ISSN 1175-7752

IPENZ
Engineers New Zealand

engineering dimension

A monthly newsletter for members of The Institution of Professional Engineers New Zealand

May 2003 • Issue 15

President's Message

The "P" words – power, planning and policy

As yet another energy "crisis" looms for New Zealand, one could be forgiven for wondering what we have learned since the previous ones. At a recent IEE/IPENZ breakfast meeting I asked the Minister of Energy, Hon Pete Hodgson, what compelling reason he could give consumers to save power. His response was to suggest they could save money by giving up such luxuries as heated towel rails.

He could have suggested altruistic reasons, signalled that demand-side management would be moved up the agenda, or promised that in exchange for our helping deal with this crisis the government would ensure it didn't happen again. He could even have hinted at an energy planning policy – if those "P" words hadn't vanished from official energy thinking since the 80s.

Subsequently he would blame "malign circumstances" – the premature depletion of Maui gas combined with lack of rain – for yet another crisis. The Maui decline was at least predictable, and foreshadowed as early as 1985.

IPENZ has had various stabs at getting successive governments to re-consider energy planning. In 1992 I chaired a policy committee, which approached energy as a "business unit" of "New Zealand Limited". The principles we came up with were:

- energy demand was still expanding in a static economy, against the OECD trend
- with demand unchanged, Maui depletion would leave us short of some 30% of the primary energy available
- NZ would remain committed to international greenhouse gas reduction targets
- improving efficiency at all levels would be fundamental
- a conservation ethic would be needed
- our choice of development paths would affect energy demand
- there were limited undeveloped or undiscovered water or hydrocarbon resources
- New Zealand's debt burden might prevent our taking an optimum course

Ten years later, and after major ideological change, only the last point has perhaps altered significantly.

Your Chief Executive and I also met the Minister of Finance, Hon Dr Michael Cullen. We suggested an Infrastructure Advisory Panel, with government and private-sector representation, to offer planning advice not only on energy but on national infrastructure as a whole, from a long-term perspective. So far we haven't heard back.

The press seems to reflect growing cynicism; asking the consumer to save power to get the country out of a hole, without changes in the pipeline to ensure it won't recur, is no longer acceptable. IPENZ wants to help. How we can best do that is still open to suggestions. We would welcome yours.

Gerry Te Kapa Coates
President

Ethical obligations and structural engineering safety

In the wake of the Scarry "open letter" Members have sought IPENZ's advice on their ethical obligations. The letter alleged that some buildings may pose a significant risk of structural failure in seismic events. IPENZ has advised that if a Member has knowledge of a building that leads them to consider that the building may present a significant and immediate risk to life or of injury, they have an ethical duty to inform the building's owner that the design and construction should be reviewed as soon as possible; and, depending on the circumstances, they should consider whether they should also inform users who might be at risk. This advice reflects the IPENZ code of ethics, and the CPEng minimum code of ethical conduct.

The obligation arises whether or not the present owner owned the building at the time of construction. Informing an owner of a perceived risk is not accusing the engineer in question of poor work; the building may have met standards at the time of construction, which may have since been brought into question by new knowledge.

In response to this advice Members have pointed out another ethical obligation: to inform an engineer before commenting on his or her work. This recognises the collegial nature of a profession; professional judgement must inform difficult decisions on issues that are not black and white, and collegial debate ensures that judgement is applied robustly. However, the CPEng code specifically excludes cases where there is significant and immediate danger. Then, the need to inform the engineer takes a lower priority than the protection of people; but the engineer raising the issue must get their facts right to avoid unnecessary alarm.

If a Member has assessed that a building presents a significant and immediate risk to people (as distinct from property) they probably should warn users as well as the owner. Risk concerning performance in an event with a 10-year return time should probably be regarded as immediate; with a return time of (say) 100 years, probably not – a personal judgement must be made as to immediacy.

If the engineer concluded that there was an immediate risk and they should inform users, it would be advisable to notify the owner of this intention, giving them reasonable time to act to reduce the danger. If nothing was done quickly enough in the engineer's view, then disclosure would be ethically proper.

Engineers must also judge what steps to safeguard life might be reasonable. This will depend on the engineer's assessment of the seriousness as well as the immediacy of the risk. Obligations might also vary depending whether the engineer was, for example, in New Zealand or overseas, and on or off duty. It would be unreasonable to expect an

Continued overleaf>>>

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engineer briefly visiting a non-English-speaking country to be able to find a building's owner; or to expect an engineer to undertake substantial work for the benefit of the building-owner without fee. Conversely, where older buildings are not required to be upgraded to 100% of the present code, raising of concerns should not be used to tout for business.

