

Engineering Tasmania

March 2008



ENGINEERS
AUSTRALIA
Tasmania Division

Newsletter of Engineers Australia, Tas Division - Royal Engineers Building, 2 Davey Street Hobart
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PRESIDENT'S REPORT

Year of Engineering Team

As 2008 is Engineers Australia's Year of the Engineering Team I put my mind to understanding what is meant by the engineering team in its broadest sense. My bent is to be very broad and often unconventional in my thinking so the following reflects that. I suspect that the conventional concept of the engineering team encompasses engineers, associates, technologists, designers, constructors, drafters, maintainers and project managers covering the reason for an engineer's existence – to conceive, investigate, implement, operate, maintain and manage systems.

This understanding is highlighted in the Engineers Australia web site article on the Year of the Engineering Team that states:

“Across workplaces in the private and public sectors, technologists and associates, together with engineers, comprise what is known as the engineering team.”

This correctly concentrates on the “technical” delivery and is absolutely critical to successful delivery of engineering services. In view of this:

Engineers Australia Council has accordingly recognised 2008 as the Year of the Engineering Team, and has established a Project Task Force to address the issue.

The Project objective is to determine and provide pathways to meet the needs, pre-requisites and processes required by Engineers Australia to form a truly representative and enfranchised engineering team. Their skills are mutually interdependent, with substantial overlap between roles and responsibilities.

The Task Force's approach recognises that engineering outcomes are delivered by a range of engineering practitioners possessing different formal qualifications and skills.

Before the engineering profession can deliver its objectives it must have the resources to do so. In the context of the engineering team it is the human resource in particular technical people.

This raises the question of how does someone decide to embrace technical streams and grow into a member of the engineering team?

Why did we do engineering rather than say science, medicine, economics, accounting or law? Who or what influenced us in making this decision? How does the profession attract and retain capable people, in particular the ‘swinging’ professional? How do we influence the influencers? In the current situation of high demand on people of all expertise, how can the engineering team stand out as a preferred option?

I personally chose engineering over other numerate professions based upon first hand experience of exciting engineering infrastructure projects. Medicine although attractive had aspects I then found a challenge to deal with. I can remember from an early age the strong emphasis placed on numeracy by the primary school head master and the suite of enthusiastic science and maths teachers from year seven through to year eleven. I chose my field of engineering as a result of an inspirational lecturer who was above all a dedicated teacher.

We need to take opportunities to enthuse and provide support to influencers and inspire potential engineers. The influencers cover from a very early primary age to secondary school year 12 through tertiary experience and finally our own engineering managers responsible for retention and minimising leakage to other career paths.

2008 YEAR OF THE
ENGINEERING TEAM

Informing parents, teachers, governments, and community leaders is a challenge that we all can contribute to.

Your Tasmanian Division's *Operational Plan 2008-2009* covers this in terms of:

Key Objective: 3 Youth appeal

Promote engineering for young Australians

EngQuest Review how best to involve more schools, teams and students

Work with Young Engineers Australia

School contacts Initiate and contribute to special events to raise awareness and interest among students (male and female) towards career opportunities in engineering.

- *Develop a good working relationship with other groups delivering engineering-related programs to schools. Continue to hold periodic meetings of those involved*
- *Continue to deliver the very successful Science & Engineering Challenge in both the North & South and raise \$20k sponsorship. Sponsor four schools related activities, continue good working relationships with CSIRO Science Education Centre & Science Teachers Association.*
- *Implement trial Engineering Initiative program in high schools where the Vocational Educational Learning Development Officers will select one student from each North school to participate in focussed work experience which will form part of the students assessment for the year.*
- *Support the introduction of Re-Engineering Australia program*

Work with educational agencies

Tertiary sector Liaise with Engineering Deans and other academics, including TAFE on matters supporting the delivery of CPD services to EA members

There will be coordinated Engineering Australia activities to achieve these objectives and participation is both fun and rewarding. As individuals at a local level we can seek and take opportunities to provide experiences and influence prospective engineers and their influencers through; for example, participation in school activities and youth organisations.

A challenge for Engineers Australia is to get the message listened to and understood. We all understand that technology is advancing at a huge pace providing a range of evolving communication tools. It is hard enough to keep up with the terminology of technology let alone understand it; I learnt the other day that the CD is now "old technology".

The values and beliefs of generation Y, the source of our current graduates and subsequent members of the engineering team, are well documented and need to be catered for.

Our Young Engineers and Women in Engineering have pivotal roles in this area and their efforts are key to getting the message out.

In conclusion, concentrating the Year of the Engineering Team on technologists and associates, together with engineers is an exciting development with a vital initiative that without distracting from the main objectives can be supplemented at an individual level by putting some effort into influencing prospective engineering team member influencers and peers.

