

New Diplomas for Skilled Technicians



At the launch of two new engineering diplomas, from left: Deborah Hume (KiwiRail General Manager Passenger Rail), Celia Wade-Brown (Wellington Mayor) and Elena Trout FIPENZ (IPENZ Board member).

Industry leaders are welcoming the launch of two new engineering qualifications designed to train workers in the infrastructure and manufacturing sectors. With demand for skilled technicians in these sectors forecast to continue, IPENZ and the New Zealand Board for Engineering Diplomas have been working over the past 18 months with representatives from industry, tertiary education providers and industry training organisations to develop the New Zealand Diploma in Engineering (NZDE) and the New Zealand Diploma in Engineering Practice (NZDEP).

The NZDE is an applied academic qualification provided by a number of tertiary education organisations. It is a two-year, full time programme offering majors in civil, electrical and mechanical engineering. The NZDEP, which follows on from the NZDE, is a practical, work-based qualification assessed in a trainee's chosen field and takes two to three years to complete.

Lindsay Crossen DistFIPENZ, Fulton Hogan Group Civil Engineer, says technician-level qualifications that offer

a good mix of academic study and "hands-on" experience are highly sought-after in the industry. "Technician qualifications have proven to be a good place to commence a successful career and employees with knowledge and practical experience have measurable benefits in both quality and productivity."

Both qualifications were developed as part of the National Engineering Education Plan (NEEP) to ensure the right numbers of the right type of graduates are produced to meet industry needs and contribute to New Zealand's future economic prosperity. New Zealand produces a low number of engineering graduates compared to other OECD countries, and one of the NEEP's key tasks was to establish ways to overcome the shortage of workers in engineering.

The qualifications were officially launched last month at Parliament. Over 150 guests were there to celebrate the launch, including the **Hon. Nick Smith FIPENZ**, Minister for the Environment, **Celia Wade-Brown**, Wellington Mayor and chief executives of industry. //



President's Message

The tour of Branches throughout New Zealand by myself, **Graham Darlow FIPENZ** as deputy President and **Derrick Adams FIPENZ** as Vice President has now been completed. It is a real pleasure getting out and around our country to meet Members and my thanks to all the Branches for their hospitality in hosting us.

In my view there were a number of key issues voiced by Members that have been repeated throughout the Branches and it may be helpful if I focus on these in this month's message.

One area of clear feedback was strong support for our profession to become more effective in contributing to improved workplace safety outcomes. And in the course of the Branch discussions, very good people have stepped forward to offer their time and experience to help make a difference. This area of work is now part of the newly formed Engineering Practice Advisory Committee (EPAC) work plan. Past President **Garry Macdonald FIPENZ** is the EPAC chairman, and scoping to identify the areas where IPENZ can most add value is underway, with "designing for safety" likely to emerge as an important area needing attention.

Another area of frequent discussion was Member concerns regarding media coverage of engineering issues arising from the Christchurch earthquakes. As we know, media

stories may not always provide the balance and accuracy we would like to see on complex topics like engineering, and Members have expressed their concerns at the potential for reputational damage to be unfairly incurred by the profession as a result. It is certainly a legitimate point to raise. Some Members have also expressed their desire to see IPENZ engage more actively with the media to counter potential misunderstandings in stories that may be lacking in balance and accuracy. This is a complex area to step into and, in my experience, the outcomes cannot always be guaranteed. Nor may they be as expected or hoped!

At the August IPENZ Board meeting a communications plan was presented by management and endorsed by the Board. Whereas the old plan focussed communications around profiling and promoting the engineering profession, the overriding principle contained in the new plan focuses on how best we can ensure our communications serve the communities in which we perform as professionals. This is a significant change which in a sense puts serving others before serving ourselves.

It helps clarify for us that the preferred position for IPENZ is not to engage in reactive exchanges with media outlets in response to media stories.

