

# straight up

THE NEWSLETTER OF THE BUILDING OFFICIALS' INSTITUTE OF NEW ZEALAND

MARCH 2006

## Richard Toner retires as BOINZ President



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# straight up

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## NEWS FROM LEN

### Building Officials Institute of New Zealand Licensing Scheme 2006

On Friday 27 January we officially launched the BOINZ Licensing Scheme. This came about after three years of work.

At the BOINZ Conference and Expo 2006 being held in Christchurch, you will be given an update on the Licensing Scheme. This programme has the distinction that building officials can demonstrate their commitment to the profession and will have been selected into various categories based on their knowledge and experience. Equally it also demonstrates their commitment to their profession and their dedication to professional improvement which in turn helps the whole building industry. Receiving a license from BOINZ will be a formal recognition of the professional ability, education and standards of competence achieved by an individual.

As and when the Building Control Authorities are accredited, this licensing programme will be a tool in demonstrating staff competency and training, a vital component in the BCA Accreditation process that is approved by the Department of Building and Housing and backed and supported by the Department.

### What are the levels of Licensing?

BOINZ provides for three levels of licensing. These are described below

	Building	
	Consent approvals	Inspections
<b>1</b> Unlimited scope		
<b>2</b> No more than 3 storeys, up to 2000m <sup>2</sup>		
<b>3</b> No more than 2 storeys, up to 500m <sup>2</sup>		

### How much will it cost to become licensed?

**\$125.00 + GST** for BOINZ Members

**\$175.00 + GST** for non- members

**\$575.00 + GST** minimum for interview application process plus whatever actual costs apply for this process to be actioned i.e. travel, venue etc.

**\$100.00 + GST** for interview or assessment postponement

### How long will it take to process an application?

If a complete application is lodged and no further information is required the applicant will be notified of BOINZ's decision within 21 days. If the applicant does not agree with the audit process, there is a procedure of recourse and that is explained in documents available on the BOINZ website or from the National Office.

If the Institute deems it necessary for further information to be submitted, the applicant will be notified in writing within 5 working days of the Institute's receipt of application. The applicant will be notified of BOINZ's decision within 21 days or

### So how will the licensing process work?

Licenses will be issued by the Building Officials Institute of New Zealand Training Academy Chief Executive. Individual persons will make an application to the Academy's audit committee to attain a license. Licenses and certificates will be issued after all details have been checked by the BOINZ Training Academy National Office, a group of experts from within the industry and representatives of the Department of Building & Housing. There are processes and systems for interviews, and the right of appeal over decisions made throughout the licensing programme. These are available for viewing and downloading from the BOINZ website.

Should a license be issued in one particular category and the individual wishes to later move into an alternative or higher category the requirement will be to re-apply under the same process as previously.

Licensed individuals will be required to apply for re-licensing every 3 years. In order to maintain an individual license, licensees are required to attain 30 Continuing Professional Development (CPD) points per annum with a total of 90 to be gained over the three years prior to re-licensing. These CPD points will only be available from courses that have been approved by the BOINZ Training Academy.

may be offered the opportunity of an interview.

### What happens if an application is denied or refused?

If an application is refused due to insufficient or non-recognised and non-approved qualifications, BOINZ has introduced a Recognition of Prior Learning (RPL) process, which may be available to those applicants who wish to pursue licensing. The Institute will not run this service but the Institute can recommend appropriately qualified individuals who can do so.

### Where can I find out more information?

You can find out more about the BOINZ Licensing Scheme by checking out the new Licensing page on the BOINZ website. Here you will be able to download the various sections of the BOINZ Licensing Manual and also the application pack. These documents are also available from the BOINZ National Office.

**Lennard Clapham**  
CHIEF EXECUTIVE  
BUILDING OFFICIALS INSTITUTE OF NEW ZEALAND

## BOARD MEMBER PROFILE

### Jeff Jamieson

My career path to working as a Building Inspector started innocently enough when I began working with my Dad who was a Builder/Carpenter.

He encouraged me to try Architecture, but I trained and qualified as an Architectural Draftsman and worked in a variety of companies in Palmerston North and Wanganui.

I set up and ran a Modular Housing Company which was extremely successful and then joined in partnership with my best man in a design/build building company. We built the company up to 30 plus staff, started a Plumbing company and bought an Aluminium window franchise as well.

With the eventual downturn in the industry I focused on my long-term goal- which was to become a Building Inspector when I was about 60, and "cruise into retirement"...

I didn't realise how busy I would be. It was 1993 and the then new Building Act 1992 was just coming in when I chanced on an advert for a vacancy in Stratford (next to Mount Egmont). Not only did I have my own job, but then, like others working in a small Territorial Authority, I was also the Plumbing Inspector, Principal Rural Fire Officer, Dangerous Goods Officer, assistant Dog Ranger, Civil Defence Officer etc.

I joined the Central Branch of BOINZ and soon got involved as an office holder and in 1994 was nominated for Executive as well. In those days we had individual portfolios: Overseas projects, Education, Earthquake issues, Memorandums between Councils etc, and this enabled specialisation.

