



## Message from the MD

### Sustainability – What Does it Mean to Us

Dear Staff

Our Strategic Plan, which has been designed to steer our business for the next three years, is underpinned by four key themes: competitiveness, controlled growth, innovation, and sustainability.

The inclusion of a sustainability theme recognises that the world, and therefore our market, is moving rapidly to a position from which all initiatives will be determined on the basis of their capacity to contribute to sustainability objectives. Our strategic focus recognises that this shift in global value systems is permanent, gaining momentum and of sufficient magnitude to require a proportionate response from Pitt & Sherry.

This decision is not just reactionary. Pitt & Sherry has a

human face. We are a group of people with our own families, and thus our own hopes and aspirations for future generations.

As an organisation we have a responsibility, and the opportunity, to contribute to the improvement of community social and environmental outcomes through our work and performance as an economic entity.

How do we do this? We do this by reinforcing our existing culture of valuing our people, helping them develop, maximising their opportunities, encouraging workplace diversity, work life balance and community engagement, and by integrating ecological and social objectives within our projects, to the benefit

of our clients, and the communities in which they operate.

This is what Sustainability means to Pitt & Sherry. We are sincere in our desire to show leadership and, through our business activities, maximise our positive impact on the communities within which we live and work.

Whilst we can't do everything, we can do something, in proportion to our capacity as an organisation of around 150 committed and creative people.

Kind Regards

J.W Pitt

## RoadPavEx Conference

Pitt & Sherry held another booth at the annual RoadPavEx conference at Flemington Racecourse, Victoria, 7 – 8 March 2006. Attendance was well regarded with people from Victorian, South Australian and West Australian councils.

Pitt & Sherry had two staff members presenting papers, David Coe spoke on “Strengthening of Bridges” and Torill Pape spoke on “Bridge

Inspections and Load Rating”.

Pitt & Sherry and Moloney Systems’s road maintenance software package, RoadAsyst™, received great endorsement from Benalla Shire Council’s talk. Norm Cook’s topic was “Risk Management and Road Inspection regimes”. Norm Cook has worked on incorporating Benalla Shire’s Road Management Plan into RoadAsyst™.

Article by: **Phoebe Moore, Marketing**.

**Left** : Winner of the wine raffle - Michael Sacilotto from Northern Pavement Consultants, Queensland. Presented by Torill Pape and Phoebe Moore.



### Inside this issue...

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- ⇒ **Project Updates**
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- ⇒ **New Product**



**Above**: Torill Pape, Bridge Engineer, explaining BridgeAsyst™ to a delegate.



## Project Updates

### Devonport Eastern Shore Traffic Management Study

Devonport City Council in conjunction with the state and federal governments are implementing the \$5M Devonport Eastern Shore Urban Design Framework. East Devonport includes one of Tasmania's major shipping ports and a key goal of the study is to separate the freight transport to the port area from the light traffic associated with the TT line vehicular

ferry as well as residential and commercial traffic.

The urban design framework proposes a number of changes to the current road network. Pitt & Sherry have been appointed to undertake a traffic management study to identify and analyse the impacts of the proposed changes. Pitt & Sherry will make recommendations to the viability of

the various proposals as well as prepare conceptual design plans for the roadworks.

The conceptual plans will be used to determine land acquisitions and staging provisions for the works.

Pitt & Sherry are working with Melbourne based subconsultant, IMIS, who are undertaking strategic level network modelling using the CUBE program. Detailed level of service assessment of the proposed intersection arrangements are being undertaken by Pitt & Sherry traffic engineers using aaSIDRA.

Article by: **Phil Gee**, Business Development Manager – Tasmania, **Hobart**.



Left Aerial view of Devonport Eastern Shore.

### Red Orbital Smart Bus Project

The Melbourne office is currently engaged by the Department of Infrastructure for the Survey and Detail Design of a Section of the Red Orbital Smart Bus Route between Box Hill and Altona.

