

# THE HEALTH ENGINEER



New Zealand Institute  
of  
Healthcare Engineering

# THE HEALTH ENGINEER

The Journal of the Institute of Healthcare Engineering

Volume 5 Number 9 Summer 2013

## CONTENTS

- Page 2      Presidents Report
- Page 6      Maximising Safety in the Boiler house
- Page 8      Thank you from Marine Reach
- Page 12     Energy refit saves DHB millions
- Page 13-21 Conference reports and photos
- Page 22-25 Executive Profiles

Cover photo - Lincoln University

---

## INSTITUTE OFFICERS

**PRESIDENT** ~ Doug Moller ~ [dentmed@ihug.co.nz](mailto:dentmed@ihug.co.nz)

**VICE PRESIDENT** ~

**SECRETARY / TREASURER / MEMBERSHIP** ~ Allison Blackler ~ [blacklers@xtra.co.nz](mailto:blacklers@xtra.co.nz)

**EXECUTIVE OFFICERS** ~ Max Christensen ~ [max.christensen@huttvalleydhb.org.nz](mailto:max.christensen@huttvalleydhb.org.nz)

Leon Clews ~ [leon.clews@ccdhb.org.nz](mailto:leon.clews@ccdhb.org.nz)

Jacqueline La Grand ~ [Jacqueline.LaGrand@waikatodhb.health.nz](mailto:Jacqueline.LaGrand@waikatodhb.health.nz)

Warren Crawley ~ [warren.crawley@xtra.co.nz](mailto:warren.crawley@xtra.co.nz)

Zane Lane ~ [ZaneLee@scripps.co.nz](mailto:ZaneLee@scripps.co.nz)

Nigel Wing ~ [nigel.wing@fortehealth.co.nz](mailto:nigel.wing@fortehealth.co.nz)

**IMMEDIATE PAST PRESIDENT** ~ Tony McKee ~ [tony.mckee@hawkesbaydhb.govt.nz](mailto:tony.mckee@hawkesbaydhb.govt.nz)

**MENTOR** ~ Tony Blackler ~ [tony.blackler@cdhb.health.nz](mailto:tony.blackler@cdhb.health.nz)

**EDITOR** ~ Jim Logan, 17 Baden Street, Levin 5510 ~ [jamlog@vodafone.co.nz](mailto:jamlog@vodafone.co.nz)

**NZIHE** ~ C/- Allison Blackler, 5 Clouston Street, St Martins, Christchurch 8022  
[blacklers@xtra.co.nz](mailto:blacklers@xtra.co.nz) | [www.nzihe.org.nz](http://www.nzihe.org.nz)

## PRESIDENT'S REPORT - SUMMER 2014

I hope this finds everyone refreshed and ready for the rigours of the year ahead.

The coming year will be as challenging for all of you as the past and your executive team's coming year will be no exception.

The conference at Lincoln in November was the best yet! A huge thanks must go to Tony & Allison Blackler along with their team of Bruce Hellyer, Nigel Cross and Gill Blackler. Since the Wellington conference of 2011 our conferences have stepped up in their atmosphere, programme and networking.

Congratulations to all who have attended and made these such a wonderful event, to you I call you our "A team".

The organization of these conferences have become increasingly demanding and a number of issues have conspired to reduce numbers able to attend. Our loyal trade sponsors continue to willingly support us and a big thanks go to you all.

The Lincoln conference has reinforced the need for support to the organising members, very active advertising, approaches to the DHB's to highlight the importance of these conferences and the incorporating of the highly successful "arriving barbecue," team activities and the dinner & dance.

The executive team, along with the conference committee, will endeavour to continue to raise the bar for the Northshore conference of November 2014. We look forward to seeing you all there.

The executive team is complete with several new members Zane Lee, Warren Crawley & Jacqueline Le Grand. Welcome to all three! Thanks also to our incumbent executive members who have all worked well in the past year. Watch out for their biographies in this issue.

We have two larger projects underway at present, the strategic plan and a new website for the NZIHE. Watch out for these in the coming year.

All the best, Doug



## THE HEALTH ENGINEER

Contributions of articles and items are continually being sought for publication in this magazine, from members and associates.

These can include reports of events or meetings, business information, advertisements, letters to the editor, stories with or without photographs, new developments, comments and criticism, learned papers and items of humour.

The items are acceptable in any form such as hand written, typewritten, on disc, e-mail etc.

Send, Fax or E Mail to:- 'The Editor' Jim Logan, 17 Baden Street, Levin 5510

Phone (06) 368 5152      jamlog@vodafone.co.nz

Note the fax is now obtainable at my home phone number only ....



lime scale build-up, to the point of failure. Safe and efficient operation depends on the boiler remaining within its safe parameters during operation.

A feedwater specialist should be employed to regularly check the water treatment plant, and test the quality of its resulting water before it enters the system. While all combustion plant has an environmental impact, maintenance and operation of a boiler house according to best practice guidelines will help to support an energy-efficient regime. This should include metering to monitor the boiler's efficiency; correct water treatment to ensure that this efficiency is not compromised; combustion analysis and burner adjustment to reduce energy loss, and the introduction of improvement devices such as economisers, variable speed drives, and flue gas dampers. Larger installations are required to have the Environment Agency's Pollution Prevention and Control (PPC) permit. Operating the boiler outside of the conditions that this permit scheme applies is illegal. Smaller plants still fall under regulatory environmental control; the Clean Air Act 1993 covers local issues such as smoke and dust from the plant.