It also helps clarify the activities that will sit under this broad principle, and

“The preferred position for IPENZ is not to engage in reactive exchanges with media outlets”

helping inform the public on some of the complex technical issues arising out of Christchurch through our Fact Sheets is a good example of how we wish to proceed. Our goal is firstly to help people understand rather than to initially try and position IPENZ. Of course, successfully communicating complex issues to the public may result in improved public perceptions of IPENZ but this is a consequential outcome rather than the primary focus of our efforts.

There are likely to be ongoing media stories arising from the Christchurch earthquakes, particularly as the Royal Commission continues its work. I hope Members will find this explanation of how IPENZ will steer through the public domain helpful, and we look forward to your support in the year ahead.

Stephen Reindler

Observations from a Life Less Ordinary

When English-born Sir Ray Avery first landed in New Zealand in 1973, two men in swanndris were running about the airport firing air rifles at birds in the rafters. “I immediately thought this is the country for me,” Sir Ray remembers.



Clockwise from top left: Sir Ray Avery; Chris Cassels and Graham Thompson; Andy Duncan MIPENZ and Sir Ray; Mark Hooker GIPENZ and Stephen Pauson; the packed audience at the Paramount in Wellington.

In colourful fashion, Sir Ray – delivering a speech in Wellington as part of the IPENZ 2011 Pickering Lecture series – talked about knowledge, innovation and a life that has been anything but ordinary. From humble beginnings growing up in orphanages in London, Sir Ray went on to eventually work in the Third World, helping develop infant incubators, IV flow controllers and pre-digested protein formulations to combat child malnutrition. In 2010 he was the Kiwibank New Zealander of the Year.

Sir Ray was a teenage runaway living under a bridge when a benefactor organised an internship for him at Wye College as a technician. It was the break that would reverse his fortunes. Years later, having forged a successful career in

science and pharmaceuticals, he realised many of the world’s disadvantaged children did not have the same opportunities he had. Wanting to give something back, he began working for the Fred Hollows Foundation, making low-cost intraocular lenses available to some of the world’s poorest people.

“Innovation through observation” was the theme of Sir Ray’s lecture. He had a pertinent message: our scientists and innovators need to take their ideas to the world. He told the story of Richard Pearse, the New Zealander who made the world’s first plane but who shunned publicity. The Wright brothers, in contrast, developed an entire aeronautical industry out of their flying machine largely through good marketing. //

Graduate Fault Comes Back to Bite

Chris Davies MIPENZ was a Graduate Member when he designed an effluent disposal system that later failed. The IPENZ Disciplinary Committee heard a complaint against him and made the following orders:

- That the Institution reprimands Mr Davies for his failure to exercise sufficient care in the performance of his engineering activities, and for a breach of his ethical obligations
- That he be fined \$1,800 (plus GST if applicable) pursuant to Rule 11.5(e) (being a sum not exceeding five times the annual subscription)
- That he be required to pay \$3,600 (plus GST if applicable) pursuant to Rule 11.5(g) being a sum not exceeding 10 times the annual membership subscription for a Professional Member towards the costs incurred by the Institution and/or the complainant as are directly attributable to the investigation hearing, and/or determination of the complaint against the Member.

THE CASE

Mr Davies set up Primary Design Ltd to carry out small commissions in his spare time, with the agreement of his employer. In 2005, he designed an effluent disposal system for **Mr Bertram** of Welcome Homes.

Mr Bertram appointed Mr Davies to undertake the work after receiving a promotional leaflet dated 21 August 2004 which introduced Mr Davies' company Primary Design Ltd. The leaflet states, among other things, "I have a Bachelor of Engineering (Environmental) from Massey University and have

been in my current employment for a number of years" and, "This company will provide wastewater system design and specifications for the installation of rural wastewater systems. I have a number of contacts in the industry for secondary treatment systems should they be required." The leaflet was signed, "Chris Davies BE (Envir) GIPENZ".