I realised the value of further education, and beavered away at "night-tech" and correspondence and obtained my NZCBI (New Zealand Certificate in Building Inspection); only a handful of people have this qualification (I trust it will be valuable when we are assessed for "recognition of prior learning" - RPL).

I "retired" from the Executive for a couple of years to allow some of the younger ones the experience, but eventually was voted on again just in time for the new revolution in BOINZ development. I now run a team of nine highly specialist building officials with the Wanganui District Council.

With the employment of Len as CEO, we are extremely fortunate to have such a dynamo on our side, just as the Department of Building and Housing was going to impose a raft of processes on us without due consultation.

Len has contacts in high places and his presence has promoted our Institute to a new and higher level, ably assisted by his office team and Richard Toner. We are now taken seriously by government, and your Executive works hard to assist in our promotion and increased level of professionalism.



## Richard Toner

At the Annual General Meeting in Christchurch on Monday 3 April, Richard Toner will officially be farewelled as President of the Building Officials Institute of NZ, and Vice-President Tim Weight will assume the role of President for the next two years.

Taking a moment to look back on Richard's presidency, it has been during one of the most challenging and changing times that the building industry has faced. He has instigated and led the modernisation of BOINZ, with initial proposals to bring the rules and bylaws, the board and the Institute's finances up to date. Despite some initial opposition to rule, bylaw and finance changes, these have now been achieved with the changes to the rules and bylaws being put forward for members' approval at the AGM.



**Richard Toner**

Richard was instrumental in securing a central office for BOINZ, manned by professional staff - a permanent chief executive and secretarial support. He has also had the vision (with assistance from the chief executive) to lift BOINZ from a relatively passive organisation to a dynamic one that can now be regarded as an equal or an authority among others in the building industry and government.

His 13 year involvement in the Institute has seen Richard firstly serving on the board of the Plumbing and Drainage Institute

and then moving to the new BOINZ executive after the amalgamation of the two Institutes. He has always been fully committed to the betterment of the Institute, its management processes and the improvement of member services.

During his time as Vice-President he wrote a procedure manual in considerable detail and presented it to the executive for adoption. The manual outlined the method on how branches should manage an annual conference and it was approved and adopted by the executive.

Richard also spent considerable time and effort as Vice-President and President in forging a closer association with AIBS including a visit to their conference in Sydney in 2002 (with the valuable assistance of the Wellington City Council). On a visit to the 2003 conference in Tasmania he addressed the delegates in exalting the positives of the New Zealand environment, and the proposed combined NZ/Australia conference in 2006. He not only encouraged AIBS members to attend the 2006 conference but, in conjunction with Rosemary Hazlewood, spent considerable time with AIBS looking at the accreditation of building officials and how the Australians had achieved this.

Richard also achieved a first by visiting all the North Island branches in 2003 to promote strong branch support for the executive. He was later involved in the promotion and support of the BOINZ code of practice with members and Department of Building and Housing culminating in the CoP being available on line.

Based in Wellington Richard has taken the opportunity of promoting the Institute at many formal and informal engagements and, during this own time often while out walking at lunch time, he has discussed relevant issues with DBH employees and other government staff to resolve any relevant issues. He has also lobbied members of Parliament on key issues relevant to the Institute and members.

While he has taken his own time for many engagements, Wellington City Council has also been generous in its support of his role as President, while thanks must also go to the staff in his office that have helped to ease the load when he has travelled on behalf of the Institute.

The future direction booklet, circulated and promoted by the executive, was written by Richard in an effort to move the Institute into a new era. Some members received this with scepticism and it required considerable skill and ongoing effort by Richard to sell the idea. Not all the proposal was accepted by members but the appointment of a chief executive in January 2005 and the presentation of a new constitution at the 2006 conference will be the culmination of this original proposal.

Looking at Richard's life outside of BOINZ and the Wellington City Council, he loves a good curry, is an avid golfer (though may not get the chance to prove his skill at the annual conference golf tournament), and always has a camera ready for spotting construction industry woes while holidaying – don't we all!

Throughout his three -year term, Richard has given unstintingly of his time and energy to further the aims and objectives of BOINZ. He has grown in confidence as his role has increased, been a wise leader always willing to listen to others and consider advice given, and has been an authoritative chairman. His term as President has been an eventful one but also one that he can be justly proud of. The board are unanimous in their praise of Richard and have stated it has been an honour to work on the Board with him during this time. It is to be hoped that Richard continues to take an interest in the industry and the Institute during his "retirement" from the Board.



# Waikato home draws a crowd

Traditionally relationships between builders and Building Control Officers can be a little tense. Builders want one thing and bylaws say another. However, a unique building site in the Waikato is proving so popular with Building Control Officers that more than 30 have travelled there to take a look.

The project is a straw-built design by Bay of Plenty-based Sustainable Structures, and constructed by its sister company Straw Built Homes.