Mike Green, FIEAust CPEng EngExec

WOMEN & LEADERSHIP SEMINAR

Proudly supporting the advancement of women in Engineering.

HOBART

Wednesday, 23 April 2008

Henry Jones Art Hotel

The Engineers Australia Women & Leadership Seminar has been developed by the Centre for Engineering Leadership and Management (CELM) in collaboration with the Women in Engineering National Committee to support the progression of women into formal leadership roles.

OVERVIEW

The Impact of Your Leadership Style

What do leaders do to get the best out of people? The reality is leaders use many different strategies, drawing on a range of skills, techniques, strengths, habits and ideas. By exploring their own leadership styles and preferences, participants will identify which styles they use most often and when they are at their most effective.

Dynamic Communication

All levels of communication are essential to create a bond of familiarity with a person or group of people. The 'gift of rapport' far exceeds the 'gift of the gab' when we are building relationships and needing to influence outcomes. Participants will learn the key concepts of Transactional Analysis and how to use this approach to communicate optimally as a leader in the workplace.

A Leadership Journey in Focus

Whilst there is no substitute for first hand experience, we learn a great deal from the experiences of those around us. One of the best ways to map your leadership journey is through identifying and learning from great role models. In an inspirational session, an accomplished leader will share some pivotal moments and challenges from their career.

'Power Session' with the Experts

A panel of experts will guide participants through and interactive, high impact session around three key leadership themes: networking, mentoring and flexibility.

A more detailed information and registration brochure can be downloaded at:

www.engineersaustralia.org.au/tasevents

UPGRADING MEMBERS



CHRIS TUMMON,
MIEAust CPEng

Chris graduated from his Bachelor of Civil Engineering degree at the University of Tasmania in 2001.

During his second year of studies he was awarded a scholarship with the Department of Infrastructure, Energy and Resources (DIER). This scholarship included vacation work at the end of both second and third years and then full time employment at the successful completion of his studies.

Chris worked in the Road Programs Branch in Launceston for both of his vacation work placements. This role involved Contract Administration and Site Supervision of various road and bridge projects around the state.

In 2002, Chris began his full time employment at DIER in Hobart with the Asset Management Branch. This group is responsible for the management of the Tasmanian State road and bridge network. The placement was for a period of six months and included assisting in the determination of road rehabilitation and resealing programs based primarily on road condition data.

Following the completion of this placement, Chris moved to the Road Programs Branch in Hobart. The main function of this group is to manage the delivery of road and bridge projects.

Chris's role in this group was as the Superintendents Representative on bridge maintenance projects.

This role involved the preparation and assessment of tenders, Contract Administration and Site Supervision.

For design experience, Chris was then seconded to Pitt and Sherry Consulting Engineers, Hobart office, in 2003 for a period of approximately 12 months. Chris was required to carry out the structural design for a number of very different projects during this time. He was involved with industrial structural design at Comalco and Boags, design for various residential developments and structural design for a number of DIER bridge projects.

Nearing the completion of this placement, Chris was offered a position with SEMF Pty Ltd in Hobart. Subsequently, Chris started as a Structural Engineer with SEMF Pty Ltd in January of 2004. This role involved structural design for industrial, residential and commercial projects. Some of the main projects that Chris worked on in this role included the Risdon Prison redevelopment in Hobart, the Hobart International Airport redevelopment, the Condong Broadwater Fuel Handling System in northern NSW, and the Darwin Shiploader.

In 2007 Chris was promoted to the position of Senior Structural Engineer at SEMF Pty Ltd. This role has involved the extension of his previous role as Structural Engineer to leading the Structural Design team at SEMF in Hobart across industrial, residential and commercial projects. Some of the more challenging projects that Chris has lead during this time include the St Aloysious Catholic School redevelopment in Hobart, the St Ann's Nursing Home redevelopment in Hobart, the new CSR Gypsum stockpiling facility in Melbourne and structural design of the Kutai Shiploader in Indonesia.

In 2007 Chris also successfully obtained his Chartered Professional Engineering status.

**CONGRATULATIONS /
WELCOME**
**Members joining, rejoining
or upgrading**

MEMBERS

Nicholas Dwyer, MIEAust
Brian Giles, MIEAust

GRADUATES

Simon Andrews, GradIEAust
Jarrod Burton, GradIEAust
Yuan Chong, GradIEAust
Tibor Congo, GradIEAust
James Falzon, GradIEAust
Wade Fromberg, GradIEAust
Thomas Guy, GradIEAust
William Hanley, GradIEAust
James Kirkby-Jones, GradIEAust
Jason Lavroff, GradIEAust
Timothy Sutton, GradIEAust
Shalini Verma, GradIEAust
Zhi Xie, GradIEAust

STUDENTS

(StudIEAust)

Jonathan Emonson
Tameika Hamilton
Barnabas Muthiah

MEMBERS ZONE

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inside the
members zone

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Note: Members Zone registration is free and exclusive for financial members of Engineers Australia.



