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# THE HEALTH ENGINEER



THE JOURNAL OF  
NZ. INSTITUTE OF HEALTH ESTATE AND  
ENGINEERING MANAGEMENT

## THE HEALTH ENGINEER

The Journal of the NZ Institute  
Of  
Health Estate and Engineering  
Management

Volume4 No4 Winter 2008

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The health and viability of any organization depends on good communications. Our objective is to produce a good quality health engineering magazine. The magazine should inform readers, it should provide a forum for discussion, encourage interest in all aspects of the technical side of health facility management in its widest sense.

## President's Page

Greetings!

The health sector continues to be very busy. It seems to be forever changing and re-inventing itself, with new challenges and opportunities to address. Those involved in health for a number of years tell me it has always been so and that's probably what keeps them in it. Also it just doesn't seem like six months since that fantastic national Conference in Christchurch last November.

On the Exec front we have been keeping communications going, with regular teleconferences and one full meeting of the team. For the most part this has worked really well.

A good number of issues have been discussed and addressed. Some are listed below however two in particular I would like to bring to your attention. They are; a review of our Institute name and the paid role of Treasurer and Secretary.

### **Institute name**

Consensus is that our current name is perceived as both too long and some of the wording not meaningful. The length probably speaks for itself, NZIHEEM. Regarding the wording, the relevance in New Zealand of the word "Estate" is questioned. The terminology seems to have more common acceptance in the UK than NZ. A good test might be explaining our Institute title and wording to others at your DHB?

A sheet has therefore been included within this Journal issue about our proposal for members to respond to. We would really appreciate and value your feedback on this most important subject.

### **Paid Role of Treasurer and Membership Secretary**

During the past two years or so we have discussed how busy we all are with work and life in general. It has become clearer to us that our Institute is at the

stage where most members simply do not have the spare time available to commit to carrying out our voluntary roles as well as we would like to. We have therefore decided to trial a paid joint role for that of Treasurer and Membership Secretary. Probably a down scaled model to that of our Australian counterparts. Initially the tasks will be on an as required basis. We expect the role to evolve so that after some 9-12 months a position description can be drafted and the positioned advertised.

Allison Blackler has kindly agreed to provide this role initially. Her wealth of experience with the Institute over the years and the organisational skills and ability she brings are ideal. I'm sure you will join with me in welcoming Allison and wishing her well as we move forward with the Institute.

### **Other items of interest include:**

Hosting of our **Web Page** has changed. Kevin Flower has been busily working away behind the scene on this.

The **BOC Award** requirements are currently being reviewed by Kevin Bardsley together with Tracey Norton of BOC.

Planning arrangements are well underway for this years **Institute Conference in Napier** by the organising group of Paul & Pauline

McCartney and Miranda Coombs, assisted by Tony & Allison Blackler.

We understand discussions are underway for all new government health facilities to comply with a **5 Star Green Rating** in the not so distant future.

**Allied national initiatives** executive members also involved with include; EARB and REA, Standards NZ and Australia, Biomed Managers Forum, Health National Asset Management Leadership Group, Project Directors Forum, Facilities Managers Forum, etc.