It is the first consent granted for a straw-built home in the Waikato, and District Council



Building Control Officer Rob Koppers says the project was exceptional from the start.

"It was very unique, very different. The plans and the specifications were really well done, easy to understand and visualise with pictures on cd-rom of how the house would look when finished. The Sustainable Structures team deserve 100% credit for putting in such a professional application. It is a good design, and it was a good application."

The consent for the house was granted in 10 days, and although it was the first straw-built construction approved by the Council, Rob Koppers says the thorough application meant there were no issues. Plus, builder Dave Murray, who has previous experience with straw-built homes, agrees and says that although he expected the consent process to be more complicated "the plans were so well done and researched that structurally the Council didn't have any problems with it. Sustainable Structures made sure every bit of information was there, and the Council could see it was a very professional team behind it"

The relationship with the District Council continues to be a good one, and Dave says he is enjoying the on-going consent inspections thanks to the good rapport with Rob Koppers.

"It's created an environment where if I have an issue at all I can call Rob and deal with him directly because we feel he is a part of the project too," says Dave.

The process has been a bit of an education, he says.

"I'm teaching Rob a bit about working with straw-built homes, and he's really teaching me how to work with them [building officers] in a better way. Because it is such a good working relationship I don't hesitate to call Rob directly if I have any queries, so it's good for him, good for the owners, good for Straw Built Homes and good for everybody, really."

The interest generated around the straw-built project has attracted a lot of attention in the area. Rob Koppers' enthusiasm for the project has spread through the Waikato District Council, neighbouring Matamata-Piako



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District Council, and the Hamilton City Council, culminating in a site visit by the Building Control team – and their administration staff!

Rob says the feedback from the visiting Building Officers was very positive.

“They were impressed. With the building technique, the structure itself, and the competency being displayed. That doesn’t happen very often. But the house is like that – the design of it just attracts people.”

The house is unique in both style and location, says Rob, and definitely makes an impact the first time you see it. “It’s perched on a bit of a rise. Then the roofline hits you – it’s shaped like a leaf – and you think to yourself ‘wow!’”

Rob Koppers says he would like to see more straw homes built in the future, because they are made from sustainable and eco-friendly materials and because the building process allows for originality in the design.

Straw built homes are extremely healthy to live in, says design company Sustainable Structures. The 400 mm-thick straw walls offer insulation at almost 5 times that of a standard home, and because straw also “breathes” it allows any moisture from day-to-day activities to naturally disperse.

Features such as lighting, room size, and layout are not affected by the construction technique.

Acknowledgements:  
Photography: Dave Murray  
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## So, you want to build a house of straw... not sticks or bricks?

A house built of straw may consist of:

- pine framing, treated to comply with the Building Code.
- straw bales generally 900 long 450 wide and 350 high from any grain product...rice, wheat, barley etc.
- walls with a finished thickness of around 500 mm.
- a 2 or 3 coat application of either a pigmented plaster or breathable paint type finish.
- a solid wall system with around 5 times the insulation value of a conventional home.
- interior walls made of straw, but there are many combinations and this is client and project specific.

In this particular project the skeletal frame currently has 95% the required bracing in place. Straw homes take about the same length of time to build as any other quality home.

**For more information and FAQs go to: <http://www.sustainable-structures.com/offerfaq.html>**



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**Building Issues Minister Clayton Cosgrove**

## Building Issues Minister Clayton Cosgrove

Building Issues Minister Clayton Cosgrove says there are two primary drivers to his commitment to his portfolio.

"First, this is not just another industry. It is huge and it is vital to the success of our economy," Mr Cosgrove says.

"Building and construction currently contribute around 5 percent to GDP and employs 8 percent of our nation's workforce, one way or another. We're talking about a \$19 billion industry employing 160,000 people.

"And then there is the whole other side to it – and it's the most basic reason of all why I am committed to Building Issues – we are talking about people's homes, their biggest investment, their security, and their well-being."

Mr Cosgrove was elected to Parliament in 1999 as the Member for Waimakariri, an electorate encompassing part of Christchurch city and rural North Canterbury, and was elected to Cabinet after last year's election. As well as Building Issues, he is also Minister of Statistics and holds associate Finance, Justice and Immigration portfolios. He is a former chairman of the Finance and Expenditure Select Committee, and has served on the Primary Production Select Committee, and a

number of caucus committees.

Mr Cosgrove says there are a number of clear priorities in the building and construction area.

"The Building Code Review project being undertaken by the Department of Building and Housing will set new performance and safety standards for the buildings in which we live, work, and play.

"We also have the implementation of the Building Act, and the occupational licensing of those in the construction industry, and of course, the Weathertight Homes Resolution Service review.

"And in terms of key legislation, we're reviewing the Residential Tenancies Act, and the Unit Titles Act, which need to reflect the needs of our modern society with its high density apartment living.

"These are diverse and substantial undertakings, but taken together they are about a very positive direction for building and construction in New Zealand, and crucially, the confidence that New Zealanders can have in the industry and in their buildings.