BRIAN GILES, MIEAust

Brian completed an electrical apprenticeship with the Hydro Electric Commission in 1982 followed by a Post Apprentice Traineeship with the Electrolytic Zinc Co at the Risdon Smelter. For the next five years as a Technical Officer Brian worked on the design and implementation of various furnace, compressor and motor control systems across the plant. He did manage to take a year off travelling the globe, with Egypt as one of his recommended destinations.

In 1989 he took on the role of an Electrical supervisor at EZ with responsibility for high and low voltage switching operations, testing and repairs of the AC and DC metering systems, and the management of the Power Control Centre.

In March of 1994 after two major transformer rectifier sets failed he took the role of Project Manager for the \$10M replacement of four transformer rectifier sets with thyristor controlled variable DC output of 30,000 amps operating at voltages up to 700 volts.

The renamed Pasminco smelter was producing a by-product called Jarosite which was being ocean dumped. And this had to cease under international law. Brian was given the position of Electrical Project Officer supporting four sub projects to convert the plant to Parageothite from late 1995 until May 1998. This role included the development of electrical design packages for plant process modifications, managing Wharf crane upgrades, specifying a new conveyor control system and a drying plant.

UPGRADING MEMBERS

He then worked jointly on a feasibility study into the refurbishment or replacement of the Plant electrolytic cell room with a jumbo cell unit. Late in 1998 he took the role of Maintenance Superintendent for the site's air, water and electrical infrastructure. This role then grew to include all of the electrolytic cell room.

Whilst working full time at Pasminco Brian studied part time at Tas Uni between 1996 and 2001 for his Engineering Degree. After majoring in Power and graduating with Honours he then accepted a position at Hydro Tasmania Consulting as an Electrical Design Engineer working on 220kV switchyard upgrade works for Transend, and a substation reconfiguration at Pasminco. In 2003 he took over the management of protection and test services at Moonah implementing new safety regimes and project managing a 3.6M infrastructure development at Cradle Mountain including installing sewerage, communications, and an 11kV electrical supply under a free standing timber track in a World Heritage Area

In 2004 Brian took on the role of Electrical Business Development Manager and one project he enjoyed managing was the rural electrification and economic modelling of transmission systems for the Asian Development Bank in Sri Lanka.

Since late 2005 he has been the Manager for Power Engineering at Consulting and has focused on growing the HTC client base to service customers like Powerlink, Western Power, BHP Billiton and Blue scope steel, to create a diversified client base whilst still supporting all of their Tasmanian clients. Brian has recently embarked on an MBA to broaden his management skills.



DANIEL INDYK, MIEAust

I think that I always wanted to be an engineer starting off my career at a very early age making things out of old matchboxes, sticky tape and elastic bands. This was soon followed by electrical circuits with batteries, motors and torch lamp bulbs whose contacts were held together by molten candle tallow. Then followed the true electronic breadboard/hobbyist phase, and the amateur radio/home made audio amplifier phase.

Leaving high school early and completing studies at home I enrolled on the College Certificate in Electronics and Telecommunications course at Norwood Technical College, London which comprised of the City & Guilds Full Technological Certificate (which was the old standard GPO engineers qualification) combined with extra maths and physics.

Upon completion with very good marks I was allowed on to the UWIST (Cardiff) Postgraduate Diploma in Electronics which was also successfully completed (the only non-graduate on the course). This was followed by a number of years working in medical physics in London. This work covered everything from electronic design, analogue and digital from first principles, design and fabrication of printed circuit boards, programming (machine code, assembler and then high level), prototyping, fault finding. During my last position in the UK I was allowed to complete the

UPGRADING MEMBERS

University of London Intercollegiate
M.Sc in Electrical Engineering.

Upon arriving in Australia in 1994 I soon gained a position at Sydney University working on passive foetal monitoring. The work comprised of the development of a completely passive foetal monitoring system. The areas I was involved in mainly were sensor design and the design of a sensor calibration system. During this period I obtained full membership of the then Institution of Electrical Engineers and then Chartered status.

I then completed the UNSW MEng.Sc in Electrical Engineering specialising in Power Systems at the same time as joining Energy Australia on an accelerated graduate engineer program due to my prior experience. This was soon followed by a band 2 engineer position with the Network Test group. Areas of experience include distribution UGOH design, underground fault location methods and practice, HV test methods and equipment design, general electrical testing (NATA certified).