**Regional Meetings** were held in Ashburton and Thames. See articles within.

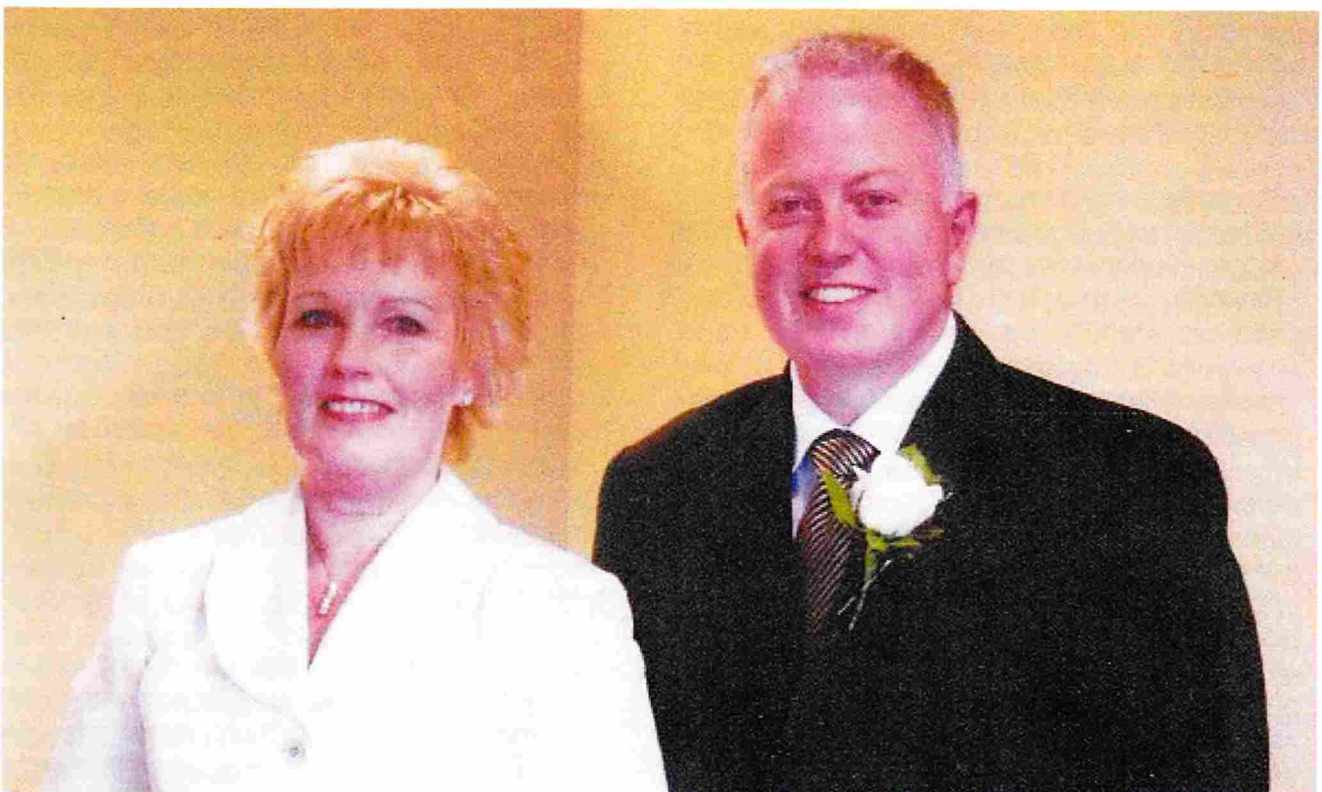
Arrangements are underway for this years **ANZEX** representatives.

This years **International Conference** in October will be held in Barcelona, Spain.

With so much happening in the health sector I'm sure you all have stories to tell on things happening in your neck of the woods. Our hardworking **editor Jim Logan** would love to hear about them to see if they could be used as material for the next Journal. Drop him an email or give him a call.

Kind regards

Tony McKee



On Saturday 3<sup>rd</sup> May two of last years Conference organisers Val Walker and Brendon Groufsky tied the knot. We wish them both every happiness for the future. Above is a photo of their special day.

### Suitable partners

The need to outsource energy consultation within health estates is overarching, but the selection of suitable partners is one founded on trust. Essentially, the partnering organisation must understand the requirements of the healthcare provider, the constraints it is likely to be working under and the need to maintain security, safety and the wellbeing of patients. The partner should also be able to demonstrate its competence and a portfolio of capabilities to suit the entire infrastructure needs of the estate. Schneider Electric's Projects and Services offer is broad, but founded on a great depth of experience, expertise and proven state-of-the-art products.

The company offers:

Total lifecycle support 24/7/365.

HTM training courses for estates and facilities personnel.

Continuity to ensure that the integrity of the electrical network guarantees continuous operation of critical installations.

Management and maintenance of the electrical network.

Creation of a safe and secure environment for occupants and property.

