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## PRESIDENT'S REPORT



### Parliamentary Fellows Program

At a Fellows luncheon held on 16 March, I outlined a proposal to establish a Parliamentary Fellows Program (PFP) in Tasmania. I received valuable feedback and general endorsement to proceed with its implementation.

The proposed PFP has been modelled on the very successful program recently implemented in the South Australia Division. The main purpose of the PFP is to provide senior members from our Division with the opportunity to communicate with the State's decision makers on behalf of Engineers Australia. To achieve reciprocal value the PFP would offer to provide engineering expertise to

Tasmanian Members of Parliament and generate exposure for them within the Engineers Australia professional community.

### Program Principles

By its very nature, the PFP would be a sensitive program. Participants would have to be carefully selected and the appropriate training and induction provided. For it to be a success those selected would have to conduct themselves in accordance with the following principles. The PFP:

- Would be a confidential personal relationship between the Fellow and the Parliamentarian and/or their staff
- Must be absolutely non-partisan in all dealings
- Must be conducted by the Fellow in compliance with the Engineers Australia Code of Ethics
- Would not provide professional engineering advice that would normally be the subject of a consulting engineering business transaction
- Would be a personal professional development opportunity not a business development opportunity
- Must be consistent with and maintain existing Engineers Australia policy positions where relevant
- Would provide a network for reference to answer questions
- Would provide a conduit back into the Tasmania Division and National Office for detailed requests on larger issues in a longer time frame

The Fellows would be the key to this program. They would be responsible for maintaining the relationships between the Parliamentarians and Engineers Australia. A Steering and

Support Group would be established to provide a governance link between the activities undertaken under the PFP and the members of the Tasmania Division. A Supporting Fellows network would also be established to supplement the Fellows allocated responsibility for the "one on one" relationships with Parliamentarians. We would also intend to establish a Mentor Group to provide expert advice to the Fellows on the relationship aspects of dealing with politics and politicians. This structure has been based on the successful South Australia Division model.

### Value proposition

Our thoughts on the value proposition for the Parliamentarian are that it is likely to be developed over time as the program experience grows. We need to test our assumptions with our Parliamentarians, but in the first instance we think that there will be value generated by:

- Engagement with an influential group of potential voters (the engineering community).
- A channel for their messages to us including advising the Tasmania Division membership of the Parliamentarians involvement and generating some profile for them.
- Providing technical information and advice such as:
- Simple engineering check of ideas and statements being drafted to improve credibility
- Source of new ideas (draw on EA policy, the PFP network, invited to technical society meetings and major events on the Engineers Australia calendar selected to be of interest to them)

*President's Report cont .....*

- An easy channel to the engineering profession for formal comments on draft policies or ideas when time allows, in confidence if necessary. (This would normally involve the Tasmania Division office or the Director - National Policy).
- Finding further engineering contacts in academia, industry and government for other points of view
- Community views from an engineering perspective

We are currently taking indications of interest from our Fellows and senior members about being involved in the program. Expressions of interest close on 2 May 2011 and can be sent to either myself or our Director, Geoff Harper . Once we have been able to confirm the number of members interested in participating in the program in various roles, we plan to approach our local State and Federal Parliamentarians with an offer to be involved.

Such a program is not without its obvious complexities and challenges, and in the first instance, may have limited take up, but if we are to take a leadership position and hope to add value to the public debate and policies regarding infrastructure, technology and service provision to our community, then we need to be engaged. Within Tasmanian Division we have a group of highly experienced, highly capable engineers.

A basic philosophy of our profession is to contribute to the common good. We can best do that by being engaged and offering our knowledge and expertise in a way that most benefits the community. Through the offer of engagement with our Parliamentarians this program hopes to do that.

**Greg Walters**  
FIEAust CPEng Eng Exec

## FELLOWS LUNCH

Wednesday, 16 March 2011



### CONGRATULATIONS/ WELCOME

Members joining, rejoining  
or upgrading

### MEMBER

Simon Krohn, MIEAust CPEng

### GRADUATES

David Harte, GradIEAust  
Tzyh Poh, GradIEAust  
Nicholas Ward, GradIEAust

### STUDENTS

(StudIEAust)

Benjamin Chai  
Suzanna Dunlop  
Vimal Kali  
Jacob Niekrasz  
Mohammed Noor  
Jainesh Parmar  
Hung Shien Pua  
Sigrid Wilson

# Meet our New Vice President – Keith Midson BE MIEAust CPEng



Keith graduated with a civil engineering bachelor degree from the University of Tasmania in 1995. He completed his Master of Traffic degree with Monash University in 2004, and later completed his Master of Transport with Monash in 2006. He has spent his fifteen year career working in the specialist areas of traffic engineering, transport planning and road safety.

Keith has been a member of the Tasmanian Division Committee since 2008.

Keith is also a Tasmanian representative and currently Deputy Chair of the National Committee on Transport Engineering. The NCTE is part of the Civil College of Engineers Australia. Keith has also held various roles on the Executive Board of the Institute of Transportation Engineers (ITE). The ITE are an international organisation for transportation engineering professionals, largely based in the United States.

Keith started a small and specialised traffic engineering and transport planning consultancy, *Midson Traffic Pty Ltd*, two and a half years ago. This originally started as a small husband and wife team, but has now expanded to include over four staff. Midson Traffic is set to move to a larger office area to accommodate recent growth, but as it's in the same building (Level 1, Bank Arcade in Liverpool Street, Hobart), it won't require any changes to the address! Some interesting projects since starting the business include Westbury Road Transport Study, Hamilton Bypass Study (Victoria), Riverside Schools Road Safety Review, Sandy Bay walking and cycling project traffic modelling and road safety reports, redevelopment of Princess Wharf No.1 shed, Salamanca Market road safety review and traffic management plan, to name a few.

Out of university, his first job was with Hobart City Council in 1996 as a graduate traffic engineer. Keith then moved to Pitt and Sherry in 1999, where he was a traffic engineer working on various state government transport projects, traffic impact assessments and road safety studies.