A useful test might be to consider what you should have done if you had visited Cave Creek as a tourist, and something about the platform had made you uneasy. IPENZ takes the approach that whereas on duty an engineer should seek out and eliminate dangers, there is no obligation off duty unless they should stumble upon a recognisable risk. So an engineer visiting Cave Creek would not be obliged to look underneath the structure; but if they did so out of curiosity and their expertise in the structural area allowed them to judge what they saw, they would have an obligation to act.

Warnings should be phrased with appropriate caution: for example, "My experience in engineering suggests this structure may not be safe, and I recommend that you take urgent action to have it reviewed," would usually be more appropriate than "This structure is unsafe", although occasionally such unequivocal advice could be given confidently.

Ingenieurs of New Zealand

In the three months since Professional Members and Fellows of IPENZ became eligible to apply to use the pre-nominal "Ir", only 25 Members have availed themselves of the option.

The term "Ingenieur" is simply the French equivalent of "engineer", and designates a person as a Professional Engineer. It thus signifies a certain level of qualifications, experience and ethical behaviour. Internationally, the pre-nominal "Ir" is recognised and highly regarded.

The IPENZ Board has made provision for the pre-nominal "Ir" (Ingenieur) to be reserved for use by IPENZ Professional Members and Fellows by trademarking it. President Gerry Coates supported this initiative and explained the rationale for making "Ir" available, which is summarised here.

Research has shown that New Zealand Professional Engineers seek recognition as a clearly identifiable group, distinct from the engineering trades. IPENZ was created by renaming the NZ Institution of Engineers in a way that emphasised that we were "Professional Engineers". Now "professional" is increasingly used simply to designate people who are paid for their services, such as professional sports players, as distinct from amateurs.

In many people's minds there is still confusion about the various more and less strict ways the words "engineer" and "professional" are used. Accordingly it was suggested that we should adopt an internationally recognised designation. In Europe such a distinct identity has been created by the use of the pre-nominal Ingenieur to designate a person holding a degree in engineering.

The Board has made the new designation available but not obligatory; it wants Members to decide individually whether they want to use it. Applicants to use the pre-nominal therefore need to inform IPENZ of their intention to use the title, and receive verification that they meet the entry requirements. These are, being a current Professional Member or Fellow of IPENZ, and obeying its Code of Ethics.

In written communication the title is used by inserting the pre-nominal "Ir" in front of the recipient's name. In verbal communication users may describe themselves as an "Ingenieur", pronounced "urn-gen-yeur."

Those questioned on their views about "Ir" have said that it will take a long time, maybe a generation, for engineers and the public to accept and understand the usage. The Board will review the relevance of the pre-nominal in April 2004. In the meantime Members are encouraged to give it their consideration. If there is a strong demand by the membership the designation can be promoted actively and retained. If not, it may be discontinued.

The Hume Fellowship

Applications are invited for the Hume Fellowship. The Fellowship was established in 1988 by Mrs Henrietta Hume, whose late husband Harry Hume had a distinguished career until his retirement in 1966 as Chief Civil Engineer, Ministry of Works, Wellington.

The purpose of the Fellowship is to provide financial assistance to young civil engineers to further their professional skills by a period of specialist study, normally at an overseas institution. New Zealand and the engineering profession are expected to benefit from the knowledge and skills acquired by the Fellows.

The Award

The award will be a sum of up to NZ$30,000. The applicant must undertake to return to New Zealand for a period of not less than two years after the award, and to produce for the Trustees a report on the achievements of the study.

Eligibility

The Fellow will be a citizen of New Zealand, preferably between the ages of 25 and 35, with a university degree in civil engineering. Selection will be based on the potential of the applicant and the proposed programme to advance the technical skills of the engineering profession within New Zealand.

Applications

The proposed subject, period and location of study shall be detailed by the applicant. The applicant must have demonstrated ability and application in the chosen area of study. An indication of how the study will advance the profession within New Zealand shall be included in the application. The applicant must supply the names and addresses of three referees. The applicant must also supply a curriculum vitae giving age, nationality, educational qualifications, publications, awards and employment history.

Applications must be forwarded to:
The Harry Hume Fellowship
C/- The Dean of Engineering
University of Canterbury
Private Bag 4800
CHRISTCHURCH

Applications close on Wednesday 1 October 2003. Interviews of selected applicants will be conducted to determine the Fellowship winner.