Editor's note – Is there any firm in NZ offering a similar service?  
This article was first published in the Health Estate Journal on the 2<sup>nd</sup> July 2007

### BOC Engineer of the Year Award 2008

Please consider nominating a member, (yourself or a work colleague) for this years BOC Engineer of the year award. All this requires is a brief paper outlining something like a successful implementation of a new technical or administrative system, a project, some energy savings, recognition by peers for work performance, ethics etc. Lets hear some good stories of all your hard effort and this years' improvements out there in the NZ healthcare industry. No achievement is too small to celebrate, just spend half an hour writing a precis of your achievement and this will be judged among any others for the \$2000.00 training and travel grant which is available each year to the adjudged winner. This is presented at the 63rd annual Conference, this year to be held in Napier.

### INSTITUTE NAME CHANGE

Included in this issue is a survey form (FAX BACK) that is self explanatory. Please take a few minutes to respond, even if you are not a current member.

**Please FAX back for the attention of Kevin Bardsley, Waikato DHB, 078398612.**  
Comments and suggestions on our Institutes new mission statement are also welcome.

Note the Australian version is IHEA, Inst. of Hospital Engineering Australia,  
UK version is IHEEM (wording as per ours).  
Canadian version, Canadian Healthcare Engineering Society (CHES), see [www.ches.org](http://www.ches.org).  
American version is the American Society for Healthcare Engineering (ASHE).  
All to get you thinking!  
Kevin Bardsley

## Regional Meeting Reports

### Northern South Island Meeting.

Although it was a bit of an overcast day we headed off to the glorious town of Ashburton (Ash-Vegas to the locals). Being about an hours drive from Christchurch and with all the passing lanes now in place it is a very easy leisurely drive. Val and I arrived at Ashburton Hospital about 10 minutes before the start of play and found Stewart Dunlop waiting for us. We went into the meeting room and chatted to the others as they arrived from Christchurch, Timaru and Nelson.

The best thing I find about any Institute get together is that you seem to carry on the conversation with people as you left them even though it may have been several months or more since you last saw them. As this group have been getting together for some time the friendships are getting stronger all the time.

Once everyone had arrived we took the group photo to remember the occasion and then the gal's headed off to do what they do best, shop. The guy's stayed in the meeting room and we kicked off our meeting. The agenda was full and some very good discussion took place during the next couple of hours. Our guest speaker was Terry Richardson and he spoke to us about the air ambulance service covering a number of areas including the type of technology they started with, through to how it has advanced over the years. I really enjoy this part of the meetings as you get to understand another part of the clinical environment that we are all there to support.

We covered quite a bit of business in the meeting, open discussion and it is always good to hear what is going on in the other locations and how different issues are tackled. Tony, as always, kept us up to date with the happenings in the executive. We discussed how we could raise the interest from other hospitals within the South Island and this is something we will continue to work on.

After the meeting we headed off to the Ashburton Club to meet the ladies and then a drink or two later it was back to the hotel to get ready for dinner. Stewart was our designated driver and we all piled into the van for the fifteen minute drive to Lake Hood. This is a man made lake and residential area. The main lake has an international sized rowing course on it and there is a separate water ski area as well. A canal system takes you to the back yards of the properties so you can cruise up to your property in your boat. All very nice. Apparently they are looking to expand the lake and facilities in the future.

Dinner was at the Lake Hood restaurant, so with great company, as usual, and a divine meal it was a very enjoyable evening. A short drive back into town by our chauffeur and we were dropped off at the hotel for a good nights sleep. Sunday dawned bright and sunny and after breakfast it was a casual drive back home to Christchurch.

Brendon Groufsky.

### Ladies Program.

After having the group photo taken, the ladies headed to the very interesting Ashford Craft Village. After exploring a number of shops that form part of this complex, we drove to Tinwald and visited a lovely patchwork shop. Once we all had had a good browse around the shop, we started the return journey by stopping at a local Tinwald café for a delicious afternoon tea. We headed back into the main street of Ashburton and browsed through a couple of lovely gift shops before heading to the Ashburton Club to have a chat and a few drinks and wait for the men folk to arrive back from their very industrious afternoon get-together.