### Correct understanding vital

Using substantial volumes of energy, generated on site, is inherent in the proper functioning of healthcare facilities. Yet without the correct understanding, interpretation, and implementation, of the law, the hospital Trust or owner of the boiler stands to be liable for any failure. Accidents involving boilers have the potential to kill; as a result, the law is strict. The Combustion Engineering Association is offering healthcare estates personnel in the NHS a discounted membership, which in turn provides access to the knowledge available on all aspects of boiler house management. (A flat rate subscription of £250 cover will provide membership for an entire NHS Estates Department, and give access to CEA events at reduced rates. For more information, telephone 01740 625538, or email: [info@cea.org.uk](mailto:info@cea.org.uk)) An efficient energy and utilities management company, meanwhile, can provide the support and expertise required to navigate compliance in the boiler house for healthcare professionals.

---

## THANK YOU FROM MARINE REACH

Dear Doug, We have received a cheque for \$2,000 from Craig Waterhouse on behalf of NZ Institute of Healthcare Engineering. On behalf of Marine Reach Ministries we thank you so very much for your generous donation of NZ\$2,000 to be used for our new clinics on board our vessel M/V Pacific Hope. The Pacific Hope is in the process of a "makeover" with many willing volunteers giving their time and skills to make the ship ready for sailing by June to Vanuatu. We plan to have three medical outreaches to Vanuatu with Dental, PHC and Ophthalmology. We have two rooms on the ship which will be transformed into clinics, where our Dentists, Doctors and Ophthalmologists will work. We have been blessed by Rotary who have donated some portable dental equipment for

this purpose. It is donations such as these that help us to obtain the goal of reaching many of the poor and needy people on remote islands of the Pacific who desperately need services such as we can give. Kind Regards, Beryl, Marine Reach



## ENERGY REFIT SAVES DHB MILLIONS

Brenda Harwood - the Star

A raft of changes, including replacing 16,000 light tubes, has helped Dunedin Hospital save more than \$2 million in energy costs in the past four years.

The hospital signed a seven year \$1.6 energy retrofit deal with international company Honeywell Building Solutions in 2008, which was designed to reduce energy consumption and improve efficiency. Honeywell's guarantee that the energy savings would meet the cost of the upgrades over the course of the contract has already been exceeded.

The hospital now expects to save \$4 million by 2016 – taking up to \$500,000 off its previously \$1.3 million plus energy bill per year. “We were able to identify key areas where we could significantly reduce our energy usage without compromising the hospital's operations, Southern District Health Board facilities and site development manager Warren Taylor said.

Many of the changes were made “behind the scenes”, such as installing hot water flow restrictors, switching to electronic environment controls and altering the lighting system.

Southern District Health Board mechanical team leader, Ritchie Fieldwick said lighting levels in the “over-lit” hospital had been reduced to standard levels during the process. “The difference is slight; neither patients or staff would notice any impact” Mr. Fieldwick said. “Relatively minor changes, such as the hot-water restrictions, were simple to achieve, but had made a significant difference” he said.

Mr. Taylor said installing electronic environment controls had reduced the hospital's reliance on the steam pumped from the Energy for Industry boiler-house, which heated the wards. Steam from the boiler-house is also used by the University of Otago and Cadbury, he said.

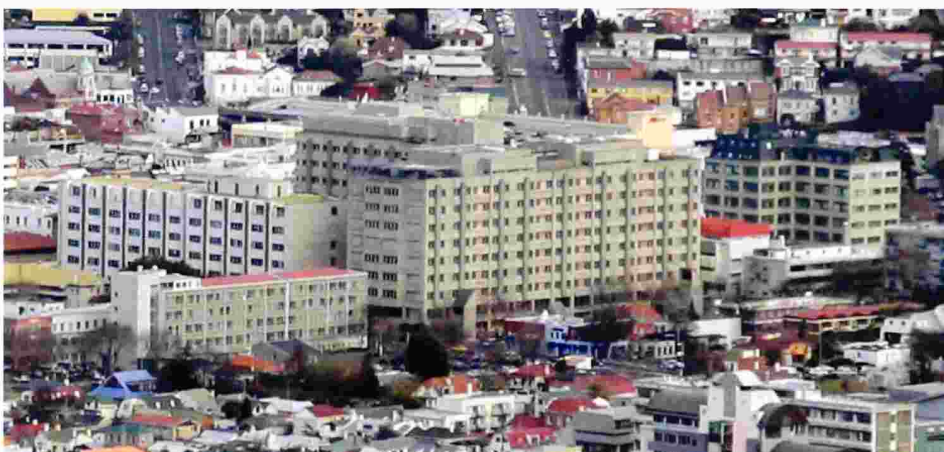
The project would not have been possible without the support of the Energy Efficiency and Conservation Authority, which had provided a grant of about \$300,000 and a loan of about \$1.5 million to cover the cost, Mr. Taylor said.