The effluent disposal system failed in July 2008 after a period of very heavy rain, three years after it had been installed. In December 2009, a Building Disputes Tribunal adjudicator ruled the sewerage system was not fit for purpose and that Welcome Homes was liable for the costs associated with its failure.

The Committee found Mr Davies did not give due regard to:

- Following a recognised professional practice in communicating with his client on commercial matters
- Drawing the attention of those affected to the level and significance of risk associated with the work
- Giving engineering decisions, recommendations or opinions that are honest, objective and factual.

The Committee also found Mr Davies contravened the obligation in Rule 4.3 that a Member performs his/her engineering activities in a careful and competent manner, equal to his/her standing in the Institution. In reaching this finding the Committee recognised that Mr Davies was a Graduate Member at the time and would normally be working under professional supervision. In this case, he was acting as a sole practitioner doing the work of a Professional Member and needed to take extra care to follow good practice and ethical standards. //



Young Engineer of the Year Finalists

Three finalists have been selected for this year's award. Congratulations to **Camilla Gibbons**, **Gina Waibl MIPENZ** and **Mark James MIPENZ** for making it through to the final stage of the competition. They were judged on their career development, contribution to the wider community and recognition by their peers, and were found to have exhibited high levels of personal and ethical behaviour and demonstrated excellence in engineering.

The finalists showcased their communication skills by giving a short public presentation in early September on an engineering project of their choice.



CAMILLA GIBBONS

Ms Gibbons is a Senior Engineering Geologist at Aurecon in Christchurch. She has worked in the United Kingdom and Australia on a variety of projects including tunnels, large industrial plants and highways.

Recently she has been heavily involved in earthquake recovery work in Christchurch. After the February quake, she assisted Urban Search and Rescue geotechnical engineers with initial geotechnical inspections and landslide monitoring. Since then she has managed Aurecon's work on rockfall mapping, assessment and remediation in the Port Hills. She has also worked closely with GNS geologists monitoring, mapping and investigating one of the large landslides and two of the large cliff collapses in the area.

Ms Gibbons participates in a range of activities both socially and competitively, including climbing, sailing, skiing, mountain biking, surfing, tramping, squash and tennis.



GINA WAIBL MIPENZ

Miss Waibl is a Risk Analyst at MWH New Zealand. She project managed the KiwiRAP Star Ratings project, a scheme which assesses the safety performance of New Zealand's roads. Gina's engineering career has largely focused on road safety, but has also included risk and asset management work, including a six-month secondment to Brunei setting up sewerage and drainage asset management systems.

In 2004 Gina won the Civil Engineering Prize for top student at the University of Canterbury, along with six other subject prizes including the ACENZ Best Practical Work Report Award. Gina has represented New Zealand in road cycling and has volunteered regularly for the Department of Conservation, culminating in a six-month volunteer position on Raoul Island.

Identified as a future leader, Miss Waibl has been enrolled in MWH's Future Leader training course in Sydney.



MARK JAMES MIPENZ

Mr James, a Project Engineer at HotChilly in Wellington, has been pursuing an engineering career since he was a high school student in the United Kingdom, where he won gold and silver Crest Awards. Upon graduating with a Masters in Engineering from Warwick University he worked for AECOM (then Faber-Mausell), before moving to XCO2 and then BrydenWood.