The construction of Smart Bus Orbitals is an initiative of the Government to encourage public transport and the movement of commuters away from the city.

This section of the Red Orbital Smart Bus Project covers approximately 30kms and incorporates 61 new bus stops from Altona Train Station to the Sunshine Bus Interchange. The works also include the bus interchange at Sunshine.

Dave Parry is acting as Pitt & Sherry's Project Manager and

Selwyn Pendergast is the Senior Design Technician. The scope of work includes detail survey, site investigations and the production of 63 drawings to a standard which can be issued for tender and construction. The project is nearing completion and final drawings are due to be delivered to the Department of Infrastructure in the next few weeks.

Feedback from Department of Infrastructure has been positive and the Melbourne office has been requested to tender future bus stop projects. For further information contact Dave Parry on 03 9682 5290.

Article By: **Dave Parry**, Project Engineer, **Melbourne**.

### Murchison Highway

This project involves the reinstatement of the Murchison Highway Tasmania North from Cradle Mountain Development Road to Shorts Road and will run for 104 weeks. The Contractor is Works Infrastructure. Work will be undertaken during the warmer months, between September and March. The project will be shut down during winter.

The existing pavement is to be widened to provide 3.0m lanes, 0.35m sealed shoulders and table drains over the entire length of works. The scope of works includes clearing and grubbing, excavation and embankment, box out and widening, reinstatement of junctions and accesses, pavement marking, and modifications to existing table and side drains. The total length of the highway to be reinstated is 10.5km.

Chris Weavers will be undertaking the role of Superintendents Representative for the Murchison Highway Contract and Lee Warren will be the Contract Supervisor. The works will cost just over \$4.25million.

Article by: **Koby Maxwell**, Administration Officer & **Chris Weavers**, Project Manager, **Devonport**

## Project Updates

### Treating bleeding, fatty and flushed seals by high pressure water blasting.

A recent contract Pitt & Sherry worked on for DIER was the high pressure water blasting of a road. This is only the second time the technique has been used in Tasmania.

Some bituminous seals bleed, are fatty or are flushed. It occurs where excess bitumen rises to the road surface. Sometimes it makes the road look shiny and on hot days it is very sticky. This causes low skid resistance, potential stripping of the seal and reduces the life expectancy of the pavement surfacing. In the past the bleeding has sometimes been treated by application of more aggregate,

application of another seal, application of a rejuvenating agent or application hardening binders with more stone. Each of the processes has limitations.

DIER are now treating flushed, fatty and bleeding seals by hydro-texturising (high pressure water blasting) for the second year. Pitt & Sherry have been involved in writing the specification, preparing tender documents, tender assessment and now Contract Administration. The Contractor is Frimokar Australia and they are based in Sydney.

High Pressure Water Blasting is

carried out by a truck spraying water onto the road surface under very high pressure and vacuuming the water and removed bitumen. The water is sprayed at pressures between 100 and 1000Bar (10 to 100 MPa or in imperial units 1400 to 14000psi). The truck has 5 water blasting heads and can treat up to 3.5m width in one pass and the truck moves at between 100 and 1400metres / hour. The method only uses water. The method extends the life of the asset and reduces the need for application of products that deplete natural resources.

Article By: **David Hugo, Launceston,** Civil Engineer



Photos of a truck



## Berwick Cranbourne Road

VicRoads regularly deliver infrastructure projects within Melbourne using the design and construct project delivery method. Pitt & Sherry recognises that undertaking design and contract type works with contractors is a major industry sector in which the Melbourne office wants to work and operate successfully.

Pitt & Sherry has recently undertaken a range of design and construct type works for contractors such as Theiss, John Holland, Akron, Winslow and Cut & Fill.

One of the major design and construct projects currently being undertaken within Melbourne Business Unit is the design of Berwick Cranbourne Road which is located in the South Eastern suburbs of Melbourne. The

Melbourne Business Unit is undertaking this design work for Akron Roads who is registered is a DC3 Contractor with VicRoads. (Works up to \$20M).