The success of the energy savings project meant the Southern District Health Board was able to pay back the EECA loan from the savings it was making, without adding to capital pressure, he said.

“And best of all, staff and patients haven't noticed any difference — the lights are still on and the environment is warm.

### DUNEDIN HOSPITAL'S ENERGY SAVING PROJECT

- 11KM Of control cabling was installed, along with about a dozen electronic control cabinets.
- 550 reheat boxes were installed to add heat to air.
- 16,000 fluorescent light tubes were replaced. The new tubes save 1.3 million kWh per year, equivalent to 130 households





# “THINKING OUTSIDE THE SQUARE” NZIHE 68th ANNUAL CONFERENCE - CHRISTCHURCH 2013

## FACILITIES REPORT.

The NZIHE Conference at Lincoln University in November 2013 combined the two groups, Facilities and Clinical Engineering, on the Thursday, and separated into two streams for 4 papers on Friday morning.

There were many papers of interest to those involved in facilities management.

In the opening paper, **David Meates**, CEO of Canterbury DHB, painted a picture of the health services in Canterbury and how the structure, which includes an emphasis on placing services in the community, helped the region cope with the catastrophic earthquakes of 2011. David suggested that with 12,500 rooms damaged in the quake, the health service would have imploded without the community model.



He also talked about the Design Lab, a facility set up by the DHB to test ideas for the design of the new health facilities. With Canterbury embarking on the largest public health spend in New

Zealand history, it is important to get it right. Input from all users is enabled by the design lab, housed in a warehouse in Addington. If you have an opportunity to visit this facility, take it.

“We are not recovering from the earthquake, but going forward and transforming.” - David Meates.

**Baden Ewert**, of the Central City Development Unit (CCDU), a division of the Canterbury Earthquake Recovery Authority (CERA) outlined the plans for the redevelopment of the city. This will include precincts for Justice and Emergency Services, Performing Arts, Innovation and Health.

The immediate priorities of the CCDU is the repair

of services, starting with the sewers, then storm water, fresh water and finally the surface repairs.

**Steve Ball**, the ANZEX delegate was next up. Steve’s “Thinking Outside the Square and Leadership in Engineering” paper talked about his work at Barwon Health, one of the largest and most comprehensive regional health services in Australia, providing care at all stages of life and circumstance.

He talked about what drives most of us – fear, reward and social acceptance – and about a culture that accepts failure as part of innovation. Fascinating stuff.

**Anke Carter** from Germany was sponsored by Mercers and presented a paper on the design of Sterile Service Departments. Anke, an expert in this field from Germany, shared her knowledge of the standards and practical requirements of sterile service design.

With around 2000 hospitals in Germany, she undoubtedly gets plenty of practice!

**Sally Nicholas**, Operations Manager of the CCDHB Older



Persons Health and Rehabilitation talked about Managing in Today’s Environment. Sally talked about the various tools available to the modern manager, including “doing things in the right way, for the right

reasons using the right people”.

She also talked about the aim of building (or rebuilding) an organisation around what works well, rather than trying to fix what doesn’t work. Her presentation really accentuated the positive.

Day two began with papers presented by our sponsors.

Schneider Electric's **Scott Noyes** paper was entitled *Optimising Healthcare Facilities*. Scott concentrated on his speciality of energy management as applied to healthcare.

He noted that, despite automation, a drop off in energy efficiency will occur if you take your eye off the ball, as has happened in Schneider's own building in Auckland.

A timely lesson to us all **Andy Roost**, representing Siemens, presented a paper on *Managed Equipment Services (MES)*.



MES is a flexible and specialized partnership with a private sector service provider, like Siemens, to provide access to innovative medical technology and equipment. This

is typically over a period of 10-25 years (sometimes longer), for a fixed annual fee.

An MES manages all equipment concerns throughout the entire contract life-time, including ownership, provision, purchase, installation and commissioning, user training, asset management, maintenance and ongoing replacement.

Two of our own members, **Warren Crawley** and **Trent Fairey**, presented papers on projects carried out in their respective DHBs.

Warren applied his expertise on energy management to various projects in Palmerston North Hospital. He talked about how we tend to "tweak to stop complaints, rather than improving", and also "repairing old stuff over and over". We can all relate to this. Warren's paper showed once again how valuable it is for our own members to tell us about their experiences, because we all face similar problems, and in many cases can use similar solutions.

Trent's entertaining paper took us through the design and build of Hawkes Bay DHB's new dialysis unit.



Innovation was a necessity, given an insufficient budget.

Following the conference, an article appeared in the paper showing the minister of health at the opening and praising the new facility for its quality. No mention of Trent, but we are known as 'backroom people'!

Dr Aoife Kenny talked in more detail about the design lab, and her talk reinforced the value of this concept. There is a video on the Canterbury DHB website – click on the "Its All Happening" tab and check it out.

The Hazards of Medical Gases were well described by **Peter Williams**. Peter has been an Authorising



Engineer for medical gases since 1988 and has probably assessed more medical gas Authorised Persons than anyone else to date.

In his paper, he talked about how things can go drastically wrong when the rules are not followed. With up

to 300 bar pressure in modern gas cylinders, the potential for disaster is ever present.