I joined Hydro Tasmania Consulting in June 2007 and after a brief stint in the Rotating Electrical Machine group involved with a particularly ingenious but rather old magnetic amplifier based Siemens Transipol automatic voltage regulating system, was transferred to the Power Engineering Group working within the Earthing Unit. This work involves performing Earthing audits at power stations and substations around Tasmania. Resistivity measurements, estimated voltage rise studies and step-touch voltage measurements are part of these audits as is computer modelling of the system in order to compare calculated and measured parameters to evaluate the design integrity.

As a result of the newly enforced requirements for employment as an engineer in government electrical utilities throughout Australia I was assessed and then granted membership of Engineers Australia in November 2007.



**DANIEL ALIMU,
MIEAust**

I graduated from the University of Tasmania in December 2002 with a Bachelor of Engineering (Electrical power).

I started working for Transend Networks in 2003, as a casual project office. At that time Transend was preparing an entry into the National Electricity Market (NEM) after the completion of the BassLink. As a project officer I identified, defined, and named all Transend transmission circuits in service that were to be used within the Asset Management Information System (AMIS) processes and IT. System. These included identification and naming of substation terminal data & terminal structure id; circuit outage group database; identified and document circuit ratings for assets; and maintained and updating of rating records and equipment attributes.

In April 2004 to date, I was employed as a Graduate Engineer again with Transend Networks and during these years, I have rotated into various department across the company based on six monthly rotation.

In my rotation in Network Compliance and Development (now known as Assets Strategy and Planning), I interpreted, reviewed, prepared and mark-up substations drawings for drafting; updated and maintained asset rating records; managed operational drawings on

operational diagram systems; prepared substation terminal structure id and data; processed amendment proposals and; assisted in preparation of transmission system incident investigations and monthly transmission network performance reports; prepared substations Environmental audit programs; managed substation noise survey project for selected substation near neighbourhood

I also worked in Operation Planning Group planning for circuit outages (for maintenance and commissioning of new equipments) using PC based power system modeling and analysis to maintain security of power supply.

In Assets Group, I worked on programs for substation relays upgrades; developing operator help card for substation relays operations; preparation of metering full scale deflection database; I also managed and commissioned Knights Road-Kermantie 110 kV transmission line protection upgrade project . I also prepared the business case for the project.

In Network Outage Planning I developed and scheduled outage programs; reviewed commissioning plans for project managers and contractors; Provided technical support in accessing outage elements; negotiated generation and distribution support for circuit outage with industry participants and implemented circuit outage risk management strategies.

Currently, I am working on updating all operational drawings; one line diagrams and ac metering and protection diagrams to standard; assisting on preparation of drawing management standard.



Vanessa King, MIEAust

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 member's aspirations to flourish.

Upcoming Events

Women in Leadership Seminar: Wednesday, 23 April 2008, Guest Speaker Julie Hammer (Engineers Australian National President). More details to come.

News

Scientists (and Engineers) in Schools

CSIRO and the Australian Government Department of Education, Science and Training are running a new program called 'Scientists in Schools' that will match scientists and engineers with schools for inspiration, fun and learning.

Schools and scientists negotiate the best way of working, for example, the scientist may speak about careers, help students with science investigations or take classes on a tour of their workplace.

Details and registration forms can be found at www.scientistsinschools.edu.au or call 02 6276 6369.

Twenty Tasmanian schools have registered their interest in this program and the take up from Tasmanian scientist and engineers has been very slow. Anyone who already have contact / partnerships with a school should register these existing partnerships via the website.

Clearly, this is not just for women, but it would be great to get as many women involved as possible, to help girls at school see some reasons to study maths and science.

Promoting Professional Women Conference – the presentations are now available online! (Held last July in Melbourne). <http://www.professionalwomen.com.au/program.php> We've got some reflections on the conference, which we will put in the quarterly WiE e-newsletter – coming soon to an Inbox near you!

Reflection

Some of us on the committee have been reading a truly thought provoking article from the Harvard Business Review – "Leadership : A new picture emerges for why women don't make it into the C-suite. It's not the glass ceiling but the sum of many obstacles along the way". (1)

The authors propose that instead of thinking of a single barrier to women's progression to the highest level jobs (CEO, CFO, Chair, etc), we should recognise a labyrinth. Not a single absolute obstacle, that is invisible until you get up close, but a complex maze with twists, turns and distractions which it is possible to negotiate.

The key obstructions identified in the article are:

- Vestiges of prejudice

- Resistance to women's leadership
- Issues of leadership style
- Demands of family life, and
- Underinvestment in social capital.

The studies referenced in the article found that there are still people who are prejudiced – and making decisions which affect women's careers: "a general bias against women appears to operate with approximately equal strength at all levels". That's you and me being affected, not just those women getting close to the corner office.