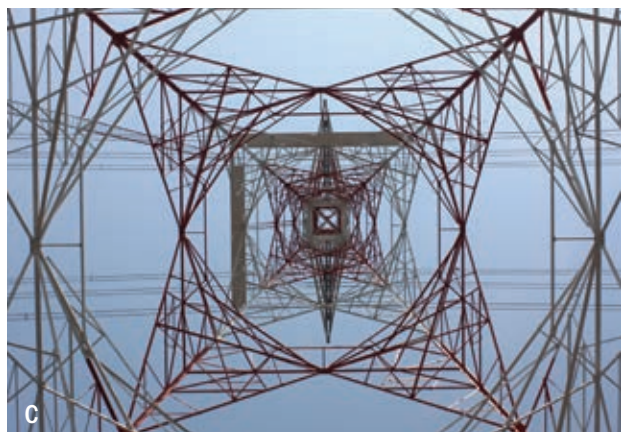
He came to New Zealand in 2009 with his Kiwi wife and took a role with HotChilly. He has primarily been working on the Willis Central project in Wellington. Mark is a Futureintech Ambassador, working with young people to encourage them into engineering careers. Outside of work he is a keen triathlete (having completed five Ironmans) and enjoys photography. He supports his wife's charity, raising awareness and funds for Type 1 diabetes whenever he can.

The Young Engineer of the Year award will be presented at a black-tie dinner in Wellington on 30 November 2011.

To purchase a ticket to this popular event go to www.nzeeawards.org.nz

Capturing Future Focus

Rain, hail and snow failed to distract the judges at this year's Engenerate Photography Competition. On the coldest day of 2011, around 100 entries were narrowed down to 12 finalists.



This year's overall winner, *220kV Roxburgh-Twizel Transmission Circuit*, was considered by the judges to have got everything right technically – composition, tone and engineering content. The photographer obviously thought about where to stand to get the perfect shot. Congratulations to **George Baildon GIPENZ**, who receives an iPad2 for winning first prize.

The winner of the Taste of Kiwi prize was also very good technically, with exactly the right exposure being used. The image also hit the nail on the head for the competition theme. Well done to **Leighton Fletcher GIPENZ** who wins \$500 for *A Bright Future*.

The judges made special mention of two other images – the vibrant colours of *Technology Across the Globe* by **Michael Betschart GIPENZ**, and the eerily lifelike *What An Eye!* by **Yinan Jia GIPENZ**. Both images were highly thought-provoking, the judges said.

Ten finalists were judged in the Members' Choice poll. This year 143 Members voted, selecting *A New Perspective on 500kV* as their favourite. Congratulations to **Michael Breckon FIPENZ** who takes away a \$500 cash prize.

Thanks to our judges **Chris Clifton** and **Michelle Boniface** for their time, and to all those Members who entered.



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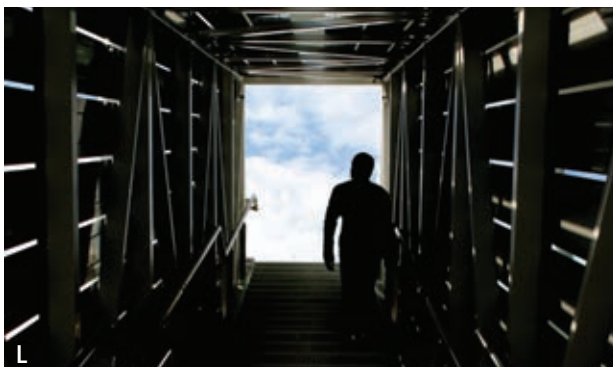
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A. 220kV Roxburgh-Twizel Transmission Circuit, **George Baidon GIPENZ**; B. A Bright Future, **Leighton Fletcher GIPENZ**; C. A New Perspective on 500 kV, **Michael Breckon FIPENZ**; D. Technology Across the Globe, **Michael Betschart GIPENZ**; E. What an Eye!, **Yinan Jia GIPENZ**; F. Cycle Back to Basics, **Dennis Teoh GIPENZ**; G. Rail. Road, **Ben Conway**; H. We Built this City, **Dennis Teoh GIPENZ**; I. Painting Shapes, **Harry Ormiston GIPENZ**; J. Future Cinema Deco, **Joe Qin**; K. Galaxy of Lights, **Lee Pike**; L. Structures to the Sky, **Harry Ormiston GIPENZ**

+ Fellows' Achievers' DINNER 2012

At the Fellows' and Achievers' Dinner in March, IPENZ recognises leaders, contributors and achievers in a number of categories. Expressions of interest for the 2012 awards are now open in the following categories.