The New IPENZ Board

At the recent AGM the following appointments were announced:

President
Gerry Coates

Deputy President
Ian Parton

Vice President
Roly Frost

Elected Board Members
Deane McNulty, Ross Major, Chris Mardon

Appointed Board Member
Rhonda Hill

Board Members continuing
Richard Haverkamp, Sharyn Westlake, Kelvin Walls, Ralph Fouché

Roly Frost FIPENZ is a Principal and General Manager of the Civil Division of Beca Carter Hollings and Ferner. He has worked for Beca since 1998, first as General Manager, Beca Roads, in which position he managed roading-related activities for Transit, Transfund and Local Authorities. In his present position he is General Manager of the consulting activities of the firm's civil, geotechnical, civil structures, survey and Hamilton offices.

He is a Team Leader on major projects; recent examples include designing and building upgrades of the Hamilton Water Treatment Station and the Pukete Wastewater Treatment Plant; design, construction and realignment work on various State Highways; and and design and construction of the Waikato Regional Stadium and the Tainui Stadium.

Before joining Beca Roly had more than 25 years' experience as a civil engineer, most of it with the Ministry of Works and its successor. As Regional Manager, Central, for Works Consultancy Services he was involved in every aspect of civil planning, design, construction, administration and management.

He is a member of the Institute of Directors and of the Association of Consulting Engineers New Zealand, and was an IPENZ Board Member from 1994 to 2000.

Ross Major FIPENZ is currently Principal Mechanical Engineer with Christchurch consultancy Cosgrove Major. He has more than twenty years' experience in the design and construction aspects of the building services industry. Involvement in an extensive range of institutional, commercial and industrial projects has equipped him with broad technical expertise.

He has experience in air conditioning, ventilation design, plumbing and drainage systems, gas reticulation, energy management and specialist exhaust systems. Recent projects have included the re-development of Grey Hospital, the Christchurch Hospital Emergency Department and the Mercer Stainless Steel Factory.

Ross is also actively involved in the development of the engineering profession and is immediate past Chairman of the Canterbury Branch of IPENZ. His professional affiliations include membership of ASHRAE and IRHACE.

Dr Chris Mardon MIPENZ won the 2002 IPENZ "Young Engineer of the Year" award. He was awarded the BHP-New Zealand Steel Scholarship (1993–95), and studied at The University of Canterbury, where he went on to complete a PhD in Mechanical Engineering. He represented the university in athletics for several years.

Chris is currently Production Manager for Best Bars automotive manufacturing plant in Auckland, where he has overall responsibility for the daily operations and strategic direction for the 60 planning, production and maintenance staff.

He previously worked for the Carter Holt Harvey Whakatane Board Mill in 1999, and then the Hygenex Factory tissue converting plant in Kawerau, first as manufacturing Team Leader and then for two years as Assistant Factory Manager. In the latter role he supervised factory operations, and led a process improvement drive, also helping to establish personnel, training and operational systems.

Chris has delivered various conference presentations on his area of specialisation, spring steels. He is a member of the Vibration Association of New Zealand, the Engineering Materials Technical Group of IPENZ, Engineers for Social Responsibility, and the Christchurch Branch of Young Engineers New Zealand. His interest in sport and particularly athletics has led to involvement over the years as a participant and service on various local association committees.

Rhonda Hill MIPENZ, a civil engineer with some 22 years' experience, is currently Design Engineer with Opus International Consultants in Napier. Her responsibilities include bridge inspections, feasibility reporting on civil structures, and designing structural renewal, repair, and maintenance works. She specialises in designing bridges, and the repair and modification of existing bridges, including deck replacements, deck joint repairs, seismic retrofitting and batter and scour protection.

Rhonda is the Deputy Team Leader and Project Manager for Opus's Transit NZ Highway Bridge and Structures Management contract. Her role includes site supervision of civil contracts for roading, bridging, drainage structures, irrigation, water supply and sewage disposal. Major recent projects have included the Napier City Council's lagoon farm link, as Design and Site Engineer; evaluation and structural strengthening of the Mangatu Bridge; and design, construction and contract administration of sections of the Napier to Hastings Expressway including the Kennedy Road Overbridge.

Prior to joining Opus in 1988, Rhonda worked as an engineer and then a senior engineer with the Ministry of Works and Development in their Napier office.

Neighbourhood Engineers update

Work with a local school on a technology project – you could help them earn $2000, and inspire a passion for technology in some young engineers of the future.