**Leon Clews**, our 2013 ANZEX delegate, wound up the conference with a review of his memorable trip to Australia for the IHEA Conference and visits to several hospitals.



From a facilities point of view, the 2013 NZIHE conference was well worth the effort of a trip to the countryside, and was a credit to the organisers.



## TRADE NIGHT



*The Gallay display with conference perennial Allan Cameron*



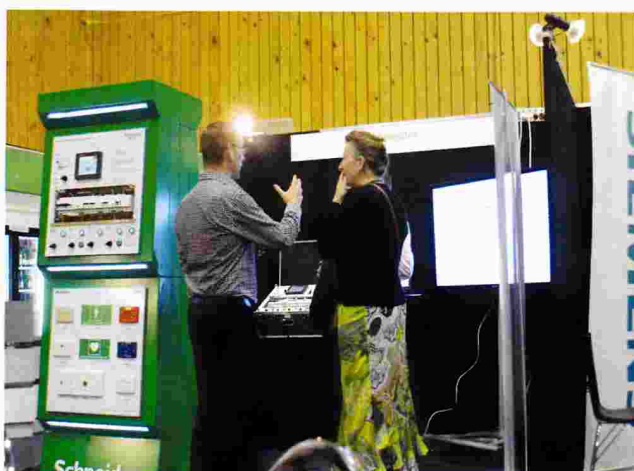
*Good display of medical gas fittings with Keyport*



*A happy guy with Welch Allyn*



*The largest plastic pipes with Aquatherm*



*Schneider display (long term sponsor) with Maria Christensen*



*A general view of Trade Night*



## “THINKING OUTSIDE THE SQUARE” NZIHE 68th ANNUAL CONFERENCE - CHRISTCHURCH 2013

### CLINICAL ENGINEERING REPORT.

Thinking outside the square? Let's start with a broken city and a great lack of accommodation and conference venues. Where do you go for an engineering conference? How about Lincoln University a world class teaching facility just outside Christchurch (25 minutes drive from the airport), accommodation (check), and lecture halls (check), catering (check) all you could possibly need, sorted. What about speakers, you could try asking work colleagues / acquaintances when you pass them in the corridor, how about asking the CEO of Canterbury Health, the Deputy Director of CCDU-CERA (Canterbury Central Development Unit, Canterbury Earthquake Recovery Authority), Pharmac and HBL (Health Benefits Ltd), Covidien, Mercers. In what other place with just a simple request could you get people of the calibre of the speakers that we had at the 2013 NZIHE conference? David Meates (CEO) Wayne Morris (Anaesthetist), Dr Ross Kennedy (Specialist Anaesthetist), Dr David Shaw (Cardiothoracic Surgeon), Baden Ewart (CERA), Steve Ball (Barwon Health, Victoria Australia), 29 companies on trade night represented a diverse group of companies from Siemens to Welch Allyn.

It's hard to imagine healthcare (or lack of it) outside our “first world” experiences. Wayne Morris spoke of working in Nepal, three operating tables in one room, windows open to allow fresh air (and insects!) in and keep temperatures down, unstable power supplies, low levels of gases (if any), post anaesthetic care (PACU) a mat on the ground outside, people walking for up to five days to get treatment. Wayne calls places like Nepal “The real world”, we live in the “Unreal world”. The USA spends 17.9% of its GDP (approx \$8,362 per person) on healthcare, Nepal on the other hand spends only 5.5% of GDP (approx 66\$ per person). Only \$22 of this comes from the government coffers, and there is less than one physician per 100,000 people and even less anaesthetists, with anaesthetic mortality rate of 1 in 133 compared to 1 in 55,000 in the “Unreal world”.



*Dr Wayne Morris, Anaesthetist CDHB*

Dr David Shaw presented the advances in replacement heart valves. The first successful transplant (with a man made mechanical valve) was performed in 1960 with a “Caged ball valve”; this was used with some success through until 2007. In 1969 a “Tilting disc valve” was first used followed by the “Bileaflet valve” in 1979. Mechanical heart valves today are very reliable and can last from 20-30 years, but normally require lifelong medication with blood thinning or anticoagulation drugs such as warfarin. By comparison biological valves (pigs, goats, and cows) can be directly transplanted but have a tendency to be rejected as a foreign body, which again requires levels of medication. The most effective at the moment appears to be a cross between the two, utilising tissue harvested from either bovine (cow) or equine(horse) tissue, sewed onto a metal frame after being sterilised to have the biological markers removed to help stop rejection. Using the latest in technology Dr Shaw and some colleagues have used a 3D printer to make a complete valve out of titanium chain mail. If this successful it could completely change the world of replacement valve surgery as it theoretically will never wear out and the body should not reject it (titanium appears to be the only element the body tolerates and tissue and bone

will adhere to). Thinking outside the square, I think so!