This Contract involves the duplication of approximately 2.5kms of Berwick Cranbourne Road and the deviation of approximately 700m of side roads in a growing part of Melbourne. The Survey Works were provided by VicRoads and Melbourne Business Unit's responsibilities included site investigations and the provision of final design drawings to VicRoads standards. Drawings were progressively delivered to the Contractor as construction was undertaken. Works commenced in March 2005 and are scheduled to be completed within the next four (4)

weeks.

It is understood that the Contract has run smoothly for the Contractor and Pitt & Sherry has received good feedback from Akron regarding the standard of drawings and other deliverables. Doug Humphrey acted as Design Technician for the project and was in regular contact with the contractor resolving issues and details on a needs basis throughout the construction period. Approximately 130 drawings were delivered as part of the commission.

For further information please contact Doug Humphrey on 9682 5290.

Article By: **Doug Humphrey,** Melbourne, Technical Officer



# Project Updates

## Bass Highway Duplication Update

### Ministers Open New Bass Highway

One of the biggest projects undertaken by Pitt & Sherry in recent years has been the Bass Highway Duplication between Ulverstone and Penguin. The total value of the 11 kilometre highway upgrade is around \$70 million with professional fees to Pitt & Sherry for planning, design and contract administration services of over \$4 million.

The project is being delivered in 2 stages, each of approximately 5.5 km length, with first stage being officially opened to traffic by State Minister Brian Green and Federal Minister Jim Lloyd on Thursday 2 February 2006.

### Stage 1 Summary

Planning & Design work commenced in March 2003 and construction commenced in October 2004. The project featured excavation of two large cuttings west of Knights Road and Myrtle Creek; Knights Road interchange with on and off ramps and roundabout; new underpass structures at Knights Road, Batten Park Road and South Road; and major culvert extensions at Myrtle Creek and Cross dam.

Some vital statistics of the works are:

- Total cost about \$28M,
- 130,000 m<sup>2</sup> revegetated,
- 15,000 new plants,
- 440,000m<sup>3</sup> of excavation,
- 130,000m<sup>3</sup> of highway embankment,
- 260,000m<sup>3</sup> of surplus material used to contour and enhance a disused land fill,
- 180,000m<sup>2</sup> of topsoil placed,
- 9km of subsoil drains constructed,
- 4km of drains excavated,
- 1km of channels constructed,
- 2.5km of culverts laid,
- 8km of kerb and concrete gutter laid,
- 120,000m<sup>2</sup> of pavement constructed,
- 5km of guardfence,
- 5km of wire rope safety fence,
- 100 signs,
- 40km of lines marked,

- 5km of fence erected,
- 18 property accesses constructed,
- 12,000 tonnes of asphalt laid,
- 180,000m<sup>2</sup> of bitumen surfacing

Some of the challenges for Stage 1 of this project included building a highway formation over a dam, lots of swampy ground and springs, and keeping the community satisfied with sound attenuation fences, access and property adjustments. There were also some testing storm events during construction.

Here is an overview of just some of the people involved in this project:

The highway was designed in the Hobart Office and featured David Conley, Brian Williams, Ross Mannering, Ted Pitman, Ralph Rallings and David Greggs to name but a few.

Construction was carried out by Launceston based Shaw Contracting.

Site contract administration was a joint effort by Pitt & Sherry/DIER, featured , Damien Naughton and Jonathon Mulcahy.

Interesting construction contingencies included dealing with poor subgrade, which required treatment to provide a solid foundation under the pavement, and coping with unexpected ground water, which had to be drained using rock drainage blankets and additional subsoil drains.

South Road had to be lowered where it passes under the highway by “soil nailing” the excavated areas with steel rods grouted into the adjacent banks. Settlement of river sediment at Myrtle Creek was accelerated by surcharge loading to ensure stability before constructing the pavement.

The creative design used excess earthworks to turn a refuse disposal area into a riverside park and a cricket amphitheatre, and to rehabilitate several disused quarries.