The Neighbourhood Engineers Award, sponsored by Transpower, is open to all schools in New Zealand. It is designed to improve awareness of the engineering profession, and at the same time help meet the objectives of the Technology curriculum. Teachers and students work together with a volunteer engineer on a project that responds to a real need in the school or its local community. A report written by the students is submitted as an Award entry. There are substantial cash prizes, including $2000 for age-group winners.

We will help you link up with a school, and the extent of the time commitment is largely up to you. Teachers find the process a valuable opportunity to connect the technology curriculum with the real world of engineering, the students develop their skills in a real context, and everyone has fun. Engineers who volunteer once often come back for more.

Visit the IPENZ website www.ipenz.org.nz/neaward for a full description of the programme, case studies and contact details.

What Members Want – the 2003 Electronic Survey

Figure 1: **Benefit area that is the most important reason for remaining an IPENZ Member**

*** Sample Size = 1521**

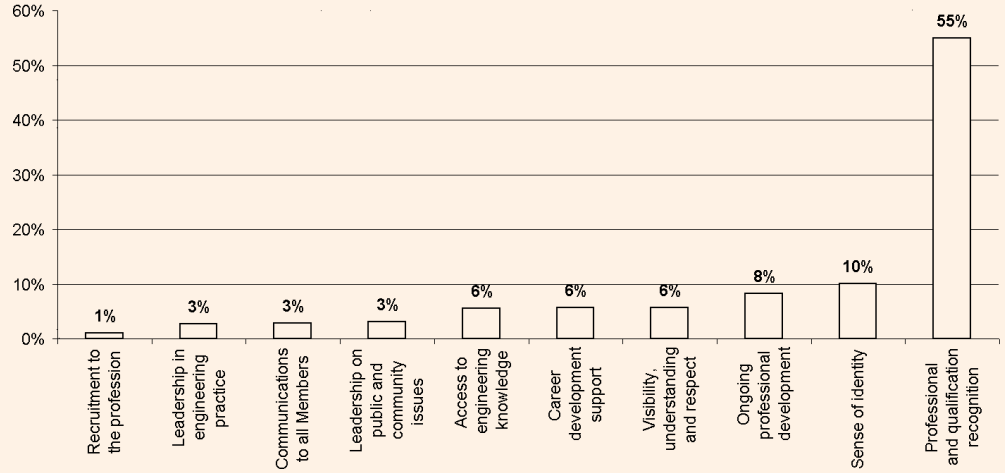


Figure 2: Mean score (1 to 10, 10=highest) for the importance of an expanded range of Member benefits

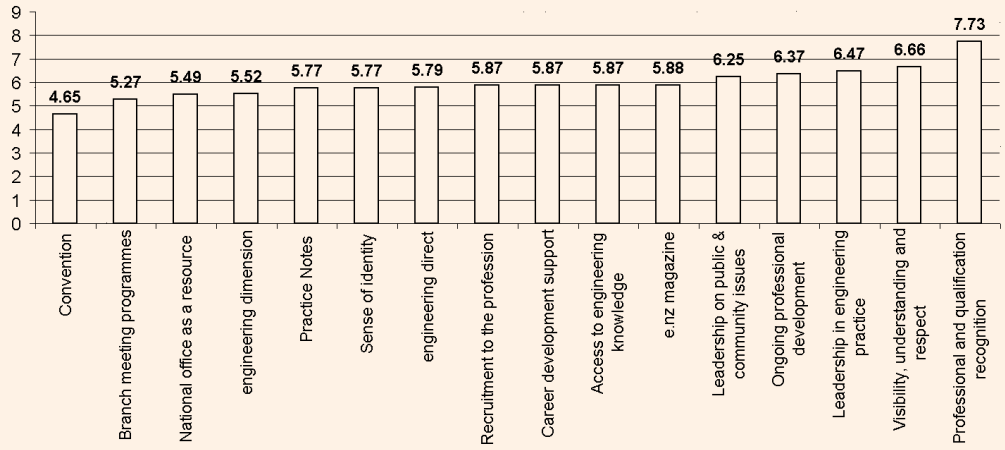
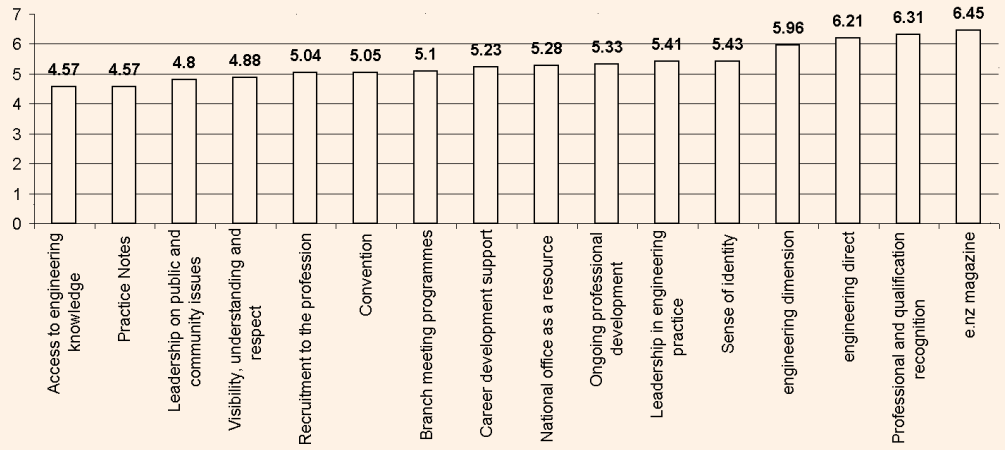


