

INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALIA  
(I.P.W.E.A.)

The Foundation for the Technical Advancement of  
Local Government Engineering in Western Australia

## HOBART INTERNATIONAL PUBLIC WORKS CONFERENCE

Fellowship Report on Practices of Interest of Value  
To Local Government Engineering Resulting  
From the Conference



Dawn in Hobart, Tasmania

*By Louka Shopov*

November 2003

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**LOUKA SHOPOV**

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# ***Fellowship Report on Practices of Interest of Value To Local Government Engineering Resulting from the Conference***

## **Abstract**

The Institute of Public Works Engineering Australia (WA) has awarded three Fellowships to assist its members to attend the International Public Works Conference, which took place from 24<sup>th</sup> to 28<sup>th</sup> of August, 2003 in Hobart, Tasmania. About 600 delegates from local government and civil contractors and consultants from all over Australia and some from overseas got together to share their experience and promote the importance of public works engineering to society. I was delighted to be one of the recipients. This was a lifetime opportunity to participate in the premier event in IPWEA's two-year schedule.

## **Acknowledgements**

I wish to thank the Trustees for considering my application for the Fellowship, and the Management of City of Kalgoorlie-Boulder for endorsing the trip to Tasmania. I would like to assure both parties of my commitment to work harder and applying the skills and knowledge acquired from the conference.

## **1. Introduction**

The following document is prepared to highlight the benefits to the community gained, from attending technical presentations and networking during the Public Works Conference in Hobart. The financial part of the report covers the expenditure associated with the event.

## **2. The Travel**

I sat out on a train to Perth on Saturday, 23 August. It was a cold, wet morning but I was so excited to get away for a few days that the rain did not matter at all. It took seven hours to get to Perth and the Qantas Boeing 747 to Melbourne departed from Perth Domestic airport just before midnight. After two hours break at Melbourne we continue on a smaller plane to Hobart. I took a cab from the airport and half an hour later I was in Blue Hills Motel, small and tidy building with a huge Tasmanian oak at the front.

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### 3. The Conference

#### 3.1 The Venue



The conference took place in Hobart's landmark building Wrest Point Convention Centre. It is one of Australia's premier conference venues that can cater for up to 1600 delegates.



Commanding glorious views of the Derwent and Hobart surrounds, this area is excellent for exhibitions, poster displays, cocktail receptions, refreshment breaks or meals.

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### **3.2 The Delegates**

About 526 delegates attended the conference. These included professional people in local government engineering, consultants, manufacturers and suppliers from all over Australia, New Zealand, USA and South Africa. The number of local government representatives was 414. Even small Shires like Coolgardie and Christmas Island had delegates.

### **3.3 The Sponsors**

Leading Australian companies and government agencies were generous sponsors of the conference. A few names to acknowledge include: manufacturers of stormwater drainage products Rocla, Humes and Vinidex; heavy earth moving and road construction machinery producers Volvo, Komatsu and Caterpillar; asphalt and bitumen suppliers Emoleum, Boral and Shell; consultants Sinclair Knight Merz, Pit & Cherry, Meritec and Axim; Australian government agencies AAPA, ARRB, AusSpec, Hobart City Council, Intitute of Engineers Australia and Institute of Public Works Engineering Australia (IPWEA). A remarkable sponsor's exhibition was set up, with the latest technological achievements in stormwater products, asset management, construction materials and tools and machinery.

### **3.4 The Technical Presentations Attended**

It was a problem for me to choose which presentation to go to. They all sounded interesting and well worth seeing. In several occasions I had to throw a coin to decide between Asset Management and Best Practice in Environment and between Traffic and Road Safety and Waste Recycling. I would have liked to have seen all papers if I could.

On day one I enjoyed three lectures in *Innovations in Stormwater*, presented by Peter Wood (City of Burnside, SA), Colin Pitman (City of Salisbury, SA) and Martin Glover (Town of Mosman Park, WA) Peter went through several case studies stormwater solutions that improved water quality, reduced the volume of rainfall runoff and improved the aesthetics of public parks and recreation areas.

Colin enhanced Peter's idea of retaining stormwater runoff on site by creating a series of thirty-two wetlands in Salisbury. Partnership with the largest wool processor in the southern hemisphere and General Motors Holden was an important part of the project as they become recipients of the stored runoff.

Martin Glover reported on a trial of three chamber gross pollutant traps feeding into the Swan and Canning Rivers in Perth. It is an effective and inexpensive alternative to proprietary units.

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In the afternoon I went to *Water Sensitive Urban Design*, a theme of Session Two. James Renee (Blacktown City Council, NSW) presented *The Evolution in Stormwater Management-a Case Study*. James brought our attention on the major challenges for stormwater managers since the colonization of Australia. He talked about the need to change European infrastructure design to suit the climatic conditions experienced in Australia. Water quality impacts associated with urban run-off, aesthetics of the structures, constructed wetlands, "Total Catchment Management", "Water Sensitive Urban Design" and "Low impact Development" were also the key points in James's paper.