They also found that the qualities people expect to see in women are not consistent with those qualities people expect to see in leaders – thus resistance to female leadership and issues with leadership style. For example, leaders "should" be aggressive, ambitious, dominant, self-confident, forceful, self-reliant and individualistic. Women "should" be affectionate, friendly, helpful, kind, sympathetic, interpersonally sensitive, gentle and softly spoken.

One of the many confronting aspects of this is that it's people who are resisting female leaders and confused about whether women can be "good" leaders and "good" women at the same time.

It's not just Brian Harradine carrying on about Julia Gillard not being a mother – it's all, or many, of us. You, me, our co-workers, our friends, our family members. People we know, and generally like and respect.

So, what about for the next month, we all think – and talk – really carefully about leadership? What it is, what it takes and who has got it? And really carefully notice our own thoughts, challenge our own underlying assumptions. And those of others around us.

We can't all implement the changes recommended in the article (change the long hours norm(2), reduce the subjectivity of performance evaluation, use open recruitment tools, ensure a critical mass of women in executive positions, avoid having a sole female member of any team, help shore up social capital, prepare women for line management, allow employees more time to prove themselves worthy of promotion, welcome women back and encourage male participation in family-friendly benefits), but we can all start changing the little bit of world around us – starting with our own minds.

PS. Does anyone read these articles? Love 'em? Hate 'em? Tell me!

Vanessa_King@bigpond.com

1. Alice H Eagly and Linda L Carly, *Harvard Business Review*, September 2007, p.63-71
2. More on that another time, maybe

Women in Engineering Committee Members: **Rebecca Tilbrook, Amanda Halley, Vanessa King, Meredith McQueen, Fiona Evershed, Sasha Ford, Rebecca Hindley, Hayley Young, Erin Driscoll and Cassandra Blazely**

Email: wietas@gmail.com

ESK WATER ENGINEERING SCHOLARSHIP

The CEO of Esk Water Mr Barry Cash today announced that twenty one year old Elizabeth Hickman from Deloraine has been awarded the second Esk Water Engineering scholarship. Elizabeth is currently completing her four year civil engineering degree at the University of Tasmania (UTAS).

The Esk Water scholarship will give Elizabeth financial assistance for her fourth and final year of her degree with the provision for full time employment for two years after her studies are complete.

After just finishing her 12 weeks work experience, Elizabeth said she was looking forward to working at Esk Water on a full time basis. "With water being one of the most precious resources on Earth, a career with Esk Water offers a promising future. In fact the water industry in Tasmania sounds like it will be very exciting over the next few years with the prospect of major construction works," she said.

In 2005 Esk Water awarded its first scholarship to Matthew Jordan. "I've been with Esk Water for over two years now and have been involved in some really interesting projects from planning through to design and finally construction", Matthew said.

"Across the Country there is a shortage of engineers particularly in the water industry and local government. We believe this is a proactive approach to attract future engineers to the water industry", Mr Cash said.

Paul Donohue
Engineering Manager



*Matthew Jordan, GradIEAust and
Elizabeth Hickman, StudIEAust*



Jessica Andrewartha,
GradIEAust

new minds.
new ideas.

YOUNG ENGINEERS

Young Engineers Tasmania has been busy planning our calendar of events for 2008.

To kick off the year we are holding a BBQ at the School of Engineering, Sandy Bay at 1.00pm on Friday, 29 February, all students, staff, and professional engineers are invited to attend! And for our graduate members: a tour of the Cascade Brewery in Hobart on Friday, 14 March, and a beer tasting session on Friday, 4 April in Launceston (venue TBA).

April/May sees a new event on our calendar... Speed Networking!

For those who would like to learn effective networking and expand their professional networks.

In June our Young Engineers will be heading to schools to excite, motivate and inspire students to pursue careers in Science and Engineering, as part of the build up to the Science and Engineering Challenge. If you are interested in being involved, send us an email!

In July/Aug we will be holding our annual Gen²X in conjunction with Women in Engineering. We also plan to announce the Young Professional Engineer of the Year

at this event, if you are interested in applying please send us an email; more details will be available soon.

And finally, professional skills sessions will be held in September, followed by a social activity in Oct/Nov to wrap up the year!

Make the most of your Engineers Australia membership and get involved in some of the events on offer.

Jess Andrewartha, GradIEAust
Chair

Jessica.Andrewartha@utas.edu.au

... CASCADE BREWERY TOUR ...