Val Walker (now Groufsky)



Back Row: Gill Blackler, Tony Blackler, Nigel Cross, Alan Bavis, Ian Ward, Russell Dickson, Stewart Dunlop, Brendon Groufsky

Front Row: Gill Dickson, Allison Blackler, Sue Ward, Val Groufsky, Janice Dunlop

### **Regional Meeting Report Thames March 2008**

A poor turnout with only four members attending including Jackie Preou (Biomed) (Waikato), Graham Dudfield (Facilities) (Waikato), Kevin Bardsley (Facilities) (Waikato) and Bruce Harper (Facilities Thames/ Waikato) met after lunch one working day at Thames Hospital.

The meeting was held just prior to the executive meeting in Wellington held in April and was helpful in obtaining feed-back thoughts on the institute's role, training fund, BOC award, annual conference and the benefits of membership.

The late afternoon was spent on a tour of the Thames Hospital's new Clinical Centre and the new 60 bed ward block, which were and are all under construction. The new \$1.0M Debris containment wall to protect the hospital structure from a 500 to 1000 year cyclic event (of heavy fluid debris flow) flowing within the nearby Karaka creek was of special interest.



*The New Zealand Institute  
of Health Estate & Engineering Management*

**63<sup>rd</sup> Annual Conference**  
**Hawke's Bay – Wine Country**  
**"Our role in shaping the future"**  
**6<sup>th</sup> & 7<sup>th</sup> November 2008**

Napier War Memorial Conference Centre

48 Marine Parade

Napier

***This conference is of interest to:***

- *Facilities Managers*
- *Maintenance Managers*
- *Biomedical Engineers*
- *Property Managers*
- *Asset Managers*
- *Architects*
- *Services Consultants*
- *Contractors*



## The conference

Once again a full and exciting programme is being organised for delegates over the two days of the conference, with an additional dedicated biomed training day running on the Wednesday 5<sup>th</sup> of November. Members are invited to register their interest in submitting a paper by contacting Paul McCartney, Conference Convener at [paul.mccartney@hawkesbaydhb.govt.nz](mailto:paul.mccartney@hawkesbaydhb.govt.nz) or on (06) 878 1644. This year we would like to place an emphasis on delegate papers, the conference is run for you (the delegate) and is a perfect opportunity for you to share your ideas with your peers.

## Trade night

Thursday night will be dedicated to our sponsors and trade exhibitors. Delegates will have the opportunity to view the products and services on offer while enjoying food and refreshments.

## The venue

Napier War Memorial Conference Centre is located on the beach of Napier's famous Marine Parade, offering an all purpose built venue that uniquely combines spectacular outlooks over the Bay with a unique functional layout. The conference centre is within easy walking distance from the famous Art Deco City Centre.

## Accommodation

The Scenic Circle Te Pania Hotel in Napier enjoys a very desirable, central waterfront location on Marine Parade directly across the road from the Napier War Memorial Convention Centre and the Ocean Spa Complex. The hotels guests are just two minutes walk from Napier's famous Art Deco style main street.

A number of rooms have been reserved at an excellent rate of \$131 + GST per night. Rooms and rates will be held till 1 October so book early to avoid disappointment. For more information visit [www.scenic-circle.co.nz/hotel.asp?id=18](http://www.scenic-circle.co.nz/hotel.asp?id=18)

**Bookings must be made directly with the hotel.**

## Partners Programme

This year the partners program will run in true Hawke's Bay style. We will be providing an entertaining package encompassing some of the regions attractions and wineries.

# Clinical Engineering News

## Napier Conference: 6-7 Nov

It is planned to run the EST refresher on the Saturday morning after the conference again this year. On the day before the conference starts there will be a full days training offered.

## Electricity Commission Guidelines

A reminder that there are now guidelines established for those patients who may be dependant on electricity as part of their ongoing care. Details of the requirements are available at:

<http://www.electricitycommission.govt.nz/opdev/retail/lowincome>

## Safety & Quality Use of Medicines Group

This national group has consulted on a policy document relating to IV devices. The policy includes requirements for medication error software.

## Ambulatory Infusion Devices

DHBNZ are currently working on a national tender for ambulatory infusion devices. The Palliative Care group has been exploring the needs of this patient group over a number of months.