"And let's be realistic – that confidence has been dented a bit in recent years with issues

over cladding and, more recently, the whole leaky homes issue.

"We need to get the substance right; that means the right legislation, the right codes, the right standards, and the right training.

"And I'm determined to narrow the gap between the policy-makers in Wellington and the people at the coal-face, the folk who literally build New Zealand. I see it as vital for policy to be practical and workable; checked and tested out with those who actually swing a hammer!"

Mr Cosgrove says buildings are increasingly seen and understood as integral systems rather than composite parts.

"This is a step forward because we need them to be resource efficient. Both the government and the industry must respond to such demands and show leadership to ensure only the amount of energy, water and materials needed, are used, and waste is minimised. The end result being efficient and sustainable buildings that keep people warm, dry and healthy.

"It's a big challenge and I am going to work hard to meet it," Mr Cosgrove said.

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# Building inspection on Stewart Island

By Lyndon Paul, Inspector, Southland District Council

My career in the trade started in the joinery industry. I gained an Advanced Trade Certificate and later a Trade Certificate in Building which led to my interest in the construction industry, particularly residential construction. I spent some years in the particle board manufacturing industry and this furthered my knowledge of the timber industry. Taking up my present position as inspector at Southland District Council was the start of an enjoyable and challenging career.

I have been inspecting on Stewart Island for only 1 year and just love the place, the scenery, the fishing, diving, it is just great, after work of course!

I visit the island every fortnight depending on demand. I am usually there for the day and stay overnight every 8 weeks or so to catch up on any outstanding issues. Quite busy really for an island with a population of about 384 (2001 census)!

I can readily communicate with the mainland by mobile phone and we have an area office there where remote access is available to all council online services. I also carry a laptop with access to Code and Standards documents such as NZS 3604. If a free copy of this Standard was available from the DBH or somewhere else for general public access this would make my job easier as we are always asked about spans and

fixing requirements, etc for various items quoted in this Standard but cannot give out this information. It is up to the designers to do this. Having the Code documents available has been great and has helped lift the standard of consents received and knowledge of our builders and designers.

Most of the building work carried out is residential construction with a small increase lately in tourist facilities as the island has become a

popular tourist destination. All materials are shipped to the island by barge and this is the responsibility of the people involved in the building work. Timber is the main material used for construction due to the expense of freighting and the nature of the land – most sites are on a slope. A small group of builders on the island do as much of the residential work as they can possibly keep up with, the rest of the work is picked up by builders from the mainland - obviously this incurs extra

cost to the building owner in accommodation and flight expenses. Side boundary requirements on the island are 3 m instead of the 1 m on the mainland and buildings have height restrictions of 7.5 m before a resource consent is needed. Any work requiring special expertise needs to come from the mainland and sometimes due to the island's location visits may only be monthly.

Although I make regular visits to the island, one of the major constraints I face is responding to requests for inspections - because we don't go each week – so sometimes we accept photographs from the builders depending on the work being done, but in other circumstances the builder may have to alter the schedule, where possible. I do get a lot of enquiries for other council services when I am there as everyone shares the council car!

Getting products to the island has also improved as has the availability of products but a common practice still exists among the locals that someone always knows someone who will generally have what you need and will let you replace it at a later date. However, there have been a lot of changes to the way we build our buildings and the islanders have come round to accepting this. For example, one of the focuses for me is the marine environment which introduces the use of stainless steel fixings and specialised roofing and cladding materials which are not general items around in reasonable quantities on the island due to the additional expense in using these materials. Builders are now becoming more vigilant with their details at consent stage due to the complexity of some designs coming through and the nature of the physical environment in which the island is situated.

Tourism is now becoming the main income provider to the island whereas traditionally the fishing industry has done that.

The oldest building on the island is Ackers House at Harrolds Bay. Built in 1834 by Lewis Acker and his wife, the house later became used as a smithy, boatshed, hay barn and brewing place. It is now protected by the Historic Places Trust. The newest building is the picture theatre, opened just before Christmas with the showing of The Fastest Indian much to the delight of the locals.

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*A common practice still exists among the locals that someone always knows someone who will generally have what you need and will let you replace it at a later date.*