DATE: Friday, 14 March 2008 commencing 5.30pm
COST: \$20 (includes tour and tastings !)
RSVP: creading@engineersaustralia.org.au by Friday, 7 March 2008
Payment must be received with registration
 Registration form available at www.engineersaustralia.org.au/tasevents



Young Engineers & YPNT Tasmania - Events Calendar 2008

Fri - 22 Feb	YPNT Welcome to Sponsors Event	April/May	YPNT Motivational Speaker Event
Fri - 29 Feb	Uni Welcome BBQ, Hobart	June	School Visits for Science & Engineering Challenge
Fri - 14 March	Cascade Brewery Tour	4 August	Gen²X Dinner
March	YPNT Northern Launch Event	August	YPNT - Climate Change / Sustainability Event
Fri - 4 April	Beer Tasting (Launceston)	Sept	Visit by National Careers Advisor
28 - 30 April	CPEng Sessions	Sept	Professional Skills Sessions
April	Careers Session @ Uni (Hobart)	Oct/Nov	Social Activity
	Careers Session @ Uni (Launceston)	Nov	Movember
April/May	Speed Networking	21 or 28 Nov	YPNT "End of Year" Event

YOUNG MECHANICAL ENGINEER OF THE YEAR

James Hamilton from Hobart, is the inaugural 2007 Young Mechanical Engineer of the Year.

From 2005 until the end of last year, James led the mechanical design, fabrication and commissioning of vibrocompaction technology for Rio Tinto Alcan. The project produced its first commercial product last November. From the start of this year he has taken on a technical services role with Roaring 40s Renewable Energy, a partnership between Hydro Tasmania and the China Light & Power (CLP) Group for the development of renewable energy systems.

The Young Mechanical Engineer of the Year Award is conferred by the Board of the College of Mechanical Engineers to recognise the achievement and contribution of a young mechanical engineer, technologist or associate in mechanical engineering.

Nominees must be under the age of 35 and members of Engineers Australia. The 2007 Award was sponsored by Applidyne.



**James Hamilton
GradIEAust**

Richard Bevan appointed National Chairman of CIGRE Australia



***Richard Bevan,
FIEAust CPEng***

At its Annual General Meeting in Townsville on 27 November, Richard Bevan was appointed Chairman of the Australian National Committee of CIGRE.

CIGRE (International Council on Large Electric Systems) is one of the leading worldwide organisations on Electric Power Systems. The organisation, based in France, was founded in

1921 and boasts over 6000 members from 91 countries.

CIGRE's main aim is to facilitate and develop the exchange of engineering knowledge and information, between engineering personnel and technical specialists in all countries as regards generation and high voltage transmission of electricity.

Australia, through the Australian National Committee (ANC) of CIGRE, has the sixth largest representation in CIGRE. Richard is Australia's representative on the International Administrative Council of CIGRE.

CIGRE currently has 16 active Study Committees, each dealing with a technical field in the Power Industry.

The ANC is structured to mirror the international CIGRE structure, with the chairman of each Australian Panel (AP) being a member of the corresponding international Study Committee.

Tasmania is strongly represented on Australian Panels with members from Hydro Tasmania, Transend Networks, Aurora Energy and the University of Tasmania.

Richard is Managing Director of Transend Networks Pty Ltd., Tasmania's high voltage electricity transmission business.

Harvey Norman Centre & Cambridge Park Site Visit Report

On 27 November 2007, around 20 members and visitors undertook a site inspection of the soon to be finished Harvey Norman Centre at Cambridge Park. The tour was conducted by Aaron George, Construction Project Manager of Hazell Bros. / Bells Construction and David Visentin, Director of Gandy and Roberts who undertook structural design for the centre. The Harvey Norman Centre comprises 39,000 m² of retail space over five separate buildings (with the innovative construction labels of A, B, C, D, and K&D Trade Centre!).

Construction activity has been underway on site since October 2006 with an early works package of civil earthworks for the building pads, car park and road areas. The civil works were carried out by Hazell Bros. Group, while the building works have been carried out by Hazell Bros. Group building subsidiary Bells Construction. This combination of civil works and building works under the one umbrella gave Aaron George a combination of large earthworks and services as well as the building works to supervise and program.

At the time of the visit in November, the K&D Trade Centre was operational with most stores expected to open just prior to Easter in March 2008. The Harvey Norman store comprises the large showroom which is typical of their Hobart store, combined with a very large warehouse. Fire considerations resulted in the warehouse being divided into three separate areas by automatic fire doors, which also separate the store from the warehouse area. The warehouse floor slabs were designed as prestressed to minimise the floor joints which can cause problems with hard wheel forklifts or pallet pickers as will be used in the warehouse. The store floor slab is a conventional slab on grade and has numerous service boxes located through it to allow simulation of different room layouts to best show off the furnishings in a home like atmosphere.