## Safety & Quality Use of Medicines Group

This national group has consulted on a policy document relating to IV devices. The policy includes requirements for medication error software.

## Electricity Regulations Revision

At the last Clinical Engineering Managers meeting we were fortunate to spend some time with Peter Morfee from Energy Safety discussing the impact of the Electricity

Regulations revision for the medical electrical area.

The three key standards AS/NZS 2500, 3003 and 3551 are at the moment cited as a means of compliance with the Regulations. Extensive discussion around utilisation of the standards resulted in agreement that citing the three standards as a mandatory requirement was a logical progression and easily achievable.

Discussion was also focused on some organisations asking for suppliers to provide devices certified to AS/NZS 3551. This standard has many facets and as such it is not appropriate to ask for such certification. It is however realistic to ask for the supplier to provide proof of:-

- CE Mark Compliance
- TGA Certification and the ARTG number
- Testing of the device by the supplier

## EWRB Discussion Document

The Electrical Workers Registration Board has published a second discussion document outlining revised categories for Electrical Worker Registration.

The document is available on their website:

[http://www.ewrb.govt.nz/content/whatsnewdocs/Categories\\_of\\_registration\\_May\\_2008.pdf](http://www.ewrb.govt.nz/content/whatsnewdocs/Categories_of_registration_May_2008.pdf)

Comments are due by 14<sup>th</sup> July.

## ANZEX REVIEW

Brendon Groufsky is the New Zealand delegate to Australia this year and reports that he has been in touch with Peter Downey who will be his IHEA liaison for the trip. His itinerary :-  
Val and I will travel to Sydney on August 31. We are looking at hospital visits in Sydney and Newcastle for the week of 1-5 September. Travel down to Canberra on the week of 6&7 September. Site visit on Monday 8 September and then exec meeting and conference from 9- 13 September then home.



Mitch Cadden from the Calvary Hospital in Canberra is the ANZEX delegate for this year. Mitch is a member of the IHEA Board and is also the convenor of this year's conference being held in Canberra.

Note Mitch's email address is:-

[mitchell.cadden@calvary-act.com.au](mailto:mitchell.cadden@calvary-act.com.au)

Mitchell Cadden (Mitch) .....

Leadership role in Hospital Engineering / Facilities Management providing opportunities to use my maintenance / engineering strategic skills, my ability to

deliver results and my capacity to manage in a complex and constantly changing health environment.

I have been employed at various levels of health engineering and maintenance for the last 14 years. Most recently (from May 2008) I have been employed by Calvary Health Care ACT which is a 320 bed fully accredited acute care Public and Private Hospital as the Manager for Capital Works and Projects. I am responsible for the delivery of a new \$12M ICU/HDU and CCU building on the campus as well as a new Operating Theatre and several smaller Capital Upgrade projects all to be completed within the next 18 Months.

Prior to this I was employed with ACT Health (The Canberra Hospital) as the Senior Manager for Property Management and Maintenance. The Canberra Hospital is the major teaching and trauma hospital for the Australian Capital Territory and South Eastern New South Wales. I was responsible for the leadership and management of a large multi-trade and administrative department of 31 staff with an annual budget of \$14m to ensure the delivery of engineering and maintenance services supporting the clinical and other services of the hospital and twenty six community health centres across the ACT to meet their targets in a timely and cost effective manner.

I have become very active within the Institute for Hospital Engineering of Australia over the last 5 years; I currently perform roles as Branch President for the NSW/ACT Branch, a Board Member at National level and am Convenor of the 59th National Conference here in Canberra in September 2008

Kind Regards, Mitch

## REA – A Powerful Employment Tool

In an era of changing engineering qualifications, and a shortage of technical engineers, employers can retain confidence in the REA (Registered Engineering Associate) credential that has stood the test of over 40 years of statutory recognition. The REA credential confirms engineering competency to a demanding standard.

REAs are technical engineers who have:

- been independently assessed for their technical engineering competency
- a high level of technical engineering achievement
- a high level of proficiency and competence
- a high reputation among the engineering workforce
- engineering supervisory experience
- followed a career path that includes technical engineer education, experience and supervisory skills.