In early 2000, he moved to Melbourne to work for Ratio Consultants. In this role, Keith worked on several road safety strategies for Victorian Council's, traffic impact assessments for a range of large and small scale developments across Victoria, road safety studies, and transportation studies (including several studies in Hobart and Glenorchy).

At the end of 2000, Keith moved back to Tasmania to work for Glenorchy City Council as Traffic Engineer and Deputy Manager Roads and Recreation. After four years at Glenorchy, Keith then moved to GHD as a senior traffic engineer. He then became the Business Group Manager for Transportation in 2005. This role involved the management of both the Roads and Traffic groups. Some key projects at GHD included the Shire of Melton Road Safety Strategy, Kingston and Environs Transport Study, state-wide transport assessment of the Gunns pulp mill as part of the original RPDC assessment, Brooker Highway Transport Study, Northern Approaches to Hobart Transport Study, Macquarie Street clearway trial traffic analysis, to name a few. Keith was also involved in several major projects on the mainland and the Middle East.

Since 2005, Keith has been employed by the University of Tasmania to lecture the undergraduate subject *Transportation Engineering*, as well as supervise several student's honours and final year projects each year on a casual basis. Keith was made an Honorary Research Associate at the University of Tasmania in 2009 and continues to lecture this subject, as well assists in the delivery of its counterpart subject at the Australian College of Kuwait. In May 2010, Keith was also employed by Monash University to lecture the subject *Road Safety Engineering* as part of their postgraduate program in traffic and transport.

Keith is married to Zara and has three young boys, Quinn (8), Lloyd (5) and Ellis (3). In his spare time he enjoys swimming, photography, windsurfing, collecting and restoring vintage Hewlett Packard calculators and renovating his 1925 house.



# SOUTH SUDAN SCHOOLS

## David Meadows, FIEAust

My personal comment after fifty years of working on various construction projects here and overseas is that my engineering life has been very satisfying, sometimes exciting and rarely disappointing.

→ 2011 year  
of  
humanitarian  
engineering

But political decisions, economic woes, wars and natural disasters have on occasions brought my projects and my wages to a sudden stop. To cope with these not infrequent occurrences when work ground to a stop in one country I moved to another country including South Sudan in 1986 to undertake work there. I retired from full time employment in 2003.

The Second Sudanese Civil War 1983 – 2005, left South Sudan with almost all its infrastructure destroyed. A friend, knowing me from 1986, and working for an aid agency as director of education, returning to South Sudan after the peace accord e-mailed me to say that all 576 schools (primary and secondary) in one area near Yei had been destroyed. I replied that they needed an architect to draw up an appropriate building design. However after a year of unsuccessfully searching for a self funded architect to go there, I agreed to go myself and attempt to give them some help. My task was to teach others to draw a single storey school building, produce a costed bill of quantities for it and prepare a proposal for submission to a funding body. We soon established that we needed three basic school designs for 150, 300 and 500 pupil schools and a teacher training college. With much appreciated help from many others, including consultant friends back here in Australia, I prepared the drawings, BOMs and proposals.



The schools are generally 8 m wide with 600 mm roof overhang either side for some protection from the sun and approximately 27 m long to provide 3 classrooms, each having about 50 pupils. Latrines were separate buildings with pits large enough for 15 years use. Parent associations were in charge of making the fire baked mud bricks by getting girls to carry mud and water from the river, boys to fill up the moulds and stack the bricks in blocks of 10,000, women to cover these with maize stalks brought in from the fields and men attempting to fire the maize and bake the bricks evenly. The schools needed from 180,000 bricks upwards depending on designs and breakages from incorrectly baked bricks.

*One of the completed 150 pupil primary schools, Yei, South Sudan*

Steel reinforcement and cement had to be imported from Uganda, along some atrocious roads. There is no glazing in any window, but there are mosquito nets and security bars.

Trusses are mainly teak timber or steel and roofs are galvanised sheets. Local tradesmen are almost non-existent. After 21 years of war, and often being on the run from one bombing raid to another, skilled tradesmen appear to have disappeared and senior tradesmen were persuaded to come from Kenya and Uganda to lead unskilled locals. Parents organised the digging of foundations and latrine pits. Broken bricks were used as back fill and all concrete is mixed by hand. Power circuits were put into each classroom and head teacher's office in expectation that one day there will be mains electricity available. Presently portable generators are used to power the schools. All the school furniture had also to be drawn and then made locally.

The results so far: in 2010 there were 100 student primary school teachers in the teacher training college, undertaking a three year course and over 100 schools have been built. Alas teachers have not been paid regularly, not many girls are allowed by their parents to go to school and funding agencies have been hard up since 2009 and reluctant to invest in South Sudan until its political future is resolved but I expect to hear one day that the program is continuing. I have returned each year to continue work on new buildings for the teacher training college and also have commenced a second training college in the north of South Sudan. Now there is a need for a secondary school design and buildings for secondary school teacher training. Any volunteers for the tasks ahead are welcomed.

# Key Dates

<b>1 Page Entry Form due</b>	<b>COB 6 April 2011</b>
<b>Detailed Submission</b>	<b>COB 18 May 2011</b>
<b>Awards Gala Dinner</b>	<b>Friday 29 July 2011</b>

We strongly encourage all members to review what projects they have worked on since May 2009 and select projects to enter into the Awards to help highlight the contribution engineering makes to Tasmania.

#### The aims of the Awards are to:

- recognise & reward high achievement in engineering;
- promote excellence in engineering;
- demonstrate to the community how engineering creates wealth and improves living standards; and
- encourage & stimulate young people to join the profession.

#### Benefits of entry:

- Wide publicity for your organisation and project
- Industry, government and peer recognition
- Winners will be eligible to enter the 2011 Australian Engineering Excellence Awards

#### The criteria for judging the entrants are:

- Sound engineering practice/principles.
- Originality/ingenuity
- Adherence to budget and program
- Extent to which the work has provided a safe and healthy working environment

Written submission will be restricted to a maximum of 1,600 words. Entrants will have an opportunity to meet with a judging sub committee and site visits may be undertaken.