For some buildings, the walls were erected prior to floor slabs being poured to suit the construction program and the production of the precast panels. The Anaconda tenancy features a pop up roof which is to allow the indoor climbing wall to achieve maximum height, there is also a proposal for an outdoor kayak pool to allow people to try out kayaks prior to purchase for this tenancy. The main K&D Warehouse building was well advanced with the walls and roof cladding finished, but with the floor still to be poured. David explained the innovative roof framing system required in this building to satisfy the desire to minimise columns – basically the roof is framed in a conventional portal frame approach, but each second column is omitted, with the loads being transferred longitudinally by central trusses to the columns either side of the omitted one.

The entire retail complex is to be known as the Harvey Norman Centre and will feature a number of bulky goods

retailers together with food outlets. The overall subdivision is now known as Cambridge Park, and comprises the Harvey Norman Centre and the almost finished Hydro Tasmania Consulting building, as well as a number of other lots which will be developed as a commercial area. The stormwater management for the overall development involves inlet pit filters together with the major stormwater pond adjacent to the Harvey Norman Warehouse and the K&D Trade Centre and the minor more formalised stormwater pond at the HTC building. The combination of these two ponds has been provided to limit the effect of the development of the area on both the quantity (flow rate) and quality compared to the predevelopment conditions. The service areas behind the buildings are concrete to cope with the expected loading, while the car parks will be asphalt with extensive landscaping. The roads and turning areas have been designed to allow the possible future use of B double vehicles in some areas.

Kevin Gutteridge, another Construction Project Manager of Bells Construction who has been working on the project has been learning to fly from Cambridge Aerodrome and hence has had the opportunity to keep a progressive log of construction progress with aerial photographs. The photo is provided by Kevin and shows the Cambridge Park site from the east, with the HTC buildings in the foreground forming an L shape around the pond, with the Harvey Norman Centre buildings access roads and car parks beyond. Access to the site will be available from either the Tasman Highway (for east bound traffic only) or from two new junctions on Kennedy Drive. The curling water path in the major stormwater pond can clearly be seen in the photo, this is to slow the water down to promote sediment dropping out of suspension and to give the aquatic plants in the pond the maximum opportunity to take up any nutrients in the water.

Grant Atherton, FIEAust CPEng



Photo © 2007 Kevin Gutteridge, used with permission.

AUSTRALIAN GEOMECHANICS SOCIETY (Tasmanian Chapter)

DATE: Tuesday, 4 March 2008
TIME: 5.30 for 6.00pm
PLACE: Royal Engineers Building
2 Davey Street, Hobart

DR DEREK PENNINGTON, MICE, MIEAust CPEng

Derek is an independent consulting engineer, recently followed his professor wife to Hobart where he has reduced his work load to less than 30 hours PER MONTH giving him sufficient time to actually enjoy parenting girls aged 3 and 6, and restore an 1830 house complete with stables and coach house in Battery Point.

Geotechnical life started with Arup in London, and had interim stops that included Thailand, Hong Kong, Tanzania, and Western Australia. He completed his PhD developing shear wave devices to measure stiffness anisotropy in clays while riding bad weather in a Fugro Investigation vessel off the North West Shelf in 1999. He then set up the Arup Perth Geo group, and subsequently Worley Geosciences. He joined Advanced Geomechanics, and then formed Pennington Scott Hydro and geotechnical consultants.

He is an Honorary Associate in the UTAS, School of Engineering and is the sole employee in Pennington Geotechnics

“Hang Tuah, Yolla & Maari: Geotechnical Perspectives of the Suction Installation of these Offshore Platforms”

Hang Tuah – the worlds first ACE platform (conceived and designed by Arup), was installed in the clay seabed of the south china sea in 2001. The second ACE platform Yolla, has since been installed off Tasmanias North Coast, and the third, Maari, will be installed in the significantly more complex interbedded sands and clays in the Tasman sea offshore New Plymouth in 2008. Derek Pennington has been involved with all three platforms as installer, designer, and currently clients engineer and will provide a light visually rich geotechnical / structural taster of the fascinating concept of these self installing, self elevating platforms – all world firsts in their own right.

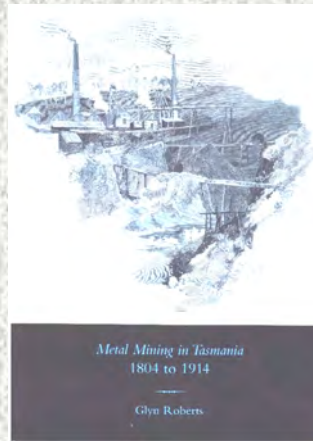
RSVP: Andrew Ezzy 6221 3740
AREzzy@skm.com.au

THIS MEETING WARRANTS 1.5HRS CPD

HERITAGE MEETING

DATE: Thursday, 27 March 2008
TIME: 7.30pm
PLACE: Royal Engineers Building
2 Davey Street, Hobart

DR. GLYN ROBERTS



“METAL MINING IN TASMANIA 1804 – 1904”

Dr. Glyn Roberts will discuss the subject of his book, *Metal Mining in Tasmania 1804-1904*.