The REA credential offers employers:

- public assurance about the abilities and experience of the individual
- an independent, transparent and reliable time tested assessment of character and technological competence by a statutory process of critical peer review
- evidence that the individual will provide an essential link in the engineering group structure for knowledge transfer between engineering professionals and the trades staff
- a 'quality mark' which allows delegation of responsibility within a competency framework
- recognition that they offer staff career paths that encourage technical engineer education, experience and supervision
- a tool to assist with industry succession planning.

In a time where it has become harder for employers to determine the most appropriate technical engineering qualification to encourage their staff to achieve, the REA continues to stand alone as an indication that the individual is a senior qualified and experienced member of the engineering profession.

Awarded under the Engineering Associates Act 1961, the statutory REA credential is a respected technical engineering qualification that has achieved national and international recognition. REA is a valuable tool for employers in establishing job specifications in selecting staff for all technical engineering disciplines. Employers use the REA as a benchmark credential for the employment of technical engineers, enhancing their ability to apply the differing engineering skill level resources to best advantage in line with the long established three tier structure of the engineering group.

REA confirms an essential level of management ability where there is significant risk of possible serious harm to life or property. These risks are ever present in works involving infra-structure services, transport and roading, civil and structural construction integrity, buildings environmental systems, supply of energy, communications and control, health sector engineering services, marine, and aviation engineering. Employment of competence as signalled by the REA credential can result in savings in insurance mitigation and litigation costs.

To offer employers additional assurance of continuing technical engineering competency, the Engineering Associates Registration Board is encouraging REAs to join a new voluntary competency assessed practitioner (REAcap) scheme. This requires REAs to sign a Code of Ethics and provide evidence that they are continuing to maintain technical currency and competency. This validation is repeated every four years, and the REAcap validated engineers are recorded on the website.

For further information, see [www.engineering-associates.org.nz](http://www.engineering-associates.org.nz)

or contact the Registrar, [registrar@engineering-associates.org.nz](mailto:registrar@engineering-associates.org.nz) or phone (04) 472 3324.

Continued from previous page....  
other lights in the past with great success. Multiple light sources drastically reduce the shadows that can interfere with the operating area.

Electronic head detection, another innovation from Maquet, can be incorporated to compliment the shadow control feature. Sensors around the outside of the light unit identify the position of the surgeon's head and compensate for the interruption in the light path by reducing the light output of the LEDs in the obstructed area and increasing the output for those in the illuminated area. Design of the cupola is critical if lights are to be used with laminar flow systems.

The aerodynamic profile and rounded shape of the PowerLED 500 permits a free flow of air and therefore minimises turbulence. The same smooth lines also mean easier and quicker cleaning. The Maquet PowerLED 500 is an important step forward in theatre lighting that harnesses the power and performance of the second generation LEDs. By adopting a total design philosophy rather than focusing solely on the light source, Maquet engineers have been able to exploit their full potential.

For more information contact:-  
Maquet Limited  
Burford Way, Boldon Business Park  
Sunderland, Tyne and Wear NE35 9PZ  
Tel. 0191 519 6200  
Fax: 0191 519 6201  
Email: [info@maquet.co.uk](mailto:info@maquet.co.uk)  
Web: [www.maquet.co.uk](http://www.maquet.co.uk)

### **Regional Round up: Waikato District Health Board**

Waikato have now successfully opened their 850 place 18 level car park building (four lifts) and the associated new 3 story main entry/hospital link bridge and building. We are now three months into an 19 month build of our new 3000m<sup>2</sup> Emergency Dept, which is designed to take two additional stories later for the expansion of, for example ICU/HDU. and other acute services. Once the ED is opened in August 2009, we will commence the construction of the new massive four story 30000m<sup>2</sup> Waikato Clinical Centre, which accommodates among other things theatres, Path labs, Radiography and numerous outpatients departments.