Fellow

This category acknowledges a Member's contribution, recognised by peers, that advances the profession or IPENZ, in one or more of the following areas:

- Creation of engineering knowledge by research
- Development of improved engineering practices, codes or standards
- Development and enhancement of IPENZ and/or its subsidiary organisations
- Education that builds engineering and technology in New Zealand
- Raising the profile of engineering
- An engineering innovation, creation or design with wide impact
- Leadership in the profession.

Distinguished Fellow

This category recognises an existing Fellow's eminent contribution, over an extended period, to leadership in engineering in a technical or wider context. Distinguished Fellows are recognised for eminent achievements in one or more of the following:

- Research
- Engineering practice
- Leadership
- Contribution to the community
- Innovation or invention
- Fostering of engineering in business.

Honorary Fellow

This category recognises an eminent contribution to the advancement of engineering over an extended period by a non-engineer or person holding an engineering qualification but whose career has been outside engineering in a traditional sense.

Honorary Fellows are recognised for eminent achievements in one or more of the following:

- Research
- Engineering practice
- Leadership
- Contribution to the community
- Innovation or invention
- Fostering engineering in business.

Turner Award for Professional Commitment

Sponsored by Pacific Steel Group, this award recognises a Member's commitment to the ideals of a self-regulating profession as judged by some of the following:

- Actively upholding and promoting the ideals of a profession
- Contributing to the processes of self-regulation – voluntary activities on committees, taskforces, panels etc
- Willingly disseminating technical information to colleagues and the wider community
- Promoting engineering as a career to young people and/or mentoring young engineers
- Consistently demonstrating and upholding the IPENZ Code of Ethics
- Actively involved in community affairs
- Ongoing commitment to upskilling and maintaining knowledge and professional skills.

Supreme Technical Awards for Engineering Achievers

Sponsored by Opus International Consultants, these awards recognise technical expertise in engineering as exemplified by contributions to the advancement of engineering practice, innovation or technical breakthroughs.

Evidence includes:

- Technical papers advancing knowledge
- Major improvements in engineering practice through codification or standard development
- Recognition by others (nationally or internationally) of leadership in a practice field
- A track record of creating new solutions to engineering problems
- Ingenious new artefacts, products, systems or services with enhanced properties.

Dobson Award

Transportation infrastructure – design, construction, development or operation of any form of land, sea or air transport infrastructure assets. Includes bridges, tunnels, rail, road, port, airport construction, transportation and traffic engineering.

Rabone Award

Information, communication, electrical and electronic technology – design, development or operation of improved or new communications, hardware and/or software, embedded systems, broadcasting, telecoms, electrical or electronic products and controls.

John Cranko Award

Mechanical and manufacturing – design, development or operation of improved or new products, processes or services using mechanical engineering, mechatronics, or arising from the manufacturing sector. This is a broad category including elaborately transformed manufactured goods, automated production facilities, mechanisation, control systems (where there is a mechanical component) and robotics. This award excludes mechanical devices permanently fitted as part of building services.

Furkert Award

Sustainability and clean technology – application of world best practice in minimising non-renewable resources, waste minimisation or improving sustainability.

Nominations open 1 September and close 31 October 2011.

Nomination and entry forms are available at www.ipenz.org.nz/IPENZ/who_we_are/honours_and_awards/Nom_app.cfm or by emailing the Awards Coordinator, Dionne Needham at awards@ipenz.org.nz

MEMBERSHIP UPDATE

Congratulations to the following people elected to Professional Membership classes between 11 April 2011 and 30 June 2011.