Dr. Roberts obtained his BSc in Geology at Birmingham in 1950, and then he was employed by the National Coal Board until 1957 when he then subsequently worked as a hydrologist in Kenya, Somalia and Jordan. In 1963, he moved to South Australia, again as a hydrologist, until 1970 when he joined the Hydro-Electric Commission in Tasmania. Here he worked as an engineering geologist, mainly on the Gordon and Franklin schemes. In 1981 he returned to Africa working first for the Snowy Mountains Engineering Corporation on the provision of local water supply for Tanzanian villages, and then with World Vision on similar projects in Kenya.

Glyn returned to Tasmania, running his own consulting companies for several years until resumed tertiary studies in history at the University of Hobart, gaining a Masters Degree and then a PhD in the subject of the title of his book.

Light refreshments will be served following the meeting

RSVP: Catherine Reading 6234 2228 or
creading@engineersaustralia.org.au

This meeting warrants 1.5hrs CPD

CALENDAR 2008

MARCH

Tuesday 4 - Geomechanics - Hang Tuah, Yolla & Maari: Geotechnical Perspectives of the Suction Installation of these Offshore Platforms - Derek Pennington - 5.30 for 6.00pm - Royal Engineers Building, 2 Davey Street, Hobart - Register with Catherine Reading on 6234 2228 or creading@engineersaustralia.org.au (Refer to page 11)

Thursday 6 - Cement Concrete & Aggregates Australia - Concrete Cracking & Successful Slab-on-Ground Construction Seminar - 6.30pm to 10.00pm - Mercure Hotel, 156 Bathurst Street, Hobart - \$33.00 per person or \$11.00 students - Email registrations to Brooke Courtnage at brooke@ccaa.com.au

Wednesday 12 - North West Group - ANNUAL GENERAL MEETING & Site Visit to Burnie Sewage Treatment Plant - 5.15 for 5.30pm - Round Hill, Burnie - RSVP to Vere Cooper 6424 0558 or vcooper@devonport.tas.gov.au (Refer to this page)

Friday 14 - Young Engineers - Cascade Brewery Tour - 5.30pm - \$20 per person (includes tour and tastings) - Send registration and payment to Catherine Reading on 6234 2216 (fax) or creading@engineersaustralia.org.au (Refer to page 8)

Thursday 27 - Heritage - Metal Mining in Tasmania 1804 to 1904 - Glyn Roberts - 7.30pm - Royal Engineers Building, 2 Davey Street, Hobart - Register with Catherine Reading on 6234 2228 or creading@engineersaustralia.org.au (Refer to page 11)

APRIL

Tuesday 1 - Electrical - Aurora Energy's Recloser Control Using NextG Modems - Nick Whittle - 5.30 for 6.00pm - Royal Engineers Building, 2 Davey Street, Hobart - Register with Catherine Reading on 6234 2228 or creading@engineersaustralia.org.au (Refer to this page)

Friday 4 - Young Engineers - Beer Tasting in Launceston - More information to be provided next month

Wednesday 23 - Women & Leadership One Day Seminar - Henry Jones IXL - 8.30am - Refer to page 2

Monday 28 - Wednesday 30 - CPEng Workshops - HOBART & LAUNCESTON - Bob Law, (National Assessor) - If you are interested in attending, please contact Catherine Reading on 6234 2228 or creading@engineersaustralia.org.au

NORTH WEST GROUP

ANNUAL GENERAL MEETING & SITE VISIT TO THE BURNIE SEWAGE TREATMENT PLANT

DATE: Wednesday, 12 March 2008
TIME: 5.15 for 5.30pm
PLACE: Round Hill, Burnie
COST: \$5.00 per person (light refreshments)
RSVP: Vere Cooper 6424 0558
vcooper@devonport.tas.gov.au

ELECTRICAL BRANCH MEETING

DATE: Tuesday, 1 April 2008
TIME: 5.30 for 6.00pm
PLACE: Royal Engineers Building
2 Davey Street, Hobart

NICK WHITTLE, GradIEAust

“AURORA ENERGY'S RECLOSER CONTROL USING NextG MODEMS”

Aurora has changed the remote control of most of its reclosers from CDMA modems to NextG modems using dialup, and is shortly to implement IP communications.

Nick will speak on the implementation of this project and on distribution automation.

RSVP: Catherine Reading 6234 2228 or creading@engineersaustralia.org.au

THIS MEETING WARRANTS 1.5HRS CPD