CEO David Meates spoke about setting up integrated health services in Canterbury which will be home and community based. With the largest elderly population in New Zealand (and growing) we can no longer operate the way we have in the past. Shifting care back into the community and keeping people at home where possible instead of institutions is the sensible way forward. With the lowest ED admissions in Australasia at 173 per 1000 we are already well on the way. Looking forward with Burwood hospitals build bringing 30,000 square metres of new buildings, 230 inpatient beds with 20-25 days average length of stay, 20 day patients every day, 80,000 outpatient visits and over 750 car parks a lot of pressure will be taken away from the existing facilities. On top of that with Christchurch hospital getting new operating theatres, approximately 500 new beds and an extended ICU, radiology and emergency department, it appears that the future is being well and truly addressed, with a world class facility.



Baden Ewart, Deputy Director CCDU- CERA

On a final note Baden Ewart of CERA spoke of Christchurch rising back, out of the worst natural disaster the country has ever seen, like a "Phoenix from the ashes" Start with a blueprint plan beginning with a "share an idea" campaign from the residents of the city that gathered over 106,000 ideas and incorporate it into a regional plan. Starting pretty much from scratch let's build a new convention centre, sports stadium, cultural centre, performing arts precinct, library, Justice and emergency services

and health precinct . Incorporate public green space following the Avon River through the city with walkways, cycle ways and playgrounds. We can turn New Zealand's second largest city that is already ranked #1 in the world for "the highest level of personal freedom", "least corrupt place" to do business and in the "top 10 places to visit" according to lonely planet, into a place that people will want to live and visit.

Well done to all of the organisers for a wonderful conference with a great theme and let's hope the 69th can be as informative and entertaining.

Mike Stackhouse

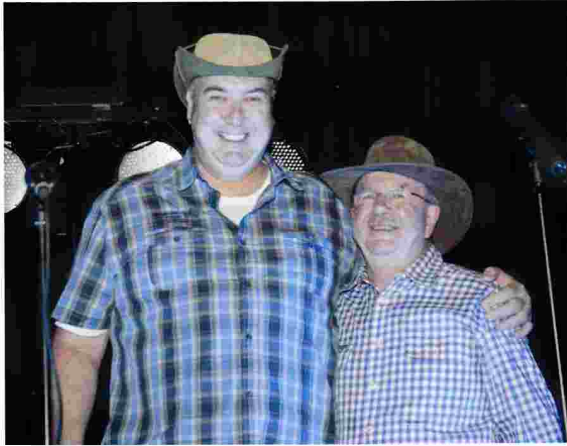
### THE FOLLOWING NOTES WERE FROM THE PROCUREMENT TEAM OF CANTERBURY DHB

Attending the NZIHE 68th Annual Conference was both an enriching and enjoyable experience. The calibre of speakers on the range of topics coupled with the networking opportunities with my peers made the days out of the office worthwhile. The mix of topics, as well as business acumen and work-life balance issues, challenged not only my procurement thinking but also my leadership styles and values. "All, in all - a great few days."

I was invited to attend the NZIHE Conference, which took place in Lincoln recently, and in my role as Procurement Analyst for Canterbury DHB I felt that it would be both interesting and beneficial for me to do so. The conference took place over a number of days and covered many different topics including the CDHB Rebuild, Energy Management and Advances in Cardiac Surgery. All of the speakers were very well prepared and provided entertaining and informative presentations on their various topics. I found attending the Conference to be beneficial on several levels, as it increased my knowledge in certain areas, with which I have dealings in my procurement role, whilst also being a valuable networking tool and helping me to develop my understanding of the roles of both Facilities and Clinical Engineering within the DHB environment.



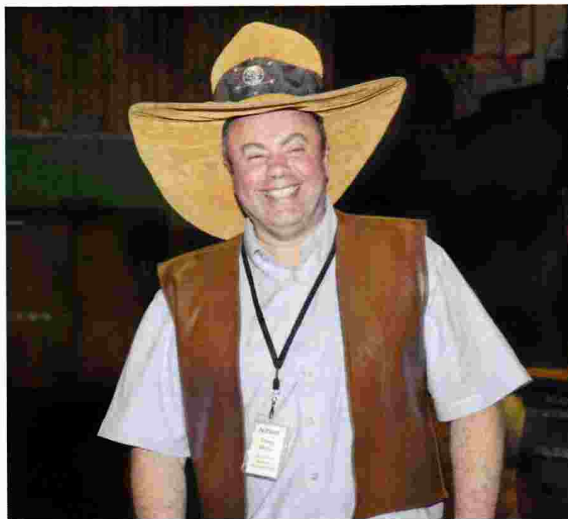
# The Lincoln Conference – Friday evening Hoedown Dinner



*The big Aussie and not so big Kiwi, Steve Ball ANZEX delegate and Tony Blackler*



*Oldest member, Lex Smith and wife Pat.*



*Big boss hat, underneath - Doug Moller*



*Enthuse provided the music.  
Great band.*



*Warren, who is the blonde bombshell? (Tric Moller)*



*Marie Christensen and Lex Smith (with walking stick) jiving?*



*Photo right :- There was even some hilarity amongst the organizers – Bruce Hellyer, Allison Blackler, Tony Blackler, Nigel Cross and Gill Blackler.*



*Kaylene Clark, Nigel Cross and Angie McKee*



*Tony McKee and Simon van Alst doing the big quick-step?*



*Sue Ward lasted for quite a long time on the bucking bull*



*Audrene Samuel and "Doug under the big hat"*



*Alex Tuilagi just about to be thrown*



*There was even some dinner*



## PARTNERS PROGRAMME

Angie McKee

At the end of his overview of the 2012 Conference in Queenstown, in the Health Engineer Journal, Jim Logan mentioned the partners programme. Reflecting that the activities that “The Ladies / Partners” were able to enjoy sounded tempting. He considered, that he might liked to have participated in the fun and variety of events and also would have enjoyed the good company.