**For full details relating to the Awards including the Call for Entries brochure and Entry Form, please go to our website [www.engineersaustralia.org.au/tasawards](http://www.engineersaustralia.org.au/tasawards)**

## Awards for Individuals

[www.engineersaustralia.org.au/tasindividualawards](http://www.engineersaustralia.org.au/tasindividualawards)

Nominations for the following Awards are also being sought:

- Professional Engineer of the Year Award
- Engineering Technologist of the Year Award
- Engineering Officer of the Year Award
- Young Professional Engineer of the Year Award
- Young Technologist of the Year Award
- Young Engineering Officer of the Year Award

#### Judging Criteria:

- Engineering competence
- Demonstrated leadership skills including leadership of teams
- Positive/notable outcomes from their engineering work
- Creativity/innovation
- Community service to industry, the profession and/or society

#### NOMINATION PROCESS

- Nominations will be captured online from 2 March 2011 and close on 30 June 2011.
- A CV may be used to support the nomination where it will be seen to add value.
- Nominators are encouraged to address those areas of criteria relevant to the nomination within a provided template.
- Nominees must agree to the terms and conditions of the nomination.

#### ELIGIBILITY REQUIREMENTS

Candidates must be a financial member in the relevant grade at the time of the nomination, be affiliated with the Tasmania Division and supported by at least one referee who is a financial member of Engineers Australia. A third party can prepare a nomination on behalf of the nominee.

The nominee must agree to the nomination and be available to be interviewed by judges.

## Engineers Australia CPD compliant research and skills development opportunity

Beyond Zero Emissions (BZE) is a leading not-for-profit research and education organisation which has a strategic partnership with the University of Melbourne Energy Research Institute to deliver the Zero Carbon Australia (ZCA) research project.

Early last decade Engineers Australia released three ground breaking reports on Sustainable Energy in Electricity Generation, Building and Construction, and Transport. BZE's ZCA project follows on from these reports demonstrating how we can meet our total national energy needs with zero emissions. The ZCA project consists of 5 plans, Stationary Energy (v1.0 now released), Buildings, Transport, Industrial Processes and Land Use. Each plan is a detailed and costed technical report giving one scenario for the complete decarbonisation of that particular sector using current commercially available technology. This unique project is a collaboration between many engineering and technical experts volunteering their time.

For example, the award winning Stationary Energy Plan v1.0 developed a 100% renewable electricity grid and outlined how the transition could take place. This plan showed that Australia's economy can be repowered with a mix of 60% baseload solar – molten salt power towers, 40% wind power – Enercon E-126 7.5MWe wind turbines and a significant transmission upgrade that was reviewed by SKM. The plan has received endorsements from technical experts and has been launched to sell-out crowds around Australia.

The ZCA plan is helping to shift the debate on renewable energy in this country. It has set a benchmark for research into climate change solutions and is busting myths about the desirability, economic impact and technical limitations of renewable energy.

Beyond Zero Emissions is now looking for additional volunteers to work on the plans (including version 2.0 of the Stationary Energy Plan), and financial donations to enable the plans to be completed.

Members of the Engineering Team are encouraged to satisfy part of their ongoing Continuing Professional Development (CPD) requirements by volunteering to work with Beyond Zero Emissions on the Zero Carbon Australia Project. Many aspects of volunteering can contribute to your CPD record in accordance with the EA CPD Policy for different CPD Types and Conditions (type IV (private study), type VI (preparation and presentation of material) and type VII (structured activity)). Volunteer activities that are available are diverse and include primary and secondary research, report development, engineering reviews, technical presentations and industry liaison.

EA National Deputy President, Professor David Hood, who was involved in the earlier EA Reports has contributed to BZE, and helped arrange the ZCA Brisbane Launch:

“The BZE ZCA Projects offer great opportunities for engineering team members to learn about renewable energy, add value to the project, and meet their CPD obligations.” Hood says.

For more information on the Zero Carbon Australia Project <http://zerocarbonplan.org>

To contribute to the project as a volunteer <http://www.zerocarbonplan.org/contribute>

To donate to enable the project <http://zerocarbonplan.org/donate>



# 16<sup>th</sup> Engineering Heritage Australia Conference

## 13-16 November 2011

Dear Member

April 2011

### Invitation to become a Patron

A golden opportunity to celebrate Tasmania's rich and varied engineering heritage is coming up in November and, if you feel that conservation is important, we are seeking your support. This biennial National Conference was last held in Hobart in 1992.

Our pioneering engineering enterprises include:

- Convict-built masonry bridges;
- The mines on the west coast and elsewhere, producing copper, tin, zinc and gold ores;
- Tasmanian Government and private railways, like the Emu Bay and ABT railways;
- Launceston streets lit by hydro-electric power from Duck Reach Power Scheme;
- Trams and trolley buses in Hobart and Launceston;
- Hydro Tasmania's many power schemes across the State;
- Production of zinc at Risdon and carbide at Electrona;
- Newsprint from hardwood fibre at Boyer.

These achievements will be showcased and celebrated at the Conference. Engineers and heritage professionals from Australia, New Zealand and overseas will attend. More information is available on the website [www.cdesign.com.au/ehac2011](http://www.cdesign.com.au/ehac2011)

You can become a **Patron of the Conference for just \$100**. This contribution will help us to run a better conference. It will entitle you to have your name listed on the Patrons page in the Conference Handbook, to receive an invitation to the Welcome Reception, and to wear a Special Patron's nametag at that Reception.

The Conference theme is *Conserve our Heritage – Make a Difference!* You can make a difference by becoming a patron. Please send your payment to our organisers Conference Design. **For easy payment options, see the reverse side of the address sheet which came with this newsletter.**

We invite you to look favourably on this opportunity to be a supporter of this significant engineering heritage event right here in our State.