Figure 3: Mean score (1 to 10, 10=highest) for the quality of service on an expanded range of Member benefits



An email survey was sent to all non-student Members who could be reached (a valid address and the capacity to accept HTML emails were needed). We received over 1500 replies, which represents an excellent response rate of approximately 30%.

The main areas in which member benefits are provided were defined (see Table 1), and members were asked to answer questions regarding the importance they attached to the various benefits.

Reasons for joining and remaining a Member

Professional and qualification recognition was given as the most important reason for joining by 79% of respondents. *Career development support* and *ongoing professional development* together accounted for 11%, and all the other reasons only 10%. However, as Figure 1 shows, the primary reasons for remaining are more diverse, and are age-related. Interest in *career development support* peaks among members in their twenties and then fades, not unexpectedly. A *sense of identity* grows in importance as Members move through their careers and into retirement. *Leadership on public and community issues* starts to become important to Members in their fifties, and remains important thereafter, reaching third place as a reason for retaining membership only among Members over 60. *Ongoing professional development* is important in the mid-career age range, reaching second ranking in the thirties and third in the forties, and losing importance as retirement is neared. Interest in *visibility, understanding* and *respect* peaks in the 40s and 50s age range.

When Members were asked to rank the importance of the 10 benefits, results were similarly dominated by *professional and qualification recognition*. The second-ranked factor was ongoing professional development; and *visibility, understanding* and *respect* were ranked third. After that most factors scored evenly, except for *recruitment* to the profession and *communications to Members*, which were the least important reasons for remaining a Member.

Use of subscription income

There was most support for increasing spending on securing *visibility, understanding and respect, leadership* in public and community issues and *access to engineering knowledge*. The only area in which a reduction was favoured was *communications to Members*. These results may seem to conflict with the answers to the previous questions, but not if they are interpreted as meaning "You are doing enough to retain my membership by your performance in the key area, professional and qualification recognition, but note that I would like more done on the following …".

Importance and quality of service

The next section of the questionnaire included benefits beyond the ten key areas discussed earlier: the communications were split into the specific periodical publications; Convention was separated from ongoing professional development; Practice Notes and Branch meeting programmes were included; National Office was included.

Members were asked to rate rather than rank the items. This meant that items were individually rather than comparatively assessed, which led to different results from the ranking process.

In terms of importance (Figure 2) *Convention* scored very low, and *Branch meeting programmes* next lowest. Some members still mistakenly see Convention as a public policy event (like its predecessor Congress) rather than an ongoing professional development event for Members. *Professional and qualification recognition* scored very highly as expected. Four other benefits scored highly in importance:

- *visibility, understanding and respect*
- *leadership in engineering practice* (despite its poor scores in other questions)
- *ongoing professional development*
- *leadership in public and community issues*

In respect of quality of service (Figure 3), there was not a wide range of responses. Members feel reasonably well-served in the *professional and qualification recognition* area which is probably why membership recruitment and retention have improved in the last three years. They also consider that they are well served by the three periodic *publications*. They do not feel well-served regarding *access to engineering knowledge*, and the single practice note so far issued is considered insufficient.

Ongoing professional development

The last section asked Members about the areas in which they considered that IPENZ should be offering ongoing professional development opportunities. There is strongest demand for refresher courses, and lowest demand for entry and re-entry to the New Zealand workforce. *Engineering ethics* scored surprisingly low, and the generic *engineering practice* area was not well-supported. The low score on ethics may reflect the fact that Members are not yet fully aware of the increased likelihood of complaints under the CPEng regime.