Mathew Hall (Nillumbik Shire Council, VIC) described the design and construction of a small residential development in the Shire of Nillumbik. The project incorporated best practice in environmental management, including Water Sensitive Urban Design (WSUD) practices, and the use of stormwater quality protection methods and recycled materials in construction works.

*Linking Our Ground Water to Water Sensitive Design* was the next paper, presented by Michael Foley and Tony Turner (City of Swan, WA). The authors offered several solutions to overcome the problem with maintaining water quality in Perth, affected by continuing urban subdivision and discharging fertilizer and other pollutants into the river system.

*Asset Management for Long Term Road Maintenance Contracts* by Geoff Webb (GR Webb Consulting P/L TAS) was the next presentation in session three. Geoff discussed some of the elements of the asset management systems employed in the delivery of maintenance and rehabilitation services in the management of Tasmania's southern road network.

At the end of day one, Bruce Douglas (Mornington Peninsula Shire Council, VIC) outlined the process of transition from a short-term service contract to a longer term contract and from one service provider to four in a Best Value administrative environment defined by the Victorian State Government. His paper was titled *Sustainable Infrastructure Maintenance Service*

Day Two started with Jacquie's White paper *Building the Capacity of Local Government & Industry Professionals in Best Practice Urban Stormwater Management*. Jacquie talked about the initiative of the Municipal Association of Victoria and the Stormwater Industry Association of Victoria to establish a program called Clearwater Program, which aims to develop skills and knowledge of local government and industry professionals in relation to best practice environmental management of urban stormwater.

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Then followed a wonderful presentation from Stephen Frost (Fairfield City Council, NSW) *Restoring the Waters: A Sustainable Alternative to Concrete Stormwater Channels*. Improving water quality, managing flooding, increasing biological diversity and raising public awareness of stormwater management issues were the main objectives of this paper.. It involved deconstruction of 2.7 km of concrete stormwater channel at Clear Paddock Creek in the City of Fairfield Sydney.

Ian Woodward (Pitt & Sherry, TAS) highlighted some issues with Best Practice Environmental Management, where final decisions can be costly in dollar and even environmental terms. It can also lead to decision making that is piecemeal, over zealous, non-scientific and unfair and unreasonable. "At its worst, BPEM can be an excuse for bureaucratic burn protection, with regulators shifting all the onus of proof for decision justification onto developers under the banner of the Precautionary Principle," Mr Woodward said. After lunch Greg Ryan, a young engineer from NZ, presented the results of his investigation on flood hazard in six communities within the Thames Coast river catchment. Greg constructed one-dimensional and two-dimensional hydraulic models using a software program to stimulate flood hazards. The result of his investigation was a quantification of the flood hazards, along with the production of a draft flood hazard map and a set of draft engineering options to mitigate each flood hazard. Greg's paper was a winner of the HYNDS award.

I did not gain as much from the next presentation from Justin Boocock (Brighton Council, TAS). Justin had traveled to Sydney, Melbourne, Adelaide and around Tasmania to investigate the latest innovation in stormwater treatment and the potential for its reuse. The paper won the FAMET Endowment Award in 2002, possibly for the abundance of photographs and to encourage recent graduates. Another speaker from Nillumbik Shire Council, Victoria covered issues with recycling and Waste Services. Steven White proposed series of strategies and actions, revolving around reduction, recovery, reuse and recycling to achieve waste reduction targets. "The aim is-no waste to landfill by the year 2020," said Steven. The first presenter in the afternoon session on Lessons in Procurement was Bill Lawson (Sinclair Knight Merz, Tasmania). His paper was about procurement of goods and services in local government. Competitive Procurement is a longstanding practice required under the provisions of Local Government Act. However, the rising cost of competitive procurement is a concern to all Australians.

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Last for the day, (but not least), was Alister Clark (Greening Australia, Tasmania) with *EnviroMark-A System for Identifying and Managing Significant Environments*. Greening Australia has developed an integrated environmental management system for mapping, marking and managing significant environments. The system is called Enviromark. It can help organizations to observe their responsibilities under threatened species legislation, weed management legislation and local and regional natural resources management strategies. Alister's paper outlined the issues, described how the system works and the key elements associated with its application on roadsides.

Day three of the conference started with *Automated Video Feature Recognition in Road Management* by Shao NG (University of Tasmania) The paper was an extract of Shao's doctoral research on artificial intelligence methods and their application in engineering practice. The basic tools are expert systems, neural networks and generic algorithms associated with decision making pattern recognition. Shao concentrated on current usage of these tools in asset management and highlighted exciting new applications using real time feature recognition in images.

The second presenter for the morning session was Ahmed Zeki (Coffey Geosciences, Tasmania). Zeki tried to raise awareness to the challenges and risks the ground presents for civil engineering projects.