Yours sincerely

**Bruce Cole FIEAust CPEng (Ret)**  
On behalf of the Conference Organising Committee

# YOUNG ENGINEERS



*Sandra Thaow, MIEAust CPEng  
Chair,  
Young Engineers Tasmania*

new minds  
*new ideas.*



As we farewell the first quarter of the year I reflect on the number of crises that have occurred around the nation and the world and the scale of the devastation that we have seen. From cyclones and floods in Queensland and down the eastern sea board to bushfires in Western Australia, earthquakes and tsunamis in Japan, it makes one wonder how these communities will recover from the devastation. However, it is also in times like these that one sees the strength and character of these communities and the inspirational stories of survival, rescue and recovery that people are capable of.

It is also times like these that highlight the importance of humanitarian aid work and show that you don't have to go very far to be able to undertake humanitarian work. A number of organisations and online websites enable members of the community to volunteer their skills for rescue and recovery work for these specific disasters. If you are interested in undertaking specific engineering humanitarian emergency work, contact **RedR**. RedR is a not for profit organisation which trains people interested in providing emergency assistance after major disasters ([www.redr.org.au](http://www.redr.org.au)).

For those interested in a more proactive approach, **Engineers Without Borders** are focused on providing assistance to disadvantaged communities, overseas and locally, through sustainable engineering projects such as access to drinking water, energy and training. Check out their website for more information ([www.ewb.org.au](http://www.ewb.org.au)).

On a slightly different note, to ensure that we as a profession have the skills and resources to deliver these types of services for the community into the future, we need to ensure the future of the profession by investing our time and effort into mentoring and engaging with school students about the engineering profession. **Women in Engineering visit a number of high schools** each year promoting engineering to students but members of the profession can also get involved through activities such as the **Science and Engineering Challenge** (coming up in July and August) and EngQuest.

**EngQuest** is an Engineers Australia program designed to help primary and middle school students learn about science, technology and mathematics in a fun and interactive way. There are a range of projects that students can undertake such as building catapults, model houses

and dams, etc., and each project has specific outcomes for the students to achieve. They are currently looking for engineering volunteers to visit schools, answer questions on their 'Ask an Engineer' forum and provide feedback on their online project submissions. You don't have to do all three, you can just choose one area to volunteer in. Visit the EngQuest website for more information: [www.engquest.org.au](http://www.engquest.org.au)

On to events! Unfortunately our Northern Year of Humanitarian Engineering Dinner at Villarett Gardens was cancelled but we hope to run another event later this year.

Rowan Crosbie-Goold, EA's Vic/Tas Industry Manager, will be in the State from 11 April 2011 to speak to PDP Companies and young engineers about **Chartered Status**. Engineers Australia will be hosting an open session in Hobart for any members of the engineering profession interested in finding out more about Chartered Status and its benefits, how to achieve it, hints and tips for writing **Career Episode Reports** and overseas aid opportunities available through Engineers Australia. **Refer to advertisement on next page for further details.**

YEAT will also be holding a small **CPEng Focus group** on behalf of National YEA (YEANC) while Rowan Crosbie-Goold is in Tasmania. Engineers Australia are undertaking a review of Chartered Status and the process in attaining CPEng and these focus groups will feed into a paper that is being compiled by YEANC that will be presented to Council in 2011 regarding the issues around CPEng. YEAT will be approaching member and non-members soon to ask for their participation in the Focus group.

We also have the opportunity for Engineers Australia's **Careers Manager** to visit the State and provide one on one career planning as well as offering workshops on writing techniques and presentation skills. Expressions of interest are sought from members across the State so that we can determine whether a visit is required and for how long. Please email [yeatas@engineersaustralia.org.au](mailto:yeatas@engineersaustralia.org.au)

I also would like to highlight to everybody that nominations are now open for Engineers Australia's **Individual Awards**.

## CHARTERED STATUS - HAVE YOUR QUESTIONS ANSWERED

### For those heading towards Chartered Status:

- Are you struggling with writing your CER?
- Are you unsure about what is required to write to demonstrate competency?
- Do you want to know how to use your relationship with managers & mentors to help you with writing CERs, and for your career development?



**Rowan Crosbie-Goold**  
Vic/Tas Industry  
Manager

If the answer is "yes" or you have other questions relating to Chartered Status then come along to a free Questions & Answers session with Rowan.

### HOBART

**When:** Monday, 11 April 2011,  
**Time:** 5.30pm  
**Where:** Royal Engineers Building  
2 Davey Street, Hobart

### To experienced engineers:

- Do you know why Chartered Status is increasingly relevant & important for younger engineers you manage?
- Are you aware of the recent legislative changes affecting engineers' ability to practice and the regulatory trends?
- Are you confident in providing meaningful mentor support to assist them in their career development, without wasting your time?

*Light refreshments will be provided*

**RSVP:** [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au)  
or 6234 2228

These awards are:

- **Professional Engineer of the Year**
- **Engineering Technologist of the Year**
- **Engineering Officer of the Year**
- **Young Professional Engineer of the Year**
- **Young Engineering Technologist of the Year**
- **Young Engineering Officer of the Year**

Judging is based on engineering competence, demonstrated leadership skills including leadership of teams, positive/notable outcomes from their engineering work, creativity and innovation, and community service to industry, the profession and/or society.

If you know any engineers within or outside your organisation that you believe is suitable for one of these awards, please approach them and, with their agreement, nominate them by going to [http://www.engineersaustralia.org.au/divisions/tasmania-division/awards/awards\\_home.cfm](http://www.engineersaustralia.org.au/divisions/tasmania-division/awards/awards_home.cfm) Nominations close on 30 June 2011.

Nominations for the **2011 Tasmanian Engineering Excellence Awards** are also currently open. The purpose of these awards are to recognise and reward high achievements in engineering, promote excellence in engineering, demonstrate to the community how engineering creates wealth and improves living standards and encourage and stimulate young people to join the profession.

If your organisation has undertaken projects since May 2009, you may want to consider reviewing them and selecting projects to enter. See <http://www.engineersaustralia.org.au/ieaust/index.cfm?CA48B2F5-ACAF-F409-3D04-8BCB13AFAC51> for more information.

I'll wrap up as I normally do with my invitation to any new members interested in joining or participating in the YEAT Committee. **We are always looking for motivated people to join the Committee.** There are a number of openings currently available, especially for any students interested in developing their professional networks.