This is a true summary of the three days that the Ladies / Partners enjoyed this year in November 2013, as part the Conference entitled “Thinking Outside the Square” held in Christchurch, three days of fun, variety and good company.

We all arrived at Lincoln University to be greeted by a delightful goodie bag with a variety of treats including some “Sheep’s Poo” I think Gill Blackler used her talents along with Allison to pack all the goodies.

As a relative new girl as a conference partner, this being my fifth, I think, this year I was particularly impressed with the privilege afforded us to enjoy such a variety of new experiences. Including seeing Christchurch and the surrounds and enjoying some of the local artisan crafts and witnessing the true Cantabrian spirit in the rebuild of the city and the surrounding areas. The company of now familiar faces and personalities, plus some newcomers was heartening. I was continually in awe of the dedication of Allison and her team. I however think that most of the credit is in the Blackler household.

The other memory is of Pat Smith who so enthusiastically participated with such grace and determination. What a wonderful role model she is for us all.

Well where did our adventures take us this year?

On day one, we were treated to lunch at Little River, with a great gift shop and general store, relaxed and delicious. On the way back we visited Birdling’s Flat, a rugged beach with fantastic flat stones, which proved amazing for us surf skimmers of old. Good to enjoy some lovely fresh sea air.

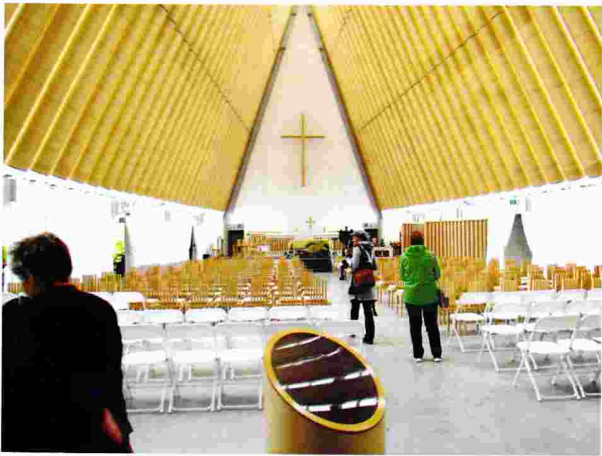


The evening meal was a hosted barbeque, in the grounds of the University. It was a bonus to be able to walk in the warm evening and see the lovely verdant grounds of the University. Besides great food, they also managed to provide a small earthquake to make us “out of town folk” feel part of the ongoing life of the locals!

Day two, embraced local artisan creativity, with a visit to Gruff Junction, a family owned goat and cheese farm. This included an informative tour and cheese tastings and the opportunity to purchase. We continued to an Alpaca farm and enjoyed the talk, the creative items for sale made of alpaca wool and viewing some of the animals. With clear instructions of how to avoid getting spat at!



The afternoon we reconvened for a real highlight, an afternoon high tea at the Tea House in Lincoln village. This was surely a ladies outing par excellence. That evening was Trade Night, which always provides entertainment with the prizes and excellent refreshments.



Day three was very memorable with a visit to the inner city, seeing the impressive cardboard Cathedral, such a tribute to engineering ingenuity but also such a positive and creative space. We had a tour of the red zone and reflected on a Christchurch we had previously known and the progress made with the reconstruction. This was followed by a visit to the container shopping mall, again resourceful and creative. Most of us were also able to visit Ballantynes and were glad to see its reassuring Christmas bonhomie.

For lunch we went to The Old Tannery, and were able to do what most ladies like to do, eat, shop and chat.

This was followed by the annual dinner held on the campus the theme was a Hoedown. The venue masterly transformed, by professional



decorators. All the delegates embraced the theme, dressing up and even riding the electronic bull! I am not sure if any of the ladies were game to partake but we enjoyed a splendid meal and the final evening.

I am sure that the conference delegates were challenged in various ways, to think outside the square, and appreciated the calibre of the input in their various sessions and valued the professional networking. However I wonder if like Jim Logan any of them entertained the thought that the ladies / partners programme sounded very tempting.

A sincere thank you to everybody who contributed to the first rate few days together.





## NEW ZEALAND INSTITUTE OF HEALTHCARE ENGINEERING.

### THE MEMBERS OF THE EXECUTIVE COMMITTEE

#### DOUG MOLLER. PRESIDENT

Born & bred in Dunedin. Married to Tric with two adult children at university. Graduated from dentistry in 1980 and took over his father's practice in 1981. Trained and set-up a technical hobby business supporting dental equipment.

Strongly supported by dental companies & the Area Health Board at the time this business grew to a point where Doug took on staff and sold his practices in dentistry to go full time into biomedical servicing of both dental & medical equipment in 1997. Since that time the business has grown to 12 staff and works an area from Timaru to the Bluff. With specialist repairing of equipment nationwide. Doug has also travelled widely to training provided by a number of suppliers at their factories overseas.