JJ Addington, M Aislabie, G H Aitken, F L Babbott, G J Beattie, G Black, G L Boaz, G V Borichevsky, R A Brook, S R Burrough, M W Carey, MWH Chan, JJC Chang, HAS Chiu, P A Churton, B J Davidson, T J Day, K E de Bruin, D R Dekker, A Deutsch, M J Doherty, C R Duncan, S P Finnemore, J W Freeman, S A Funaki, MFL Gibson, D R Goodall, C J Gordon, B Z Greer, G J Hill, DML Ho, N L Hogg, T J Holden, T L Hyde, S A Javadian, HJC Jenkins, F J Jirjees, G S Layfield, A D Leonard, MHY Leung, A Lind, D G McCabe, A C Macdonald, C Muddiman, A G Murahidy, K M Murahidy, G Newby, R J Noonan, B M O'Dempsey, L J Oliver, W E Oliver, S Pampanin, T G Parsons, J K Pettersson, J V Pooch, S S Prasad, W L Pump, M A Rangī, M Rupp, B J Sawyer, N Searle, R G Seville, M J Shaw, M A Sollner, J M Stanway, S A Stringfield, P J Sullivan, JLP Thompson, A P Tokelove, J F Trowsdale, RWM van Bergen, WAN van den Worm, C J Wastney, D Westwood, A S Williams, M S Wilton, R A Winkler, MJM Wright, A Wrona, R A Young. //

Branch Update

TAURANGA

There was a good turnout to a site visit in August to the TiDA titanium development facility at Bay of Plenty Polytechnic. Attendees got to see first-hand the processes involved in developing and refining applications for titanium powder. The technology has only been available for 10 years and TiDA is considered at the forefront of exploring its use.

WAIKATO/BAY OF PLENTY

In July, Branch members enjoyed an open presentation on Licensed Building Practitioners by **Alan Bickers DistFIPENZ**. The talk covered a lot of ground and Mr Bickers enjoyed the relaxed atmosphere of talking with industry peers. Hopefully he also inspired younger engineers to strive for challenging roles in the construction industry.

CANTERBURY

Engineers Without Borders completed the first phase of its Ambae Wastewater project. As part of the project, five University of Canterbury students went to Vanuatu for five days, helping build a septic tank and toilet block. The team will embark on the next phase of the project towards the end of the year.

Women in Engineering (WIE) held a mentoring session for university students in July. In a Q&A format, whilst decorating cupcakes, students learnt about both the social and academic aspects of university life from WIE Committee members.

AUCKLAND

In August, former Prime Minister **Jim Bolger** was the guest speaker at "Sustainable Policies as Part of Future Planning". Mr Bolger gave his perspective on planning for the future, emphasising how sustainability must be at the forefront.

The University of Auckland Formula SAE Team, in the midst of readying its car (the M11) for the 2011 SAE campaign, opened its doors in August to Mechanical Engineering Group members. On show were the M11's custom engine, transaxle package and carbon fibre monocoque along with other key parts of the vehicle.



Above: The Engineers Without Borders team and locals building concrete slabs in Ambae, Vanuatu. Below: The team at Longana Airport.

WELLINGTON

The annual President's Dinner was held in July. Around 50 people attended to hear IPENZ President **Steve Reindler FIPENZ** talk about the Institution's visions, including the goal to reduce work-related deaths and injuries. Mr Reindler also spoke passionately about encouraging more women into engineering.

NELSON/MARLBOROUGH

In August, Branch members were treated to a tour of McCashin's Brewery in Stoke. The tour included an inspection of the brewery's laminated timber beams – as well as of the brewery itself – and members were given the opportunity to bring along their homebrew and ask process engineering questions. //



The Technology Education New Zealand (TENZ) biennial conference was held in Dunedin in July.

TENZ, an IPENZ technical interest group, is a professional network designed to promote technology education. It worked alongside IPENZ to run this year's conference, held at the Otago Museum. The conference included workshops, papers, industry visits and presentations from international guest speakers and renowned New Zealand practitioners and researchers.