We invite you to come along to one of next meetings on either the 5 April 2011 or the 3 of May at the Division Office in the Royal Engineers Building, 2 Davey Street, Hobart commencing at 5.40pm.

**Sandra Thaow, MIEAust CPEng**  
Chair YEAT

→ **2011 year**  
**of**  
**humanitarian**  
**engineering**



Nyssa Muir, GradIEAust

# WOMEN IN ENGINEERING

**Women in Engineering, Tasmania**  
**Attract. Support. Develop. Celebrate.**  
*Our mission is to increase the participation of women in the engineering profession and allow our members' aspirations to flourish.*

## Events

15<sup>th</sup> **International Conference for Women Engineers & Scientists**



This is an international forum and Australia is fortunate is host it in 2011. This conference has attracted some very big sponsors and influential speakers so far.

**Venue:** Adelaide

**More info:** [www.icwes15.org](http://www.icwes15.org)

### WIE BBQ and 2011 Launch

**\*\*COME AND MEET THE 2011 COMMITTEE\*\***

Hosted by Tasmanian WIE, but **EVERYONE** in Engineers Australia are welcome. Sausages, hamburgers and bread will be provided as well as some soft drink. BYO alternative food and drink.

**When:** Commencing at Noon, Sunday, 3 April 2011

**Where:** Longbeach playground & BBQ area, Sandy Bay

**Cost:** EngAust members = FREE, Non-members - \$5 per person or \$10 per family.

**RSVP:** [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au)

*Held in conjunction with Surveying and Spatial Sciences Institute – Women in Spatial Group TAS*



## News

### One Million Women Campaign



1 Million Women is a campaign of daughters, mothers, sisters and grandmothers who are committed to protecting our climate, our communities and our future, leading change for the better.

Their goal is to inspire 1 million Australian women to take practical action on climate change by cutting 1 million tonnes of carbon dioxide (CO<sub>2</sub>), the main greenhouse pollutant causing global warming.

Why 1 million women? Because it is often women who make the domestic decisions in family households.

**More info:** <http://www.1millionwomen.com.au/>



### Habitat for Humanity – Hand in Hand

Habitat for Humanity Australia is embarking on an ambitious fundraising campaign to find 100 women to each donate \$5,000 to help build homes for 250 poor female-headed households. Their aim is to raise \$500,000 to help Habitat for Humanity in Nepal to implement a two-year project in Itahari, Nepal.

[www.habitat.org.au/handinhand](http://www.habitat.org.au/handinhand)

### PPE Fit For Work

As the number of women working in manufacturing and construction industries increases, it is paramount to have PPE (Personal Protective Equipment) for women that is Fit For Work.

Women in Engineering Australia have received feedback from members on the lack of Fit for Work PPE available in the current market. The lack of PPE designed for women is one of the reasons why female engineers are leaving the profession, in addition to driving young girls away from studying Engineering.

### Poor Fitting PPE creates Hazards

Some examples of hazards encountered by women due to poorly fitting PPE include:

- Poor visibility due to foggy monogoggles;
- Blisters on feet due to poorly fitting boots;

- Safety glasses falling down nose as too big;
- Hands getting caught in equipment due to large gloves;
- Problems walking through slurry due to oversized wellingtons;
- ‘Harry highpants’ is just not a professional look!

The national WIE committee would like more photographic evidence of poor fitting (and hence, unsafe) PPE. If you struggle with your ill-fitting PPE, please send photos us of it, so that we may submit them to the national committee’s campaign. [wietas@gmail.com](mailto:wietas@gmail.com)

### Engineering help in Schools Wanted



Dr. Graeme Faulkner is looking for three or four engineers who can help with a Schools Robotics program. Most of the other schools involved are co-ed Primary Schools, where Tasmania already has an enviable record.

The Robotics program uses Lego NXT Mindstorms robots.

The time commitment would be about 1 ½ - 2 hours a week spent in a school, assisting a teacher. The number of sessions varies between schools, but are mostly run for about three-quarters of a school term. The way these sessions work is that the teacher is in charge of the class, and the engineer provides knowledge and encouragement to both the teacher and the students.

If you are interested in helping out or what more information we can put you in touch with Dr. Faulkner, email us at [wietas@gmail.com](mailto:wietas@gmail.com)

### Reflection

The internet is not so full of random uselessness, or is it? **Cooking for Engineers** - Cooking for the analytically minded. There are recipes, reports and a fascinating test report on eggplants. And you thought you had too much spare time?! Although that Ratatouille recipe looked pretty tasty...hmmm... <http://www.cookingforengineers.com/>

### Quote of the month

“Knowledge is knowing a tomato is a fruit; Wisdom is not putting it in a fruit salad.” - Anon

### Women in Engineering Committee Members:

Meredith McQueen, Fiona Evershed, Erin Jackson (nee Driscoll), Cassandra Blazely, Nyssa Muir and Sarah Kube.  
Email: [wietas@gmail.com](mailto:wietas@gmail.com)

# Family BBQ

Hosted by the  
Women in Engineering Committee

**Sunday, 3 April 2011**

Commencing at 12:00 noon

Longbeach Playground &  
BBQ area, Sandy Bay

**EA Members = FREE**

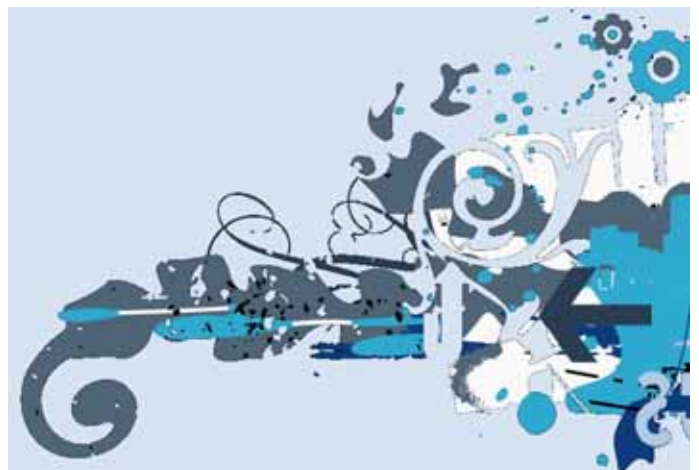
Non-members  
\$5 per person or \$10 per family

Sausages, hamburgers and  
bread will be provided as well  
as some soft drink.  
BYO alternative food and drink.