Doug holds licences for the repair and compliance testing of radiation equipment. Doug's business Dental & Medical Equipment Ltd now provides biomedical services to three DHB's, 90% of medical, dental & veterinary practices, private hospitals and the University of Otago in Otago, Southland & South Canterbury area.

Doug is involved as a consultant to the DHB's for the Oral Health development program for fixed & mobile clinics and the University of Otago dental school upgrades. Doug is also managing director of a transport company involved in the transport of biohazard substances.



#### JACQUELINE LA GRAND

Married to Marcel La Grand, Children – One boy aged 3 years. Been in Biomedical Engineering over 17 years, the last seven as Team Leader at Waikato DHB.

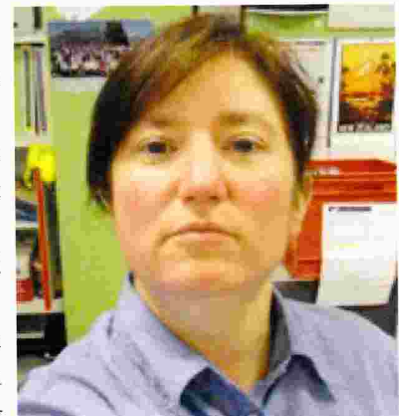
Originally from the UK, where I was a Technical Project Manager for the British Army, which included lifecycle management of special project devices (I can't say any more as I'm under the Official Secrets Act).

Other jobs I have had are a camera technician on Formula One cars, and software programmer for the Ministry of Defence.

Qualifications I have are Diploma in Electronics, TAFE Diploma in Medical Servicing, Post Grad diploma in Management, and Masters in Business Administration. I have just completed a certificate of computing and about to start a degree in IT. I am also thinking about completing a PhD, with the research being in E Health or Telehealth.

I did an apprenticeship the old fashioned way in Electronics with the Ministry of Defence when I left school, and became a Camera Tech with the formula One cars not long after. I then got back into the ministry as a programmer, programming software that processed technical literature for the Army. After being promoted, I became the Technical Project Manager for lifecycle of the Army's equipment, I was head hunted to lead a project, but decided to come to live in lovely NZ, and got a job at Waikato DHB not long after. I've been here ever since.

The reason I wanted to join the NZIHE committee was to promote NZIHE to the younger engineers and I feel to give something back into the community that has helped me over the years.



**WARREN CRAWLEY**

I commenced my working life with the Signals Division of New Zealand Railways being involved with all major signalling and electrical project in the Central North Island including earthing and bonding site engineer for the Marton to Te Rapa section of the NIMT Electrification Project. I left the Railway during the down-sizing of the 1980's and joined the Health Service as Engineer at Wanganui Hospital under Barry Hobson. After the establishment of Crown Health Enterprises, I transferred to Palmerston North as Electrical Engineer working for Peter Stevenson.



The political changes of the mid 1990's saw our Facilities and Clinical Engineering functions contracted to Spotless Services. This resulted in a range of opportunities including work in the USA, Australia and Antarctica. More recently my involvement has been solely with MidCentral and Whanganui DHB's as Regional Electrical Engineer, Regional Energy Manager and involvement with Capital and Asset Planning. I am a member of the Energy Management Association, and am currently a member of the NZS6115 Standards Committee. Outside of Health Engineering I have completed 24 years with St John finishing this year as an Upskilled Paramedic having been involved in every aspect of ambulance work including several years as Rescue Helicopter Crew. I have a keen interest in Tramping, Diving and Amateur Radio and am in the last 2 months of completing a Master's Degree in Technology.

**ALLISON BLACKLER – SECRETARY/TREASURER**

My involvement with the Institute began 39 years ago when I married Hospital Engineer Tony Blackler who was working at Canterbury Health where he is still working.

Tony became involved in the Executive just after our daughter Gill was born and consequently I started to attend Conferences and Regional meetings and we seemed to have travelled New Zealand and overseas attending Hospital Engineers Conferences etc, we have been involved in organising eight or nine National Conferences in Christchurch. We have made some lifelong friends over the years as a result of the ANZEX exchange and among colleagues and their wives and partners within New Zealand. Four years ago I took over the Institutes' books and the membership role.

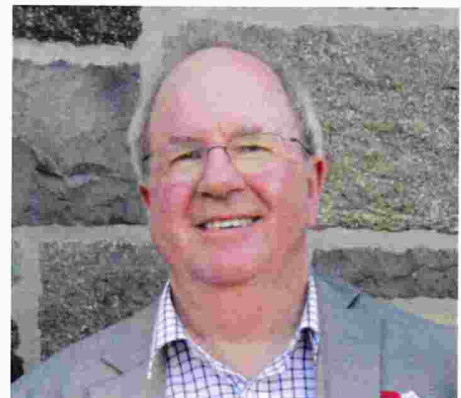


When not involved in Institute affairs I enjoy gardening, reading, cooking and DIY. I am involved in a variety of voluntary work within Christchurch. We are now beginning to clear out 39 years of accumulated treasures as we look forward to a rebuild of our home sometime this year.