The work was finished 2 months ahead of schedule. Final landscaping is scheduled to be completed in June 2006.

### Stage 2 Update

Design work commenced in March 2005 and tenders have already been called for the design and construction of the new 160 metre long Leven River Bridge. Design and documentation is well advanced on the roadworks and new bridges at Forth Road and Lovett Street. DIER plans to call tenders for this work in April 2006.

Key people in delivering this stage of the project include David Conley, Ross Mannering, Ted Pitman, David Crowe, Richard Cassidy, Ian Woodward, Brian Beckitt, Frank Shadwick, Marc Foster, Angie Serato, Mike Williams, Kate McIntosh, Neil Johnson, Brett Chandler, Aaron Percy, Anne Zegveld and Jim Briggs.

Article by: **Koby Maxwell, Damien Naughton & David Conley.**



Photo 1: Knights Road roundabout



Photo 2: Lying culverts under highway

## Project Updates

### EastLink Project

The EastLink Project is the work being carried out on the Mitcham Frankston Freeway which is under construction between Mitcham and Frankston. This section of freeway covers approximately 40kms and will have an overall construction cost of approximately \$2.5B.

The Melbourne office is engaged directly by the Contractor (Thiess John Holland) to undertake a range of services for the project including the design and documentation of temporary road works, temporary design works associated with the tunnel construction at Mitcham and temporary structural works associated with noise walls and pre-cast beams.

Leigh Barrett is managing the design and documentation of a range of temporary road works for the project and currently has approximately ten active civil projects undertaking design works at various interchanges

such as Maroondah Highway and Canterbury Road, Wellington Road and Ferntree Gully Road, Princess Highway, Greens Road and Molan Street.

The staging works and Traffic Management Plans at the various interchanges are designed and documented by other consultants directly engaged by the contractor. These management plans undergo a comprehensive approvals process prior to being delivered to the Melbourne office for final design and documentation. By the time the projects are delivered to the Melbourne office the urgency for construction is usually high and there is always an amount of pressure on the design team to turn around designs in a matter of days.

Leigh Barrett in association with Doug Humphrey, Dave Parry and Selwyn Perdergast have worked up a

number of systems and processes to deliver the designs for temporary civil works in a timely and cost effective manner. In addition to those in the Melbourne Business Unit, resources from other offices have been able to assist in meeting the high demand for design services for this project.

William Zegveld and Tony Bowden from the Hobart office are regularly involved in projects to assist the Melbourne office. Feedback from our client (Thiess John Holland) to date has been excellent and the Melbourne office is receiving repeat work on a continual basis at a rate at which our team can deliver.

For further information please contact Leigh Barrett on 03 9682 5290.

Article By: **Peter Holland**, Director, **Melbourne**

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## Special Announcement

### New Associate Appointment

The Principals and Associates of Pitt & Sherry have pleasure in announcing the appointment of Mario Aiezza as a Pitt & Sherry Associate - effective from 1 July 2006.

Mario has been Regional Manager, Infrastructure in the Melbourne office for the past 2½ years. His focus is to develop the Melbourne infrastructure business.

Mario comes from a contractor-based background having held positions with Walters Construction, Transfield and John Holland.

Mario and his wife Leah have four children - Joseph (11), twins Cameron and Travis (10), and Danny (5). Both Leah and Mario's outside interests are centred around their children's sporting interests and they both hold positions with their sons' football team.

Mario's appointment continues the policy of actively managing the succession planning aspect of the business, by broadening the share register with a pool of talented people with both the potential and the aspiration to assume more significant leadership roles within Pitt & Sherry.



Congratulations Mario!



## New Product

### Sustainability in Pavement Technology

Note: This article is reprinted with permission from the *Ecopave Australia Journal* as an example of sustainable pavement technology practice. Pitt & Sherry, as an element of policy, do not publicly endorse products or services manufactured or otherwise provided by 3rd parties.