**All male & female members  
are welcome to come along.**

Bring your children, wives, husbands,  
partners and friends!

RSVP to: Catherine on 6234 2228  
[creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au)



# Leadership Skills For Professional Women

## Creating strategies for personal and professional leadership

This **one day** workshop takes participants through aspects of personal visioning and discovery into their impact as leaders. It offers a unique and energising experience using a variety of tools and processes to challenge current beliefs and focus on reaching personal and professional goals. The main focus is on determining ways of being the best you can be in all aspects of your life.

The breakthrough experience aims to challenge participants and presents a variety of skills and strategies for developing confidence and leadership qualities that are essential for high performance.

Includes a pre-workshop focus list, a comprehensive workbook incorporating practical exercises and reflective processes, and a follow-up review program.

**Target Audience** For women engineers, project managers or those involved in leading teams, and those focused on developing their knowledge, skills and appreciation of effective leadership.

### Course Outline

#### Environmental scan of engineering work cultures

- Reviewing work practices and environment
- Traditional approaches of leadership and management
- Communication and engagement practices
- Working with diversity in the workplace
- Relationship management

#### Defining skills requirements for high performance in the engineering industry sector

- Practical strategies to increase confidence, innovation and creativity
- Relationship development, team dynamics and corporate goal setting
- Designing strategies for high levels of achievement and impact
- Leading personal and professional change for breakthrough results
- Discovering how to engage others and double your performance

#### Creative approaches to developing self confidence

- Designing a life vs earning a living
- Discovering 'your circle of knowing'
- A 'total' approach to work life balance
- The secrets to radiating possibility
- Discovering your centres of power and influence and how to use them effectively
- Landmark values and beliefs for high performing leaders

#### Tools, processes and techniques

- Imaginization
- Life mapping – scenario planning for self
- Leadership social styles
- Hierarchy of generative conversation
- Communication that counts - story telling and dialogue
- Stages of change - the '4 room apartment'

#### Turning theory into practice – experiential processing

- Circle of Knowing
- Generative Conversation
- Life Style Circumplex
- Ben & Roz Zander – The Art of Leadership
- The 'coach' approach

Evidence and research indicates that achieving outstanding results only happens when you are passionate about that level of your desired achievement. Each of us has our own innate powerful source of energy – our passion. Your ability to contribute to your world, your dreams and to be happy, being the best you can be is governed by your passion. This workshop experience is about helping you to discover and unleash that inspirational energy.

**\$528 Tas Div Members**  
**\$660 Non Members**

### Course Objectives

At the end of the workshop participants will have:

- An understanding of the value of 'their inner circle of knowing'
- An appreciation of self beliefs and values and how they can enhance you and others
- Developed the art of imaginization as a new and powerful way of thinking
- Pinpointed your the strengths and weaknesses when successfully influencing others
- Discovered how to attract and retain the interest of loyal followers
- Acknowledged the virtues of embracing a variety of social styles in your team
- Identified specific skills for successful visualisation and new ways of seeing your world
- Experienced the power of effective communication
- Created opportunities for developing life mapping and scenarios that work
- Discovered how leading self and others can be masterful and effortless
- Designed and developed ideas and set workshop experiences for further exploration to realise personal and professional transformational change

Recognised for Continuing Professional Development (CPD) by Engineers Australia

**11 May 2011**  
**Salamanca Inn, Hobart**  
Download flyer at:  
[www.engineersaustralia.org.au/tasevents](http://www.engineersaustralia.org.au/tasevents)



Engineering Education Australia

[www.eeaust.com.au](http://www.eeaust.com.au)



## RESIDENTIAL WATER METERS – THE PROJECT'S ECONOMIC BENEFITS

**DATE:** Monday, 4 April 2011

**TIME:** 12.15 to 2.00pm  
(Light lunch provided)

**PLACE:** The Old Woolstore Theatrette  
1 Macquarie Street, Hobart

With the roll-out of more than 60,000 residential water meters across Southern Tasmania scheduled to start shortly, Southern Water's CEO, Mike Paine, will outline the project's economic benefits and the substantial infrastructure gains this project will bring.

### MIKE PAINE, FIEAust CPEng CEO of Southern Water since January 2010

Mike has had considerable experience in the water and sewerage industry in Queensland, Victoria and now in Tasmania. He was appointed CEO of Cradle Mountain Water in late 2008. Before that he had been General Manager of Customers and Communication at Geelong-based Barwon Water and CEO of Westernport Regional Water Authority, south east of Melbourne.

His passion for water conservation led to his role as a Foundation Director of the Savewater Alliance, which promotes water efficiency nationally.

Mr Paine has a Bachelor of Civil Engineering from the University of Queensland and a Graduate Diploma in Engineering (Municipal Management). He is a Fellow of the Engineers Australia and a member of the Australian Institute of Company Directors.

**For catering purposes, please RSVP to Catherine Reading by Thursday, 31 March 2011 on 6234 2228 or [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au)**

## NORTH WEST GROUP

### SITE VISIT - Bring Your Family and Friends!

**DATE:** Thursday, 14 April 2011

**TIME:** 4.15 at the Julie Burgess,  
6.00 for dinner at the Tapas Lounge Bar

**PLACE:** Port slip yards north west abutment of the Bass Highway Bridge over the Mersey at Devonport and 97A Rooke St Mall – The Tapas Lounge



### THE JULIE BURGESS RESTORATION PROJECT

The Julie Burgess is a 64 foot 40 ton fishing ketch built in 1936 in Launceston.

