

Road Runner...

ISSUE 1, 2004

VIEW FROM THE POND

Who's Moving the Goal Posts?

In 2004 the Government must decide if they are going to be contractors or regulators because they can't pretend to be both. You can't be a 'referee and a player'.

Playing by the rules

The Australian and New Zealand road maintenance industry is an AUD\$8bn marketplace. Last financial year \$28m was spent on road maintenance every working day.

The cost in road trauma and accident is double what we spend on road maintenance. For all this expenditure we are barely holding the current condition. Without massive injections of funds, or a fundamental shift in our thinking, we are fighting a losing battle.

Key to this fundamental shift must be the role and responsibilities of former Government Departments. These now privatised and commercial entities must take a leadership role in defining what the needs are and

ensuring that the systems and practices being promulgated are the best for Australia and New Zealand.

Sidelineing the Opposition

However at the moment there is a tendency for former Government Departments to be given a free track to be part of committees setting standards whilst bidding for the commercial work that is being derived.

This contradictory and controlling stance has been a major factor in driving down the price below commercial rates of return and stopping new major players entering the marketplace. This artificial barrier is created because no large organisation, with responsibilities to shareholders, will invest in a venture that is artificially regulated and offers no true investment rate of return.

Australia needs big business to be involved in our infrastructure maintenance.



Without their involvement, and the capital they bring, I believe road maintenance in particular will continue to struggle until there is an almighty collapse.

We also must remember that Australia and New Zealand have vast infrastructure assets and small populations and the funding per capita for infrastructure delivery and maintenance has dried up earlier than in Europe and North America. As a result, tools and solutions have been developed by small niche engineering

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ROAD SIGNS

Aquarius

Jan 20 – Feb 18

Strange twists lie in your path for the next few weeks Aquarius. Sounds mysterious? It's a rare and curious collection of planetary influences that brings with it unexpected news and developments. It won't be all good but it won't be bad either. Focus on following routine and keep to your usual track.



Pisces

Feb 19 – Mar 20

This is one smooth month for the happy-go-lucky Pisces. Things will fall in to place without any unnecessary effort on your part. You'll cruise through the next few weeks, with the planets delivering the kind of smooth ride you'd expect from a well engineered German vehicle. Enjoy the ride!

*Check your road sign
Continued on page 4*

HONOUR ROLL:

Dr Yeaman to Advise Feds with ATSE

Dr John Yeaman was recently inducted into the Australian Academy of Technological



Sciences and Engineering. The organisation brings together key individuals from all sectors of the economy largely to provide advice to the Federal Government and advance Australian technology internationally.

The nomination and acceptance by his peers is further confirmation of the good work and thoughtful leadership that Dr John Yeaman has brought to the industry. ■



MONEY MATTERS

It Doesn't Have to Be Sexy to Save You Money

Would you like to save 12.5% from your allocated road works budget in 2004?

This is not about money-vs-safety. This is about employing up to date technology to pinpoint the most cost effective reconstruction option.

Can you afford not to know? Use the output from your pavement management software. Use the Falling Weight Deflectometer. Save significant dollars by only having to rehabilitate what you have to!

Priority of Effort

There is an old Indian proverb that runs:

**"Question:
How do you eat an elephant?"
"Answer:
One bite at a time."**

This proverb comes to me time and time again when I talk to Local Government engineering staff as they are explaining to me the enormity of their task. However, when you tackle the problem one issue at a time there is a sensible way forward. One key area is to look at what you are doing with reconstruction and rehabilitation projects because many of us are over-designing or reconstructing pavements

that only need a surface treatment.

The New Face of Paving

Most organisations now operate pavement management systems. These computer based systems derive candidate sections for treatment given budget and decision parameters. Often we take these initial results to the field and use our experience to confirm what needs to be done. By confirming our experience with advanced testing using the Falling Weight Deflectometer most of these candidate sections can be engineered so that we only have to rehabilitate a portion of the total section.

For example: one particular 400m section had been flagged out of the pavement management system. It showed high roughness, cracking, potholes and was a major arterial collector. Following field inspection and the setting of priorities, this section was confirmed in the operational road program and was funded for reconstruction the following year. The value assigned to the reconstruction was \$240,000 or 3,000m² at \$80 /m².



Cashing In

Structural testing at 10m intervals using the Falling Weight Deflectometer found that only 160m really needed reconstruction and the remaining 240m was structurally sound for the volume and loads anticipated. As a result the remaining 240m only needed a mill and re-sheet to bring the entire section up to a twenty-year design life.