In general, demand is highest in the 30– 50 age range. *Engineering practice* rates low overall because it is valued only by younger Members; it might therefore fit into graduate development programmes. Given that the main reason for membership is professional and qualification recognition, and that such recognition must now be re-earned every five years, the surveys give valuable insights into the areas in which practising engineers feel they need to keep up to date to retain their professional recognition.

Closing remarks

The purpose of the survey was to ascertain Members' views; how the Board and staff of IPENZ will respond is still being determined. Changes in work programmes for the 2003/2004 financial year will be reported in a later issue of *engineering dimension*.

A more detailed report is available in the member-only area of the website.

Table 1: Definitions used in Member Survey

Professional and qualification recognition	securing recognition of your qualifications and competence to assist you directly in gaining and keeping well-paid employment
Sense of identity	belonging to, contributing to and feeling good about your acceptance as a full and respected member of your profession; loyalty to your professional body
Visibility, understanding and respect	making your profession more visible, better understood and better respected as a premier profession by the general population of New Zealand
Leadership on public and community issues	visible leadership by your professional body on the resolution of public policy and other issues in the community
Recruitment to the profession	imparting better knowledge of engineering to young people and supporting their education so they consider engineering careers
Career development support	assistance in planning and developing your skills and career, often leading towards achieving and maintaining professional recognition
Ongoing professional development	providing of opportunities to maintain and update your professional engineering skills
Access to engineering knowledge	providing access to worldwide engineering knowledge
Leadership in engineering practice	developing codes of practice and standards to lift the performance of the engineering profession
Communications to all members	communicating with all Members: the 2-monthly *e.nz*, the monthly *engineering dimension*, the weekly *engineering direct* (electronic newsletter), practice notes and informatory notes

Movers and Shakers

Arrow International appoints new CEO

Arrow International, New Zealand's largest project and construction management company, has announced the promotion of Hugh Morrison to the role of Chief Executive Officer. Having joined the company in 1994, Mr Morrison was most recently CEO of Arrow's Australian operations where he oversaw the setting up of the Sydney and Melbourne branches and several major projects.

Mr Morrison replaces Arrow's founding CEO and Principal, Ron Anderson, who remains Chairman. Mr Anderson describes the appointment of Hugh Morrison as part of the company's succession strategy.

"Bob Foster and I founded Arrow International with the aim of creating the most outstanding company in the history of New Zealand's project and construction industry. Hugh has the vision, passion and proven leadership skills that will enable Arrow to reach that goal by 2010."

Mr Morrison has broad experience in the construction and property industry, which includes Singapore's Sentosa Island Sewerage Scheme and Night Safari Zoo, tunnelling and civil structures for Hong Kong's Tai Kok Tsui Station, overlay projects for Sydney's 2000 Olympics, development of The Wollongong Innovation Campus in Australia, and numerous hospitality and retail projects in New Zealand and Australia. Mr Morrison holds a Bachelor of Engineering with honours from Canterbury University and a Masters of Business Administration with distinction from Otago University.

Congratulations to John La Roche MNZM, FIPENZ

Engineers for Social Responsibility is delighted that founding member John La Roche became a Member of the New Zealand Order of Merit in the 2003 New Year Honours List.

John was a founding member of Engineers for Social Responsibility in 1983, and has been extensively involved with it ever since. He is a very active office-holder in the Auckland Branch, and has served on the National Executive. John believes passionately that engineers have a responsibility to the global community and not just to their immediate employer, and that New Zealand engineers have much to contribute to the rest of the world.

Two now-separate organisations arose out of ESR, thanks to John's efforts. The first is Water for Survival of which John has been Director since its formation in 1988. It contributed more than $1.8 million towards clean water supplies, basic sanitation and health education in developing countries.

The second is RedR NZ (Register of Engineers for Disaster Relief NZ), which is part of the international RedR network. John was founding Chairman of this organisation in 1994. Through RedR New Zealand engineers and other specialists provide expertise to help disaster relief organisations in their work around the world.

John has recently been working on a typical project, helping establish a Local Employment Migrant Working Group involving WINZ, IPENZ, and employment consultants, to help migrant engineers secure work.

Another Endorsed Employer

The numbers of firms recognised by IPENZ as having high-quality graduate development systems in place continues to grow.

Fonterra was recently presented with their Endorsed Employer certificate at the IPENZ Convention. Fonterra is committed to investing in the professional development of their engineering graduates, and to making use of the IPENZ competency development programmes and web-based services for graduates.