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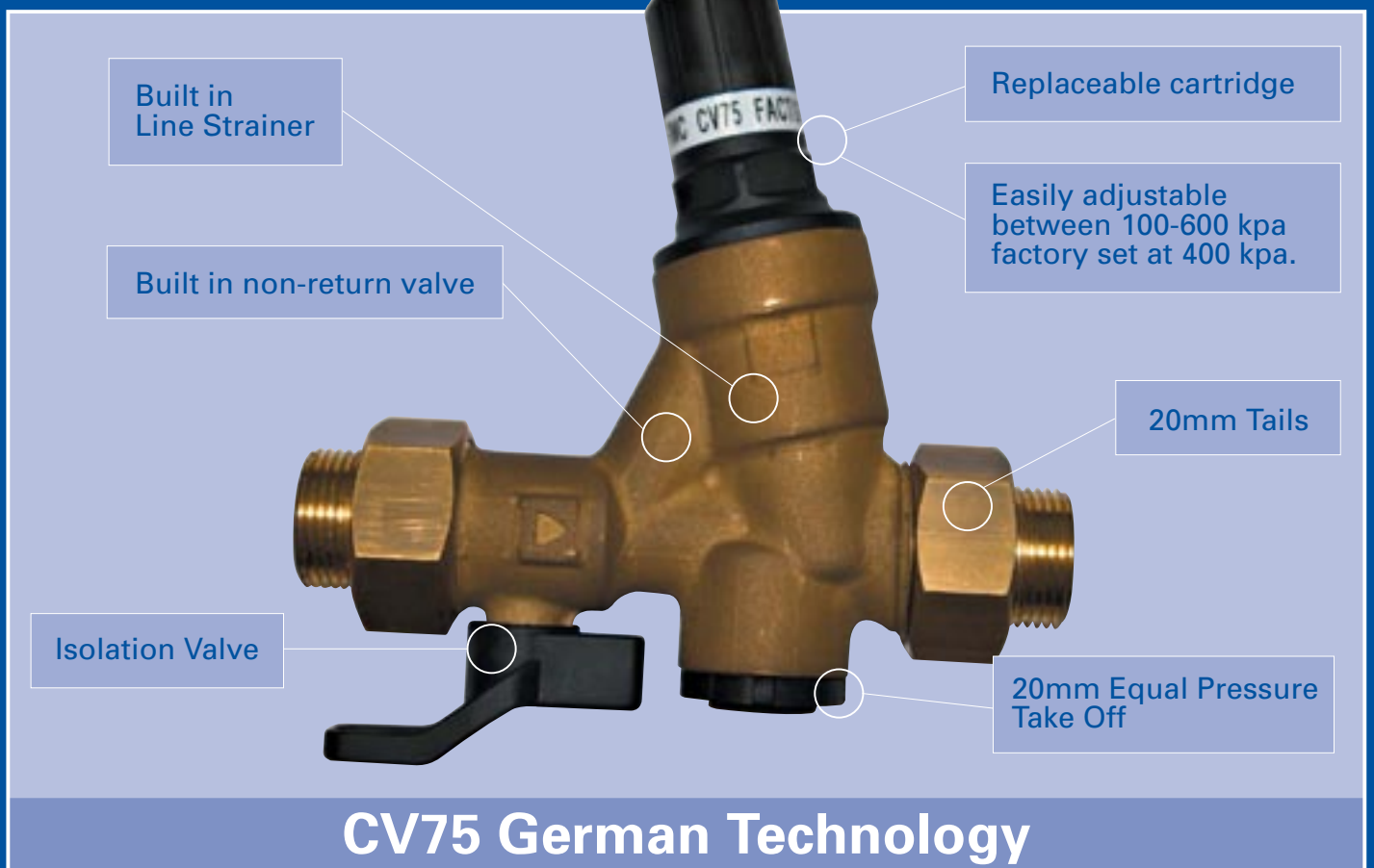
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# The changing nature of the property inspection industry

By Bruce Symon, Director, Realsure Ltd

Generally, property inspections are made on request by clients pre-purchase or pre-sale but are also used regularly by people wanting to keep up with maintenance around their homes. A property inspector's main job involves conducting non-invasive, visual inspections of homes to detect obvious maintenance and/or construction issues.

We collect as many facts as possible and use the data to advise clients on the condition of a dwelling. While it is ultimately the homeowner's responsibility to take action to solve any issues, an inspector can shed light on potential problems that may otherwise go unnoticed.

Property inspection is a relatively new and unregulated business and recent media coverage has highlighted many of the developments that have occurred in building and construction to improve standards. In inspection work it is therefore important that the fact finding process itself through to the systems used to track property inspections over time are robust and able to withstand intense scrutiny. In this environment, property inspectors must retain their levels of professionalism and independence to allow consumers to make an informed decision about what to do, based on the facts presented to them. Likewise, consumers need to seek out property inspectors

that work to meet industry standards.

The property inspection industry has undergone significant changes over the past few years that have altered the way property inspectors work. For many years, New Zealand property inspectors had no minimum level of competency to comply with. When Realsure was established in December 2000, the company had to measure itself against the Australian Inspection Standard as it was the only recognisable industry standard available. This led to other companies taking up the Standard and creating the first recognised benchmark.

As part of the wider shift to improve standards in the construction and property industries, the New Zealand Standard NZS 4306:2005 – Residential Property Inspections, was eventually established in March 2005. The Standard aims to develop consistency between property inspection companies nationwide, create benchmark levels for skills, and provide consumers with the confidence that their inspector complies with a recognised inspection Standard.

However, the use of the Standard alone is not sufficient, as it is a guideline only. To be effective it is imperative that it be backed up with an individual company's commitment to developing rigorous internal systems. Most large property inspection companies operate on a franchise or employee basis, so the need to ensure consistency between different branches and inspectors is paramount.