In 2005, the Asphalt Industry celebrated 100 years since the invention of roller (compacted) asphalt, the same asphalt we see on our roads today. Following those early pioneers, a family-owned Australian company, Ecopave have developed a commercially viable, non-petroleum-based asphalt substitute made from organic wastes such as the sugar by-product molasses, in addition to products such as natural rubber (latex), tree resins, gum resins and edible vegetable oils, such as palm, coconut, peanut, and canola oils and potato and rice starches. The product GEO320 MRH (Mastic Roller Hybrid) asphalt bitumen for road paving, is an environmentally friendly, revolutionary breakthrough technology made from non-petroleum based low molecular weight, water-soluble raw materials derived from renewable resources.

GEO320 MRH Asphalt is made using (MM) Micro Mastic Matrix technology developed by Ecopave Australia, which means that asphalt application thicknesses from 1mm ultra thin surface coatings to 200mm full load bearing road constructions are now possible with the largest stone in the asphalt mix having to be only up to 10mm in size.

GEO320 MRH bitumen is also made from the distillation waste acquired from recycling used motor oils, which Ecopave Australia can manufacture. Bitumen from non-petrochemicals, food stuffs, plant materials and petrochemical raw material sources can convert these into stand alone, road grade bitumen equivalent e.g., CL320 or multigrade or pigmentable bitumen.

GEO320 MRH Asphalt Bitumen prototype has been tested by RTA South Australia since 1996 and RTA NSW in a line marking situation, passing AS4049 road marking Standards, Boral Asphalt field trial since 2000 and benchmark tested to AS2008, against Shell's CL320 residue bitumen by ARRB Transport Research in 2002.

GEO320 MRH asphalt and bitumen has been proven to have very high durability, fatigue, solvent, cracking, rutting, and skid resistance. The MRH asphalt has imbedded glass spheres for reflecting light for road safety. GEO320 MRH comes in dry granulated form, so no hot storage is required, and it is non-fuming. GEO320 MRH asphalt is compacted at low temperatures (Warm Mix) and the aggregate mix in GEO320 MRH asphalt can be made from alternative rock sources, such as recycled

crushed brick and cement concrete to preserve our natural rock reserves. The inherently lighter colour of GEO320 MRH asphalt helps combat the "heat island effect" and reduce climate change due to global warming caused by green house gas emissions.

In view of the global move towards environmentally friendly renewable resources and sustainability, GEO320 MRH will make a positive contribution not only to the health of asphalt workers in the road paving and construction industries, but also to the reduction of green house gas emissions and recycling.

As Supplied By: **Kate McIntosh**, Senior Engineering Geologist, **Hobart**.

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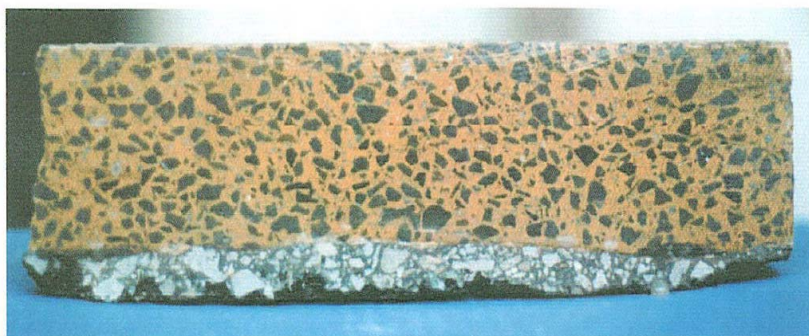
### Editor's Note

Dear Pitt & Sherry Staff,

Thank you to all staff for your contributions to this newsletter. Any interesting events or exciting projects you are working on (or have worked on), will be readily accepted. It will be distributed around the office and available on the Intranet.

The next edition is June 2006. Forward your contributions to the Journalist in your business unit.

See below for the Journalists in your office.



A cross-section through GEO320 asphalt laid on a road base, showing a lack of the 'voids' (air spaces) which normally weaken regular asphalt bitumen. Ecopave



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