Graduate engineers employed in IPENZ Endorsed organisations can be assured of mentoring and opportunities to develop the competencies expected of engineering practitioners. A list of current IPENZ Endorsed Employers is available at http://www.ipenz.org.nz/ipenz/careerdev/EndorsedEmployers/Employers.cfm

Endorsements are subject to three-yearly review.

Deputy President Ian Parton presents the certificate to Fonterra representative Ross McCowan

University purchases hi-tech sea-floor mapping gear

The University of Waikato is acquiring leading-edge technology for sea-floor mapping which will significantly boost research capacity into the nature of the coastal sea floor.

The $420,000 Triton Elics Multibeam Sea Floor Imaging System is state-of-the art echo-sounding equipment that does the job better, more quickly and more cheaply than traditional methods, says internationally renowned coastal scientist Professor Terry Healy FIPENZ, from the university's Department of Earth Sciences.

The university's coastal marine group is recognised as the national leader in research into coastal sedimentation processes, geomorphology, oceanography and marine ecology. Sea-floor mapping is integral to this research, and the group will have the best capability in Australasia for shallow water imaging.

Professor Healy says that the Multibeam will help attract students to the University, and will generate commercial revenue to help fund research. It can also contribute to the environmental management of New Zealand's coastline in areas such as preventing erosion, monitoring marine reserves and maintaining navigation channels.

The equipment will initially be based in Hamilton, but the University plans to move it to Tauranga once the University's planned coastal marine research facility is established there.

Life Members

IPENZ congratulates Bruce Burton and John Sherring on their recent election to life membership.

Bruce Burton FIPENZ began his career at Hutt County Council in 1953 as an Assistant Engineer, rising to Assistant County Engineer before being appointed Ohinemuri County Engineer (Paeroa) in 1961. In 1962 he was appointed the first resident Taupo County Engineer. He helped to promote the Lake Taupo Reserves Scheme, developing an integrated roading plan and setting up the engineering administration.

In 1972 Bruce was appointed Waikato County Engineer, in which capacity he served for nine years. During this time he was appointed to the Engineers Registration Board, on which he served for some years. He was also a member of the Axle Weights and Loadings Committee of the National Roads Board and several other committees. He became President of Waikato Swimming, and was appointed a JP and elected to FIPENZ in 1974.

Appointed Waikato County Manager in 1981, Bruce retired in 1989 when Local Government was reorganised. Since his retirement he has been active in many community organisations. He is currently an executive member of the Parkinson's Society Auckland.

John Sherring MIPENZ began his career as a Junior Assistant Engineer in the Stormwater Section of the Christchurch Drainage Board in 1956. In 1958 he was appointed Drainage and Water Supply Engineer at the Tauranga County Council, meaning to stay just five or six years to gain experience; in fact he found that the challenges of providing services in a rapidly-developing area a source of satisfaction, and he retired from the County in 1988.

John was involved in upgrading land drainage and rural water supply systems, and providing and improving services for coastal resorts. Land use changes brought about involvement in urban planning, preparing legislation, and Waitangi Tribunal and Water Board hearings, and in 1985/6 he was a member of the Western Bay of Plenty urban growth study group. The portfolio grew to incorporate refuse disposal, sewerage and reserves, and he was Deputy County Engineer from 1980. For his last 18 months with the County, John was Project Manager for data systems, information and records development.

John served on the NZIE Water Supply Committee (1970–1974), and the New Zealand Standards Association Committee on water supply and disposal (1972–1976). He was also a member of the SANZ Project Committee on asbestos pipes in 1977.

Auckland Engineering teams top NBR Game

Four teams of post-graduate students from The University of Auckland's School of Engineering have taken the first four places in the academic section of the National Business Review Management Game, and the second through fifth places in the overall competition.

The Management Game consists of several rounds, each running for six weeks and focussed on a single fictitious product. Points scored at the end of each round represent the fictitious company's profit. The winner of each round progresses to the next round.

The teams had to make decisions about the products, ranging from pricing and logistics, to the use of consultants for marketing or production. The decisions were collated and scored by the NBR with the help of a dedicated computer programme, which imposed conditions such as global and local market effects and exchange rates.

School of Engineering Dean, Professor Peter Brothers says that the students' success demonstrates the capacity of engineers to transcend the boundaries of their discipline and take on leading roles in the world of business.

All the students agree that their success can be put down to their training as engineers. The leader of the second-placed team, Mark Glucina, says that it all comes down to being able to see the big picture.