Concurrently we are upgrading Delivery suite in several stages and over the top a large expansion and refurbishment of NICU.(new born IC) We have a 60 bed ATR (rehab) ward on hold awaiting the go ahead, as well. An extensive laboratory upgrade is next and a new building housing a large histopathology department is due to open next week

There are currently 5 active and complex construction projects being built on site at present with another to commence (labs, next month) and it is very disruptive to the campus . It keeps our Property and Infrastructure team extremely busy, but with the excitement of it all , happening at last, it is almost worth it. Thames Hospital (60 beds) has been almost completely rebuilt at a cost of \$20M . This project is due for completion this September.

Our department has been involved fully in the design process for both sites over the last approximately five years and we are now involved in keeping business as usual going as best as we can whilst the construction work proceeds. This is complex and varied but often rewarding and seldom depressing. (And we have to do our own 'normal' jobs as well!)

We are a great place to visit, and welcome any visitors and will share information gladly, just call. We can offer you a lot of information from our experiences, mainly good. This is only a fraction of what we are currently involved in. Next issue, I will explain a little about our site energy (co-gen) centre proposal and our complete site wide infrastructure upgrade which is now complete and includes mains water and storage, fire mains, 11kV, BMS, natural gas, Med gas mains to name a few.

Kevin Bardsley, Projects Manager, Waikato District Health Board.

To overcome the problem, SKF recommended that hybrid bearings be fitted to the non-drive-end of the fan motors to effectively prevent bearing damage from the electrical discharges. The balls of a hybrid bearing are made from a ceramic material that acts as an effective electrical insulator. In addition the grease life of ceramic bearings is longer, so that bearings last for years instead of months.

"I was pleased to have an effective solution to the bearing breakdown problem," Kenneth Simu said.

From Health Estate Journal, January 2008

### Upgraded

Seven fans at the Sunderby Hospital were upgraded to hybrid bearings. Cost of hybrid bearings: 2,500 SEK; cost of standard bearings: 400 SEK; and cost of exchanging bearings: 4,000 SEK. From statistics it is shown that the life of a standard bearing is 11,026 hours = 15 months (the seven worst fans) and 28,465 hours for all exchanged bearings. Around 50,000 hours should be expected - with one hybrid installed giving over four times the standard bearing life. With hybrids replacing both bearings the expected life should reach eight times the standard bearing life.

A couple more Photos from last years conference in Christchurch

Photo below – Alistair Rattray having something explained on the REM SYSTEMS display on Trades Night



Photo, above– Some “caged birds” halfway up the cathedral spire on the Friday morning teams competition.

Don't forget

### The 63<sup>rd</sup> Annual Conference.

To be held in the Napier War Memorial Conference Centre on 6<sup>th</sup> & 7<sup>th</sup> November 2008.  
Theme- “ Our Role in Shaping the Future”.

Accommodation – The Scenic Circle Te Pania Hotel.

**Book directly with the hotel.**



**45<sup>th</sup> Annual Conference at Whangarei, 1988**

- 5th Row. John Wray, Mike Clemson, John Stent, Kevin McDonnell, Peter Rotherham, Dick Schneider, Peter Duncan, Roger Pemberton, Brian Barry, Alan Stumpf.
- 4th Row: George Depree, Norm Dewson, Willem Duitemeyer, Graham Dudfield, Mike Harris, Kevin McGrath, Graham Todd, Stuart Bridgman, Ernie Wilson, Hugh Elder, Ted Hugill, Mike Timmings, Rod Markham, Mike Ryan.
- 3rd Row: Alan Clark, Brian Fry, Robin Dunmall, Dave McIntosh, Brian Fitzwater, Jim Logan, Roger Brookes, Alan Smith, Larry Minto, Bob Adams, Tony Blackler, Donald Beasley, Stanley Saw.
- 2nd Row: Bill McGovern, Neil Trower, Douglas Luckens, Scott Cormack, Percy Hills, Ross Parker, Peter Stevenson, George Vanner, Robert Duncan, Owen Crosbie, Arthur Crosbie, Peter Brookman.
- Front Row Jocelyn Sim, Melanie Dunmall, Monica Logan, Erica Bridgman, Alice Wilson, Margaret Hills, Valerie Parker, Sandra Saw,  
 L to R: Kay Glasgow, Shirley Clark, Rosalie Todd, Shirley Hugill, Allison Blackler.