Only the FWD can correctly determine the stresses and strains needed for this type of analysis by better representing the dynamic impact loading of a moving truck.

We continued to test all ten sites this Local Government Authority had flagged for reconstruction that financial year. In the end we were able to save \$600,000 or 12.5% of the allocated budget.

This money was then used for an additional three sites that the client initially thought would have to wait for another year.

If you would like to save, call one of our engineers on (02) 9674-9488 and discuss how. ■



The Big Picture

The cost savings are startling and are as follows:

Initial Budget:

$$400\text{m long} \times 7.5\text{m wide} = 3,000\text{m}^2$$

$$\text{Reconstruction @ } 80\text{m}^2 = \$240,000$$

Final Expenditure:

$$160\text{m long} \times 7.5\text{m wide @ } \$80\text{m}^2 = \$96,000$$

$$240\text{m long} \times 7.5\text{m wide @ } \$25\text{m}^2 = \$45,000$$

Savings:

$$\$99,000$$

There was a little additional cost for traffic control, establishment of the two works crews and consulting but the saving was still in the order of \$65,000.

FACES / PARTIES / PLACES

Ozzy Parties with Pink

The theme was all Pink for Judith Yeaman at the Pavement end of year celebration. Partnered by a dashing Ozzy Osbourne costumed Dr John Yeaman, Judith confesses tattoos and a sky-high hemline are not a regular part of her chic wardrobe.

"I borrowed the dress from my hairdresser but it was so short I had to wear a skirt underneath," says Judith Yeaman.

And the tattoos? Just like those of Pamela Anderson and Angelina Jolie, these stickers ain't stuck no more. ■

We're Not Boasting But...

In a super-big year for VicRoads, Pavement Management Services have just completed the biggest video and laser survey ever undertaken in Australia. An entire 27,000 lane km survey of all major arterial roads throughout Victoria.

Breaking New Ground

In a breakthrough, the survey incorporated newly developed digital video imagery using Fire Wire technology and high-speed laser profilometry. Collecting at normal traffic speeds we were able to capture five images simultaneously. These high quality images were then replayed in the office to identify and record the severity and extent of cracking.

A Pat on the Back

As this was the first contract of this type undertaken by VicRoads, everybody was keen to ensure that it was a success. And it was.

The study showed that reviewing videoed material back in the office gave very consistent results. This was confirmed by

'blind' re-sampling of road sections which gave an impressive 5% variation and 'on-pavement' assessment confirmed that even the smallest defect was being detected.

Get it On DVD

The system used five high definition cameras with three providing a 170° panoramic, one of the road surface and a rear-ward facing camera.

Each of these images can be selected 'on the fly' and the playback system has all the functionality of a home DVD/video player. This is where the increased accuracy shows because the rater, from the comfort and safety of the office, can walk through – pause / replay the image, so that the correct assessment

can be made. This reduces the human error factor where the competing influences of traffic, navigation, heat / cold can lead to inconsistent data collection for all but the most professional and careful operators.

The equipment is also linked and stamped with a DGPS signal and centre-line information. As a result asset information within the field of view can be collected and seamlessly plotted into any mapping system. The ability to 'click, rate and locate' is an outstanding achievement.

Happy Days

VicRoads now has a complete and consistent database of roughness, rutting and cracking information linked to high quality digital imagery.

CASE STUDY

This information can be reprocessed time and time again to identify and review safety issues, plot the location and condition of roadside assets, even make an assessment of traffic congestion as all images have a date and time stamp. It allows the engineer analysing the data to queue up any section of the network by clicking on a map and replaying high quality imagery.

WHAT DOES THIS MEAN FOR YOU?

Probably the most important development in LinServo is that the Client now has a photographic record of the road surface condition at the time of survey.

This will be an invaluable tool in confirming a 'duty of care responsibility'.

If in the future a vexatious claim is submitted claiming that the 'road was a contributing factor' in an accident then all parties can review the condition at that time and see what the issue or problem may have been. ■

Who's Moving the Goal Posts? Continued from page 1

consultancies because of the reduction in government sponsored R&D. Many solutions in roads, water, sewerage, and power amongst others, arguably lead the world because they are backed by practical experience. Right now these solutions are being demanded throughout Asia and the Middle East.

Why would then a major former Government Department become a reseller for UK based systems rather than work with and reinforce successful

businesses in Australia? Similarly why would they seek to trade as "Road Management Services" to meet the needs of Local Government. This just stifles and damages?

The only end state possible is that many of these innovators will be forced to take their technology and ideas elsewhere other than Australia and New Zealand –

AND WE WILL ALL BE WORSE OFF.