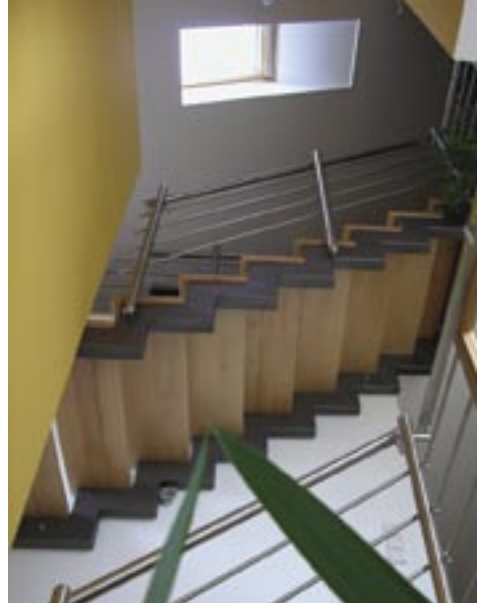
The introduction of the Standard also makes it easier for consumers to assess the reliability of an inspector for themselves. Consumers have grown more knowledgeable and smart about building issues and demand the same from inspectors.

High levels of consumer awareness mean that modern inspectors need to have some sort of appropriate technical qualification, such as an advanced Trade Certificate, New Zealand Certificate in Building, Diploma in Construction Management etc; they must have experience within the building industry, and be able to comply with the New Zealand Standard.

The ability of property inspectors to advise on a wide range of issues further highlights the need for rigorous standards within the industry. While the majority of property inspections are relatively straightforward, when litigious and unexpected issues are uncovered it can be upsetting for those involved.

Good property inspectors are able to advise on a variety of topics, including the assessment of unauthorised work, quality assurance, along with a basic knowledge of electrics, plumbing, council building records and know how to safely obtain asbestos and lead samples.

The range of skills required to cope with these different issues is extensive. Good property inspectors should always work to upskill and keep up with new developments in building practices, materials and technologies, and weathertightness. They need robust and thorough training, and on-going technical support based on quality research to keep up with events.



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# Site safety – practical advice for building inspectors

Building inspectors throughout New Zealand regularly face significant construction hazards that can and do cause serious injuries and deaths. The number one priority for inspectors is to ensure that their actions or inactions do not cause themselves or others harm. There are a number of things inspectors can do to ensure this happens, as Blake Kyle, Site Safe NZ explains.

Inspectors will all have different qualifications and experience. This may or may not include training in health and safety.

- If you are an inspector who climbs scaffolding to perform your duties, can you recognise a scaffold that is erected according to the Scaffolding Code of Practice or Best Practice Guidelines?
- If you work in the vicinity of mobile plant or power tools, do you know the site rules for accessing these work areas and do you have the required personal protective equipment?

- If you climb ladders or work around trenches, do you have the training to identify uncontrolled hazards to avoid injury?

If you answered no to any of these questions, talk to your employer about getting proper construction health and safety training.

All contractors have rules to keep unauthorised people off their sites. Most sites require visitors, including inspectors, to report to the site office or the Site Supervisor for a site induction. These are used to communicate about the emergency procedures and particularly hazardous work that may be taking place that day. Before entering onto a construction site first check-in with the person in-charge, find out what is happening and what you should do in case something goes wrong.

Finally, if you are on site and see someone putting their own lives, or the lives of others at risk, what should you do? The worst thing you can do is to ignore it. If you do this, you

run the risk of contributing to an accident through your failure to act. If you see a worker exposed to a hazard on site you can either talk to the worker directly about it. If this appears to be too confrontational, talk to the worker's boss, if you know who they are. At the least, find the person in control of the site and let them know what is going on so that they can correct the situation directly.

Taking these steps will help to ensure that you and others are not harmed while on site.

**For more information regarding Site Safe courses, including the sector specific range contact Site Safe on 04 499 2509 or visit**



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# Introducing BOINZ member – Tracy Quinton-Boundy

**Fire Engineering & Evacuation Officer**

**Building Control , Christchurch City Council**

For those living outside the Canterbury/ Westland area, I have been the Branch Secretary for the past 2 years. Over this time our membership role has grown steadily. I believe this has occurred through the appointment of our CEO and the professional approach the Institute is promoting for its members. With regular monthly meetings, organised presentations/speakers and training planned for the future our members

are increasingly involved. I am a firm believer of hands on, visual training and mentoring of members and staff in the workplace. This has certainly been reflected in the increasing number of members attending our Branch meetings. For many of our members spread over six TAs, coast to coast, this is the only opportunity they have to catch up and meet other members.

As for my career in the building industry,



*Tracy Quinton-Boundy*

*“There is never a dull moment let alone quiet time.”*

I gained my NZ Certificate in Architectural Draughting in 1993, have completed about 75% of the Diploma in Construction Management, completed a Fire Engineering paper at Canterbury in 2005 and have attended many BRANZ and BIA seminars.