Dr Andrew Cleland FIPENZ, IPENZ Chief Executive, gave a presentation via FaceMe video conferencing. "Technology Education and the Innovation-led Economy" discussed how our shortage of tertiary graduates – especially Maori and Pasifika students in ICT, engineering and technology – may compromise our economic future. Dr Cleland also covered the National Engineering Education Plan, the "Pathways to Careers in Technology, Engineering and Applied Science" webpages on the Futureintech website (www.futureintech.org.nz/pathways), and recent developments from the Government's Youth Guarantee strategy, which aims to transform education at the secondary-tertiary transition. Under the strategy, secondary, tertiary and industry training organisations will work with industry to establish coherent and consistent vocational pathways that will better align the education system with the wider societal and economic needs.

Futureintech contributed to the conference, with presentations by Otago-based Facilitator **Lynne Newell** and Futureintech Ambassadors **Jess Chaloner** (Farra Fabrication mechanical engineer), **Phil Jackson** (ADinstruments software writer), and **Stuart Dickerson** (Cadbury food technologist). They encouraged technology teachers to get involved with Futureintech by demonstrating the kind of learning opportunities ambassadors offer students during school visits.

Techlink had a display stand at the conference promoting the technology resources available on the website and in publication, providing the opportunity to communicate with a key audience and gain feedback on the website. Techlink received positive feedback and suggestions for improvement via this forum.

At the conference Techlink launched "Stories of Creativity", an educational resource on the website about the World of WearableArt™ (WOW). IPENZ was approached by WOW, which had been looking to provide a teaching resource complementing its touring exhibition *Off the Wall*. Over the past few months Techlink worked with WOW to provide a resource for delivering technology in the curriculum that is drawn from the technological processes wearable artists go through to develop their award-winning designs. The site

features 13 garments and a description of the story behind the artists' technological development as well as a substantial teaching notes section with a range of curriculum-focused approaches and activities.

In conjunction with the conference, TENZ held its biennial awards ceremony acknowledging the significant contribution made to technology education. This year seven awards were presented including one to Techlink Project Coordinator **Glynn McGregor GIPENZ** for his outstanding contribution to technology education. //



2009 Brancott Estate World of WearableArt™ Awards Show – "Second Skin" by Hayley May and Fiona Christie, Wellington.

ENGINEERS LAY OUT VISION FOR CHRISTCHURCH PRECINCT



Above: The design concept for the former Christchurch Women's Hospital site submitted by "Character City" in the 48 Hour Design Challenge, which was run by the Christchurch City Council to gather ideas for rebuilding the central city. The engineering-led team of [Emily Rudkin MIPENZ](#), [Mike Day MIPENZ](#), [Wen Hou GIPENZ](#), [Fadi Jirjees MIPENZ](#), [Guy Quaife](#), [Samantha Ramos](#) and [Leicester Murray](#) created a concept for an accessible and sustainable health precinct that could be constructed within a short timeframe so it can support the city's recovery. Key features include a safe cycle and pedestrian thoroughfare and a public space which doubles as a night market.

Douglas Dell 1934–2011

Douglas George Dell FIPENZ, a distinguished power industry engineer, died on 11 August after a long illness. He is survived by his wife and two daughters.

Doug worked for the State Hydroelectric Department through to the Electricity Corporation of New Zealand, completing his career as a commissioner in the newly formed Electricity Commission. He was remarkable as a practical and innovative engineer, an effective manager and a mentor of young engineers. He excelled in everything he did.

Roy Hemingway, the first chairman of the Electricity Commission, wrote, "Doug had one of the most forward-looking and innovative intellects I had ever encountered. His deep background in the New Zealand electricity system allowed him to understand what had been good with the old system, but also what had not worked and what needed changing. Doug, more than any of us on the Commission, advocated for the changes that would make the electricity system less costly, more efficient and more reliable in the future."