**TONY BLACKLER – MENTOR**

My initial work experience commenced with an avionics apprenticeship and time as a licensed aircraft engineer with the National Airways Corporation. After 8 years with the airline industry I made the transition to clinical engineering within the Canterbury District Health Board. This year sees the completion of 40 years in health with my current role being as Manager of Clinical Technologies. This role is responsible for the Clinical Engineering, Sterile Services, Medical Illustration and Mobility Services.

Participation with the Institute has seen many and varied roles over thirty-five plus years. Participation in Standards activity and the IFHE has given the opportunity to participate both at a National and International level in the wider aspects of Clinical Engineering.





Outside of the work environment I have been involved with many voluntary organisations since my early days at high school. More recently I have been involved in Rotary both at a local and district level with a number of youth based programmes.

### MAX CHRISTENSEN

Following an apprenticeship at the Post Office workshops in Taita, and a few different jobs in between, Max started work at the Hutt Hospital Works Dept in November 1981 as a maintenance electrician.

Those were the days of the Wellington Hospital Board.

Like so many people who became involved in the business of hospital maintenance, it was intended as a short term fill in job, something to do until a better offer came along. That was 32 years ago – still waiting for that offer.

Over the ensuing years, the Hospital Board, the Wellington Area Health Board, Hutt Valley Health (CHE) and Hutt Valley DHB have all been Max's employers.

Max is currently Maintenance Supervisor at Hutt Hospital, responsible for all the day to day maintenance at the 250 bed facility, a job he still greatly enjoys after all these years.

Hutt Valley DHB is now part of the 3 DHB Facilities team, which also includes Capital and Coast DHB and Wairarapa DHB, a setup not dissimilar to the Area Health Board. In some ways, this continues the 'revolving wheel syndrome' that will be familiar to anyone who has been in the public health system for any length of time. The new model is being approached with enthusiasm and with the intention to deliver a better outcome for the delivery of health in the Wellington/ Wairarapa area.



### ZANE LEE

I started out working for an Auckland company repairing autoclaves and dental equipment part time while I was at Polytechnic. This became a full time job for a couple of years till I left to do my O.E. While I was in London I worked for two different company's repairing and installing equipment for 3 years. When I came back I moved back to my home town of Whangarei and took a job at the NZ refining company repairing Lab equipment but the word got out I knew how to repair Dental/medical equipment and there was no one covering this area on a regular basis so I ended up starting my own business in 2005. We now cover Auckland to Kaitia over two branches. We have 16 employees who repair Dental medical, White ware, brown goods and electrical. While this does keep me very busy I still find time to take my two boys out to go to BMX, Motocross and fishing.

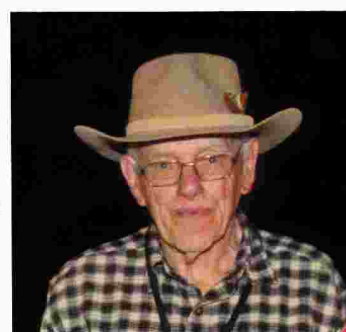


### JIM LOGAN

Born in Edinburgh, Scotland. Educated at the Royal High School then served an apprenticeship with Brown Bros. & Co Ltd makers of ships steering gears and ship stabilizers. Joined New Zealand Shipping Co Ltd as 10th Engineer progressed during the ensuing years to 2nd Engineer.

Towards the end of 1961 attained Chief Engineers Certificate and joined Union Steamship Co of New Zealand as 2nd Engineer progressing to Chief Engineer on coasters.

After this I was Engineer at Waikeria Youth Centre, as it was then known, for four years before being appointed to Horowhenua Hospital, Levin as



Engineer. I stayed there for 28 years being involved in the expansion of the hospital from 2 wards to 5 wards complete with operating theatres, X-ray etc. I was also responsible for the Levin Maternity Hospital, and medical gas equipment and sterilizers in the various District Nurses rooms in the area. Since I retired Horowhenua Hospital has been wound down and eventually closed to be replaced by a smaller Medical Centre. On retirement I was asked to set up and edit a magazine for NZIHEEM which has now developed into NZIHE. The next Magazine will be my 50th.

## BILL McDUGALL

Bill has worked in the health sector, both public and private for 40 years, firstly in Scotland with the Greater Glasgow Health Board and then in Saudi Arabia before arriving in NZ in 1986. Since then he has been employed through the various iterations of the Auckland Area Health Board, CHE's, and District Health Boards.



He has recently left ADHB and moved “across the bridge” to establish a new clinical engineering dept. at Waitemata DHB. This is a totally new venture (the biomed function having been previously contracted out) and getting staff on board, test equipment purchased and systems put in place is keeping him well occupied.

In addition, with the upcoming conference being held for the first time in the Spencer on Byron in the Takapuna area of the North Shore of Auckland there is certainly enough to be going on with and keep him out of mischief.

He is hoping for a different “feel” for the conference this year with input from the clinical and leadership teams of his new DHB and looking forward to seeing old and new friends and colleagues in November.

In the next edition there will be bios from Leon Clews, Nigel Wing and Tony McKee