In 1994 I moved to Nelson and worked with an Architectural Designer for 4 years. We covered a wide range of projects from housing to the ‘The Honest Lawyer’ and ‘Origins’ new terminal. I then took a position at Nelson City Council in the GIS unit, followed by the position of Building Consent Officer in the building team.

I worked in this team for 2 years processing all levels of building consents, PIMs, inspections and reviewing engineering reports for subdivisions. This was a great training and working environment, as it is a unitary authority with fewer staff and higher levels of responsibility.

Then at the beginning of 2001 I moved to Christchurch, where I started working at CCC in the Civic Building Consent Team, specialising in commercial review and my interest in Fire Engineering. Wanting to increase my skills in fire design and compliance, I gained a position in the Building Control Team 2 years ago.

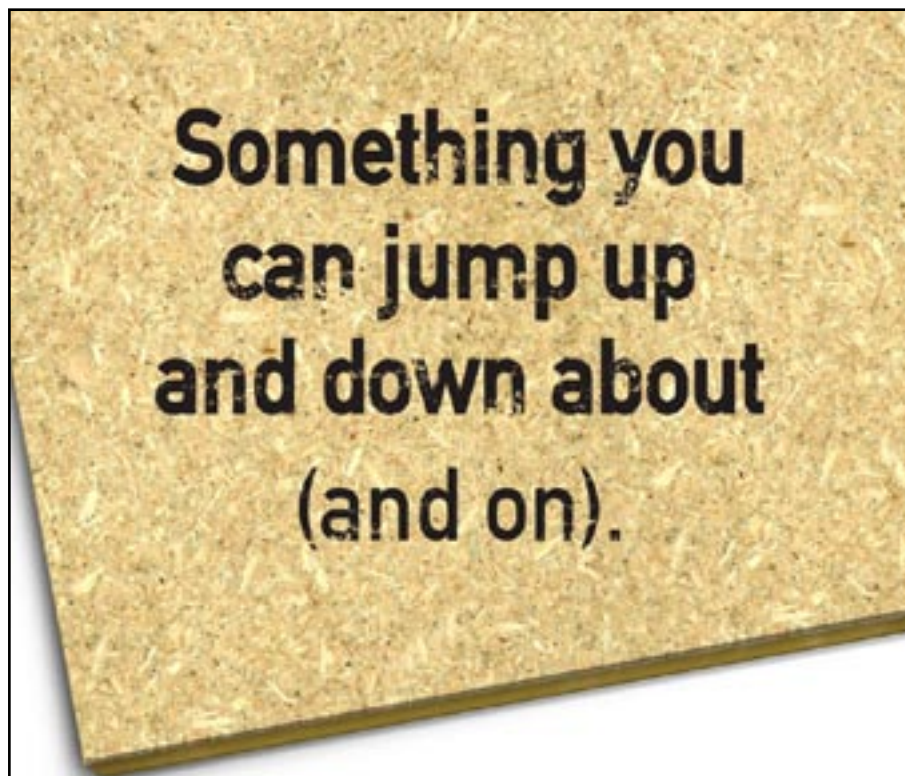
This team incorporates our fire, structural and civil engineer(s) and the BWOFF team.

I have enjoyed the work and challenges in this team, there is never a dull moment let alone quiet time.

As for 2006, I have personal goals and new challenges ahead.

The building industry is ever evolving as is my career and interests.

All the best for this year and see you at Conference.



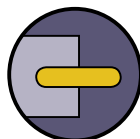
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# New regional hospital for Wellington

Progressing absolutely positively is the present status for a project described as one of the regions (if not New Zealand's) biggest construction projects.

The \$140 million project for the new main hospital in Wellington was consented in early December 2005 with the appointment of the principal contractor, Fletcher Construction, at a similar time.

The present project forms the focal point of the complete redevelopment of the Newtown Hospital site and is part of a \$303 million budget for Capital Coast District Health Board spending in the Wellington region.



2004/05 saw the completion of demolition of the original buildings and the construction of the oncology building/wing. The oncology building forms approximately 10% of the new building and its construction established a critical path for the project.

The building was successfully occupied in late July 2005 with enabling works then already progressing for the foundations of the remainder of the building. The total building incorporates state of the art technology and design, exceeding the Building Code requirements in virtually all areas.

Capital Coast District Health Board has chosen consultants and project management wisely

with the project bringing together some of the elite architectural, engineering, and building professionals of NZ to produce what the Board describes as a hospital for the future, meeting and exceeding all user requirements.

The Building Controls team at Wellington City Council have risen to the challenge during a period of construction boom in all other areas of the city.

The success of this project was always a paramount objective for all parties involved and the client, design team, contractor and Regulatory Authority have developed a working relationship that they describe as synergistic communication.

The project is scheduled for completion in 2007 and presently the combined team will continue to ensure this prediction is positive.