She carries 7 sails with a total area of 2000 square feet when fully rigged and is powered by a 110 hp diesel motor. The Julie Burgess is the last of the fishing ketches that were once common in Bass Strait. She was originally built for Harry Burgess and until recently was owned by Captain Dick Burgess prior to Devonport Council's acquisition of the vessel in 2009.

The funding for the restoration came from an Australian Government grant, the basis for which was work generation following the global financial crisis slowdown. The restoration team includes full-time shipwrights, trades assistant, trainees, and volunteers. The grant included an amount for a berthing pontoon to be located at East Devonport, an interpretive centre and the actual restoration. It is anticipated the pontoon will be in place some time in April 2011, with the vessel undergoing internal fitting out from about May, when the hull work is complete. Restoration commenced in November 2009. The aim of the project is for the Julie Burgess to be a major tourist attraction, and by meeting stringent MAST survey requirements, to operate the vessel for tourism and training purposes. **The inspection commences at 4.30pm so that the shipwrights and trades people can assist the Committee with tours and insights into the restoration work.**

Following the inspection Engineers Australia will put on drinks and nibbles at the Tapas Lounge Bar – see <http://www.tapasloungebar.com/> This new Devonport Venue has proven very popular with those wishing to stay on for a meal at tables recommended to book with Catherine by 4 April 2011. An assortment of lounges are also available for meals for those who book later or who do not wish to sit at tables! A singer with acoustic guitar is expected to entertain from 7pm. **Inspection of the Julie Burgess will cost \$10.00 for adult non members and \$5.00 for children if they are staying on for drinks and nibbles at the Tapas Lounge afterwards and is free for Engineers Australia Members. Drinks following depletion of the tab and meals are at own cost.**

**RSVP:** Catherine Reading on [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au) or phone 6234 2228 by 4 April 2011.

# EMINENT SPEAKER SERIES 2010-2011

COLLEGE OF CIVIL ENGINEERING

## Professor Tony Wong, MIEAust CPEng

2010 Civil Engineer of the Year

Director & Chief Executive,  
Centre for Water Sensitive Cities, Monash University



To RSVP for all sessions:

<http://www.engineersaustralia.org.au/eminentspeaker/>

(Please note there is a \$10 charge for Non-Members to attend Engineers Australia Eminent Speaker sessions)

### Water Sensitive Design for more Sustainable Developments

Professor Wong has an international reputation for his research and practice in sustainable urban water management. His career has been devoted to linking research and practice, with a focus on integrated urban water cycle management and Water-Sensitive Urban Design to deliver more sustainable developments.

When presenting the 2010 Civil Engineer of the Year Award Matthew O'Hearn, Chair of the Engineers Australia Civil College Board, said that "Professor Wong has helped define a new paradigm for design of urban environments that blends creativity with technical and scientific rigour.

Throughout his career, he has been an effective thought leader and he continues to encourage his colleagues and clients through his passion and dedication to building sustainable environments."

In accepting the award, Professor Wong said, "Today, the challenges of the delivery of sustainable and resilient environments, both urban and rural, require more than ever the interdisciplinary training of a civil engineer to provide leadership in fostering coordination of efforts in the social and physical sciences."

Professor Wong provides strategic advice on sustainable urban water management to Australian federal, state and local governments, as well as continuing his advisory role to the Government of Singapore. He has published widely with over 100 articles in industry and scientific journals, including a series of book chapters in UNESCO publications.

### PRESENTATIONS

#### Launceston

**Date:** Monday, 18 April

**Time:** 5.30 for 6.00pm

**Location:** Tamar Yacht Club  
7 Park Street, Launceston

#### Hobart

**Date:** Tuesday, 19 April

**Time:** 5.30 for 6.00pm

**Location:** Old Woolstore  
Theatrette, 1 Macquarie Street,  
Hobart

2010-2011 SERIES SUPPORTING PARTNERS:



Members of Engineers Australia can claim CPD hours for attendance at this event.  
Members should refer to Engineers Australia's CPD Policy for requirement details and conditions.

# Safer Construction – Design Stage

This **one day** course presents a guide to best practice for safer construction with a specific focus on designing for safety as set out in the Engineers Australia Guide to Best Practice for Safer Construction.

A particular focus on design for safety and OHS in the construction industry for clients, designers and constructors.



**\$528 Tas Div Members**  
**\$660 Non Members**

**Target Audience** For engineers, architects, OHS personnel, safety managers, project/construction managers involved in the planning and design and construction of civil engineering infrastructure and building works.

This course is particularly valuable for design managers but will also be important to less experienced design professionals in introducing the concepts of designing for safety as set out in the Engineers Australia Guide to Best Practice for Safer Construction.

## Introduction

Australian State and National OH&S legislation has introduced new safe design duties and legal obligations which each person who has control of the design of infrastructure projects, buildings, plant or of a system must comply with.

This means that designers and those responsible for designs must carry out detailed hazard identification, risk assessments and risk controls for the impact of designs on construction safety risk.

Designers are now legally obligated, and can be held accountable, for injuries arising from negligent design decisions affecting construction phase safety. Designers need to consider, by legislation, design elements to reduce safety risks at the construction stage.

To meet this need at the design phase of a project, Engineers Australia developed the Guide to Best Practice for Safer Construction – Design Stage. It is a much needed guide to explain these new legal duties that apply to designers, and what they need to do. The Guide provides practical advice on ways to meet these obligations, and to maximise the safety of construction projects, plant and systems at the design stage.

Participants will receive the comprehensive Guide and workbook, with additional tools and resources that can be used in the management and consideration of construction hazards and risk in the design phase of any project.

## Course Outline

- Construction Industry Trends and Statistics
- OHS Hazard Identification (Practical Activity)
- The Guide to Best Practice for Safer Construction - The 'Safer Construction' process and principles will be presented and discussed with an emphasis on the Design Stage.
- Discussion on 'Best Practice' – Design Reviews and Constructability
- Hazard Identification and Risk Assessment in Design (Practical Activity)

## Course Objectives

At the end of the course participants will be able to:

- Understand the new OH&S legislation and legal obligations of all those responsible for designs .
- Be familiar with the Safer Construction principle of designing for construction OHS.
- Gain an understanding of risk management principles and practices as they relate to designing for construction workers' OHS.
- Gain an understanding of the process of hazard identification, risk assessment, and risk control, in the context of construction design.
- Gain an understanding of the practical benefits, in terms of OHS risk elimination and/or reduction, that can be achieved through the application of OHS risk management in construction design.
- Know what new methods and approaches need to be implemented at the design phase of a project and its completion.