Fair Play

Why don't these former Government Departments become the Coach and

foster the development and adoption of best practise and promote Australian and New Zealand talent and success. Showcase and extend the opportunities rather than compete head-on? Harness the good things don't copy or try to play down local successes.

The 6th International Conference on Managing Pavements will be held in Queensland later this year. This represents a perfect opportunity to showcase Australian technology and achievements. Let's make a world class team and tackle the rest of the world. ■

~ Bull Frog

**Do business with an
award winning company**



ROAD SIGNS

Aries

Mar 21- Apr 19

It's time to move up a gear Aries and see what this puppy can do. With planetary forces gathering in your career zone, it's time to up the ante and make a move toward that promotion, pay rise or new position. The pressure will get to you before the month is out...be ready to put your foot down!



Taurus

Apr 20 - May 20

Strap yourself in! In a wham-bang roller coaster month, you'll feel the full scale of highs, lows, firsts and finals. It's all happening and you are where it's at Taurus. Let the road take you where it will, Taurus.



Gemini

May 21-Jun 21

Bump, bump...bump. It's a tedious cycle but that's where you're headed Gemini. If you let speed humps and shallow pot holes get in the way this month, then yes, you're going to get fed up very quickly. Shift into low gear, hands on the wheel and eyes on the road ahead. You'll get there. And when you do there's a very comfortable limousine waiting to pick you up.



Cancer

Jun 22 - Jul 22

Sometimes things are so slow to happen that you feel like you are in reverse. Grinding along in the usual routine is not going to make you a happy little crab this month. If you feel like you're being overtaken, sharpen those creative claws Cancer and scratch out a new path before you're parked in one of life's dead end streets.



Leo

Jul 23 - Aug 22

It's a downhill ride for Leos who have put in all the spade work in the last few weeks. If you've been a conscientious lion lately, the rewards are two fold: first you'll take a ride on the freeway of love (and the Cadillac won't stop gliding) then you'll coast into better health and big energy with that lion heart ready to roar!



Virgo

Aug 23-Sep 22

Dangerous curves ahead Virgo! If you're single and have a heart beat watch out! A new love in your life will turn everything on it's head. While you'll enjoy the shake-up, the fall out could be less than pretty. Hug those curves if you wish Virgo, but be warned of the consequences!



Libra

Sep 23 - Oct 22

It's a sign Libra! It's time to spin your wheels and make your mark on the highway of life. Some people mistake coincidences for signs, but you won't have that problem this month. You'll know without any doubt that you have been given a sign and it's time to change tact. It will rise up in front of your eyes and you won't miss it without running over it.



Scorpio

Oct 23 - Nov 20

All your cosmos have moved into high beam. While the guarded Scorpion usually ducks for cover when the spotlight is on them ... not this time. The road is yours, the horizon's clear and you're feeling like doing something a little fast and furious. Go full throttle, there's a prize for first over the line.



Sagittarius

Nov 22 - Dec 21

It's been a steep climb Sagittarius and the road has not been sign posted well. Getting cut off at every turn? After a few tricky false starts, soon you'll feel like you've conquered Everest. Think of that happy moment when you're negotiating the rough patches.



Capricorn

Dec 22 - Jan 19

Riding roughshod over your colleagues is not on Capricorn! No matter how ambitious you are, the planetary circumstances call for caution when dealing with business and career matters this month. Although you'll be tempted to mow down anyone in your way, show some courtesy, hit the brakes and the rewards will be ten fold further down the track. ■



New South Wales
Unit 7B, 26 Powers Road
SEVEN HILLS NSW 2147
SYDNEY AUSTRALIA
Phone: +61 2 - 9674 9488
Fax: +61 2 - 9674 9345

New Zealand
P.O. Box 5465
FRANKTON, HAMILTON
NEW ZEALAND
Phone: +64 7 - 847 0499
Fax: +64 7 - 847 0399

Queensland

104 Arthur Street
WOODY POINT QLD 4019
AUSTRALIA
Phone: +61 7- 3889 4722
Fax: +61 7 - 3889 4755

Victoria
P.O. Box 2138
EAST IVANHOE VIC 3079
MELBOURNE AUSTRALIA
Phone: +61 3 - 9455 2711
Fax: +61 3 - 9455 2722

Western Australia
9 Carnegie Street

KALGOORLIE WA 6430
AUSTRALIA
Phone: +61 8 - 9091 5399
Fax: +61 8 - 9091 5499

www.pavement.com.au



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