Doug's plain common sense, encyclopaedic knowledge of the whole

industry and ability to focus on the important issues were his strongest traits. He studied engineering at Christchurch, graduating with honours. After doing his OE as a graduate apprentice with Metropolitan Vickers in Manchester, he returned to New Zealand and worked on the DC link. He was then in charge of the Dunedin district office and later Auckland.

When the original DC link was being built, Doug was responsible for the electrodes needed to return the current to Benmore. The current loading was 10 times greater than anything of its type ever carried out in the world, so he was right into new territory

Doug always took a long term view. He foresaw the need for extra transmission capacity across the Auckland isthmus and wanted to upgrade a 110-kilovolt (kV) line to 220 kV. Head Office said such an upgrade wasn't possible, so Doug converted a 110 kV tower to 220 kV just to prove it could be done. But

even that didn't change their minds. Now we are paying \$300 million to do what Doug could have achieved for a few million dollars.

Eventually Doug became Deputy General Manager of the Electricity Department. Kevin McCool was General Manager and between them they made big changes to how the department operated. Unfortunately, the public service structure stopped them making all the changes they knew were needed.

When Electricorp was formed Doug was never given the opportunity to complete the job he and Kevin started. The new management, it seemed, did not value his ability or breadth of industry knowledge. If it had, the transmission system and the whole electricity industry might be in much better shape than it is now.

New Zealand has lost a remarkable engineer.

Courtesy of Bryan Leyland FIPENZ

DID YOU KNOW?

IPENZ celebrates its centenary in 2014. The Institution went through several incarnations before its current name was adopted. New Zealand's first professional engineering body, the Institute of Local Government Engineers of New Zealand, was formed in 1912, while the New Zealand Society of Civil Engineers (NZSCE) was established the following year. The two bodies merged in 1914 and were known as the NZSCE. Membership grew steadily and in 1937, after much debate, the NZSCE was renamed the New Zealand Institution of Engineers in recognition of the many non-civil engineers who comprised the Membership. The current name was adopted in 1982 to emphasise the importance of professional engineering. //

Continuing Professional Development

SEPTEMBER

Bridge Design

This course provides a broad overview of all aspects of bridge design, particularly the application of seismic design principles relevant to bridges. It is structured to reflect the requirements of the NZTA Bridge Manual.

It will be useful to intermediate structural engineers interested in becoming involved in bridge design, experienced bridge designers who want to update their knowledge of seismic design in line with the proposed NZTA Bridge Manual amendment, as well as graduates, and engineers from other countries who wish to become familiar with New Zealand bridge design standards.

- 20 September – Wellington
- 21 September – Christchurch
- 29 September – Auckland
- 30 September – Taupo



NOVEMBER

Intelligent Transport Systems

ITS: The Components (Beginner Level)

This course provides an introduction to the key principles of intelligent transport systems (ITS) and the broad outcomes which they strive to achieve. The course will provide details about data collection and communication technologies and provide an overview for how those functions fit within transport system architecture. The course is aimed at anyone with an interest in ITS. No previous experience or knowledge of the transportation sector is required.

- 2 November – Auckland
- 9 November – Christchurch
- 15 November – Wellington

ITS: The Systems (Intermediate Level)

This course will build on the participant's existing transport knowledge and present a range of ITS applications which deliver key strategic network aims. It will provide an overview of the systems engineering approach that continually assesses the direction of the project against the project goals. Selected larger and wider-scale ITS systems are discussed with particular emphasis on the real life issues. The course is aimed at engineers with limited experience and knowledge in the design or application of ITS, but who are directly involved in the transportation sector.

- 3 November – Auckland
- 10 November – Christchurch
- 16 November – Wellington

For further information on dates, locations and how to register please visit the engineering calendar at www.ipenz.org.nz or contact cpd@ipenz.org.nz for more information on the IPENZ Continuing Professional Development Programme. //



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