A new must-do course for designers and those responsible for design.  
Learn how to meet your new Legal OH&S Responsibilities for Safer Construction.

Recognised for Continuing Professional Development (CPD) by Engineers Australia [refer to EA CPD Guidelines]

**24 May 2011**  
**Salamanca Inn, Hobart**

Download flyer at:  
[www.engineersaustralia.org.au/tasevents](http://www.engineersaustralia.org.au/tasevents)

[www.eeaust.com.au](http://www.eeaust.com.au)



# CALENDAR 2011

For up to date information on these and other events, please visit [www.engineersaustralia.org.au/tasevents](http://www.engineersaustralia.org.au/tasevents)

## APRIL

**Sunday 3 - Women in Engineering - Family BBQ** - 12.00noon - Longbeach Playground & BBQ area, Sandy Bay - EA Members FREE, Non Members \$5 per person or \$10 per family - Sausages, hamburgers, bread & some soft drink provided - RSVP to Catherine Reading 6234 2228 or [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au) (Refer to page 11)

**Monday 4 - Residential Water Meters, The Project's Economic Benefits** - Mike Paine (Southern Water) - 12.15 to 2.00pm - Old Woolstore Theatre, 1 Macquarie Street, Hobart - RSVP to Catherine Reading 6234 2228 or [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au) (Refer to page 13)

**Monday 11 - Young Engineers - Chartered Status Information Session** with Rowan Crosbie-Goold (EA Vic/Tas Industry Manager) - 5.30pm - Royal Engineers Building, 2 Davey Street, Hobart - RSVP to Catherine Reading 6234 2228 or [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au) (Refer to page 9)

**Wednesday 13 - EEA COURSE** - Graduate Program in Engineering - Salamanca Inn - 8.30am to 5.00pm - **HOBART** - \$5,940 (EA Members) - \$6,600 (Non Members) - Download Registration form at [www.engineersaustralia.org.au/tasevents](http://www.engineersaustralia.org.au/tasevents)

**Thursday 14 - North West - SITE VISIT - The Julie Burgess Restoration Project** - Meet at 4.15pm at the Julie Burgess, Port slip yards north west abutment of the Bass Highway Bridge over the Mersey at Devonport & 97A Rooke St Mall - Inspection of the Julie Burgess will cost \$10 Adult Non Members & \$5 for children - EA Members are FREE - RSVP to Catherine Reading 6234 2228 or [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au) (Refer to page 13)

**Monday 18 - Eminent Speaker Program - LAUNCESTON** - Tony Wong, MIEAust CPEng - 2010 Civil Engineer of the Year - Water Sensitive Design for more Sustainable Developments - 5.30 for 6.00pm - Tamar Yacht Club - RSVP to Catherine Reading 6234 2228 or [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au) (Refer to page 14)

**Tuesday 19 - Eminent Speaker Program - HOBART** - Tony Wong, MIEAust CPEng - 2010 Civil Engineer of the Year - Water Sensitive Design for more Sustainable Developments - 5.30 for 6.00pm - Old Woolstore Theatre, 1 Macquarie Street - RSVP to Catherine Reading 6234 2228 or [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au) (Refer to page 14)

## MAY

**Wednesday 11 - EEA SHORT COURSE** - Leadership Skills for Professional Women - Salamanca Inn - 8.30am to 5.00pm - **HOBART** - \$528 (EA Members) - \$660 (Non Members) (Refer to page 12)

**Wednesday 11 - Civil/Structural** - Barrow Island Structures, Innovative Steel Engineering for Extreme Conditions of Wind, Corrosion & Cost - Geoff Fletcher, MIEAust CPEng (LiteSteel Technologies) - 5.30 for 6.00pm - Royal Engineers Building, 2 Davey Street, Hobart - RSVP to Catherine Reading 6234 2228 or [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au) (Refer to this page)

**Tuesday 24 - EEA SHORT COURSE** - Safer Construction-Design Stage - Salamanca Inn - 8.30am to 5.00pm - **HOBART** - \$528 (EA Members) - \$660 (Non Members) (Refer to page 15)

### ADVANCE NOTICE

#### CIVIL/STRUCTURAL BRANCH MEETING

**DATE:** Wednesday, 11 May 2011  
**TIME:** 5.30 for 6.00pm  
**PLACE:** Royal Engineers Building  
 2 Davey Street, Hobart  
**SPEAKER:** **GEOFF FLETCHER, MIEAust CPEng**  
 LiteSteel Technologies

Geoff Fletcher is a Civil engineer with much experience in design, construction and specialised structural systems particularly for steel, concrete, formwork and vibration isolation. He is an MIEAust CPEng, a member of the Construction & Technical Committee for Aust Steel Institute, a member of the Technical Committee re anchorage into concrete for the International Federation for Structural Concrete (fib), and is a member of the Code Committee currently reviewing AS3850 re precast concrete. He has presented at numerous engineering conferences & published about hollow-flange beam technology and aspects of concrete anchorage including the Boston Big Dig failure.

#### “BARROW ISLAND STRUCTURES – INNOVATIVE STEEL ENGINEERING FOR EXTREME CONDITIONS OF WIND, CORROSION & COST”

This presentation examines some less well known structural aspects associated with the Gorgon Project, the largest resource development in Australia's history. For what was possibly the highest wind loading ever designed for in Australia a surprisingly light weight steel solution with screwed connections was developed which also managed corrosion & construction logistics problems with relatively simple and innovative engineered features. In current conditions where much capital investment for resource developments goes off-shore this was a win for Australian engineering and supply. Also for further information, please refer to “Engineers Australia” magazine (Civil Edition - March 2011, page 52).