists and engineers put their skills to the test in April in Queensland's first Science and Engineering Challenge.

Co-sponsored by Main Roads, the Challenge involved more than 450 Year 10 students from 15 schools across the Darling Downs competing in various tasks that used basic engineering and science skills.

The aim of the Challenge was to show students in a 'hands on' way that technical skills are used in everyday things, as well as to showcase the range of interesting science and engineering careers on offer in Main Roads and other areas.

Several staff members volunteered their time to assist the students in a variety of tasks that ranged from bridge and catapult construction to cracking codes and mazes.

The University of Newcastle established the Challenge and it is hoped similar events will be held across Queensland with the support of Main Roads, Rotary and other organisations and tertiary institutions.

If you would like to become involved in organising an event in your region, please contact Executive Director (Southern Queensland) Brian Luttrell or Regional Environmental Officer Kathryn Mahony on 4639 0700.

By Linda Lester