"As engineers we are taught to look at problems holistically. Engineering is all about solving complex problems that are influenced by many factors and the game was basically an optimisation problem with multiple variables."

Auckland University NBR Game participants with Professor Peter Brothers.

Business resource agreement

IPENZ is pleased to announce an agreement with the Centre for Organisational Excellence Research (COER), Massey University. IPENZ members will be able to join the Benchmarking and Performance Improvement Resource (www.BPIR.com) at a 20% reduced membership fee.

COER was created in 2001 to address the lack of research in New Zealand on organisational excellence, benchmarking and best practices. It's various initiatives use the concepts of Business Excellence and benchmarking to focus both practical and academic research into NZ business performance.

The BPIR.com is a comprehensive international resource on best practices, performance improvement, benchmarking, and management tools and strategies. The website makes available hundreds of case studies on real organisations around the world, from all industries, and full access to over 150,000 articles on organisational performance.

See the May/June issue of *e.nz magazine* for a more detailed coverage of the COER and BPIR.com.

Membership Changes

The following is the full list of additions to and changes in the classes of membership for the period 1 February 2003 – 31 March 2003

Elected to Graduate Member:

B W Ake, E J Angell, A Bent, C P Brown, C C Byers, R J Carter, A Y-S Chung, B J Colcord, M R Copland, H D Corbett, H S Dhunna, T R Fuhlbohm, M D Green, P J Grenside, A J Harrison, S Hermiz, A N Ingram, D D Irvine, M W Jacob, B James, J B Jennings, R M Jones, S G Jones, M K Kanaganayagam, J R Keir, J Kershaw-North, T G Lascelles, L S Lee, W P Lim, M Lum, D R McEwan, R G Mackie, T R Maunsell-Terry, C J Meyer, C Mlambo, O A Motofelea, S Mudliar, B Murugesampillai, A C Parfitt, T Ragupathy, R H Rose, H P Rupasinghe, L P Rutherford, S L Sayers, C Senior, C B Singh, C H Smith, S E Smith, D J Strang, S A Styles, A R Tippett, D N Velluppillai, A Zaher

Promoted from Graduate Member to Professional Member:

J J Swanney

Elected to Professional Member:

I D Currill, P R Exley, G D Illupella, A K James, W D Ladbrook, J C Phillips, J N Rajasooriya, P Rooney, G R Scholtz, R L Walton

Elected to Affiliate Member:

S J Crockford, N G Lee, M D Patel

Coming Events

2003 FIEA Annual Conference

Seminar / conference, addressing environmental and sustainability issues through the use of wood in building and design.

When: 16–17 June 2003
Where: Crowne Plaza Hotel
Contact: murray.wilson@fiea.org.nz

Fit for the Future

Proven steps for achieving competitiveness, today and tomorrow.

When: 5–8 August 2003
Where: Auckland
Contact: N.Bleasdale@massey.ac.nz

New Zealand Society on Large Dams

One day symposium. Dams – Consents and Current Practice.

When: Tuesday 26 August 2003
Where: Wellington Festival and Convention Centre
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Competence Assessment tips – avoiding the pitfalls

Feedback from assessors indicates that many applicants for Competence Assessments are submitting documentation that makes the assessment process more difficult. Here are some tips to help you prepare a portfolio of evidence that will ensure your application can be dealt with quickly, and without assessors having to request supplementary information.

1. When gathering evidence of current competence please download the actual CPD records from the website. A certificate will not suffice, as it does not indicate the type of development undertaken in relation to the competence standard.
2. If submitting a CV instead of a Work History form, remember that the CV needs to be annotated to demonstrate each element of the competence standard.
3. PR 140 Work History Form: Filling out the column headed "activity / roles" involves more than listing projects. A description is needed of the candidate's personal responsibility in respect of each project to indicate the specific competency element/s being evidenced.
4. The primary practice area is the area in which you are being assessed as being currently competent. If you put down two practice areas you will need to provide evidence that you are competent in both. You should indicate the differences clearly, even if they are subtle.
5. Candidates applying for an Initial Competence Assessment are strongly recommended to supply work samples as evidence of competence. There is a tendency to submit large project reports, which are usually joint final products from engineering companies. If you do so, you will need to specify the parts you actually managed or were responsible for. A written review outlining your role and how it demonstrates that you meet the competence standard will need to be included.

There may be delays in sending applications to assessors if referee reports have not arrived at IPENZ National Office. It is suggested therefore that applicants follow up such requests and check that the forms have been sent.

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engineering dimension is the official journal of The Institution of Professional Engineers New Zealand Inc.