Following that was an exciting paper about *Recent Developments in Bitumen Road Surfacing*. Speaker, Dr Nigel Preston (Shell Co. Victoria) stressed a number of new products and spoke in justification of their high price. This is what he actually said: "The sustainable technologies are available to procure highway maintenance activities to a high standard in both quality and health management arenas, but there is a cost associated with these high standards which has to be recognized particularly at the client end of the supply chain".

The last three presentations I attended were in the area of Waste and Other Water. *GIS Approach in Consequence Assessment of Flood Damage*, by Keith Stove (Hydro Tasmania); *Bio-Remediation in Wastewater Systems* from Rob Smith (BioRemedy P/L QLD) and *Engineering Solutions in Salinity*, from Don Bursill (CRC for Water Quality & Treatment SA).

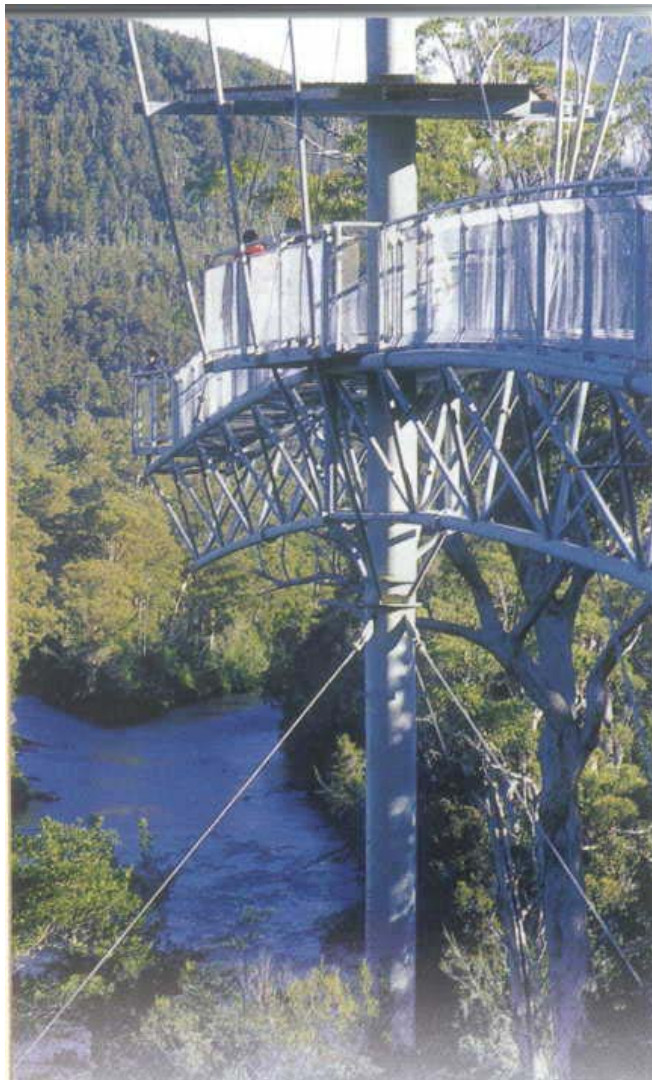
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### 3.5 The Technical Tour

I attended the Tahune Air Walk tour which was an exciting one day experience. We saw a workshop (school), where boats and small yachts are made by hand and met the young people who look after the site with great enthusiasm. I really enjoyed the walk through the forest and above the top of the trees overhanging the big river. The river had just washed away the bridge railing balustrade and surrounds including some camping furniture. The importance of the steel structure as a tourist attraction was brought to our attention by the young tour guide. I could appreciate the unique design and construction technique of the walkway. The structure contrasted with the background of the green forest. There was plenty of food and drinks during the tour, as well as remarkable service from the organizers.



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### 3.6 Social Program

The Convict Dinner on Monday was great fun, providing an excellent atmosphere for socializing and networking. Government House Reception was interesting from an historical point of view taking everyone back to the British colonial time.



Finally, the “Titanic” Dinner, which was brilliantly set up and performed, was the culmination of the social program.

#### 4. Budget

Travel expenses:

1 Quantas Air Fare-	\$ 667.43
2 Train Kal-Perth-Kal	\$ 119.00
3 Taxi	\$ 174.00

Conference

1 Registration	\$1030.00
2.Functions	\$ 85.00

Accommodation

1 Blue Hills Motel	\$ 462.00
2 Meals	\$ 240.00
3 Books and souvenirs	\$ 125.00

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**Total** **\$2899.43**

#### 5. Conclusions

Fellowships awarded from the Foundation for the Technical Advancement of Local Government Engineering in Western Australia provide a great opportunity to local government engineers. Usually, conferences like this are attended by directors, CEOs and Councilors, and people that need the outcomes the most can't afford to register.

The major outcomes from the conference for me are:

- Networking
- New knowledge about stormwater management, assets management, partnering, waste management, caring for the environment.
- Increased confidence in communicating with other professional people and elected councillors.
- Making new friends and meeting old ones
- Exploration of new places

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