**Rob Tierney**  
**Team Leader**  
**Building Consents and Licensing Services**  
**Wellington City Council**



DRAWING COURTESY OF: Capital Coast District Health Board

## Incorrect rebending of starter bars can cause massive failures!



It is common practice for starter bars in precast elements to be bent out of the way for transportation and erection. The department of Building and Housing has identified that this is often done incorrectly and in a manner that reduces the strength of the structural connection and commonly results in the bars breaking off on site.



It is a requirement that bars should only be bent to a controlled radius of 5 times the bar diameter. However in practice this is not being adhered to and protruding starter bars are being bent flat against the panel face to allow transportation.



The DBH also confirms Pacific Steel's warning that 500E starter bars should only be rebent after being reheated to 'cherry red' on site. Because this is impractical the rebent starter bars are losing ductility when rebent and are commonly breaking off during the rebending process.



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### Solution



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# Response to news item

On the 29th of December 05, the following news article appeared in the Dominion Post. I know a lot of members have either written or called me about this and I thought it to be appropriate that I give you our response to this news item.

This is the published item:

## Building leader takes swing at council inspections

29 December 2005

The Construction Industry Council has taken a swing at the standard of local government building inspections in the wake of the leaky homes crisis. John Pfahlert, the council's chairman, says good progress had been made in raising standards in the building industry.

But "there is a need to lift the performance of local government in the area of inspections and to accelerate consent processing", he said.

"Our intention is to work with local authorities and the New Zealand Building Officials Institute on the issues that have been identified."

Mr Pfahlert said there was no instant fix available, but "improved training procedures and financial recognition of the importance of their role will do much

to improve the situation".

Meanwhile, architects, engineers, builders, materials suppliers, researchers and training organisations were all working hard towards lifting professional and trade standards.

The building industry took a pounding after a large number of new homes were found in 2003 to be mouldy or rotten as a result of poor construction materials and techniques.

Mr Pfahlert said the council and Standards New Zealand were reviewing building and design standards. Developing a new building code was "probably the most important exercise", although it probably wouldn't be close to finished for two years.

Other improvements included the establishment of best practice guidelines

for various parts of the industry, and a research strategy.

A builder registration and accreditation process was in the works, and industry training was in demand despite the shortage of labour, although ongoing Government funding for this was vital.

"None of these steps are compensatory for those who encountered, and may in future have to deal with leaky buildings,"

Mr Pfahlert said.

"But they do offer assurance that the industry is not sitting on its hands and ignoring the problems that became evident when reasons for the crisis were studied." The Construction Industry Council consists of chief executives of more than 28 professional and trade groups across the construction industry.

The BOINZ response to this article was immediate. I talked to Mr Pfahlert, chairman of the Construction Industry Council, on the evening of 29 December suggesting three solutions which were:

- His immediate resignation as chair of the council, and a press release approved by all CIC members as to why the previous release went forward without their consent.
- He and his communication person to come back with a strategy that meets the needs of all the CIC members (including facts and an apology).
- If neither of these were forthcoming BOINZ would resign from the Council and issue its own press release advising the public of NZ why we are taking this action.

Since that time there has been a lot of toing and froing of dialogue amongst the council members either supporting (or not) the actions of the chairman. BOINZ, however, took the following action in replying to the entire Construction Industry Council.

### Good morning everyone

After due consideration of this matter, fielding complaints from a number of local authorities and allowing for individual CIC members to make their feelings known about this issue, we are still of the opinion that it is

absolutely essential for this council to be seen to be maintaining a high level of integrity, reputation and an unquestionable standard of ethics. It is therefore disappointing that, of 36 people on the council including observers who were asked to reviewed this issue and offer their opinion, only eight (so far) have considered it important enough to do so.

In seeking the opinion of the Council we have in fact given them an opportunity to consider the issue and respond which is more than they were given prior to this particular press release being published in the Dominion Post. We would reiterate that the original press release was extremely badly written. The resulting issue could also have been completely avoided had the Council had adequate media policies in place particularly in view of the fact that this is not the first time that a potentially damaging press release has been issued by the chairman. In both cases we would suggest that the chairman should have known better.

While some of you may be disappointed in the Building Officials' stance over this issue, we feel it is yet another example of bad press over what has become a "hot" topic for the Institute and its members. The Building Officials' Institute will continue to deal with those organisations who continue to uphold the values of integrity, reputation and ethics

however, in the interim, we will be suspending all association with the Construction Industry Council pending a final decision on our continuing membership which will be made at the BOINZ Board meeting on 24 February.

We do not view this stance as "taking our bat and ball and going home" as has been suggested, but rather a matter of distancing ourselves from an organisation which does not offer its members an opportunity to mitigate compromising and potentially embarrassing situations brought about by the incompetence of its chairman. The council may wish to consider offering its reassurance that a set of policies will urgently be established and adhered to so that such situations are avoided in future. This action may influence both the BOINZ board and other members of CIC to maintain their membership of the organisation.

We will report the Board's decision following its meeting and, understandably, offer our apologies for the meeting to be held on 16 February in the interim.

By the time you have read this article and our response to this matter the board would have decided on an appropriate action.

**Len Clapham**  
Chief Executive  
BOINZ



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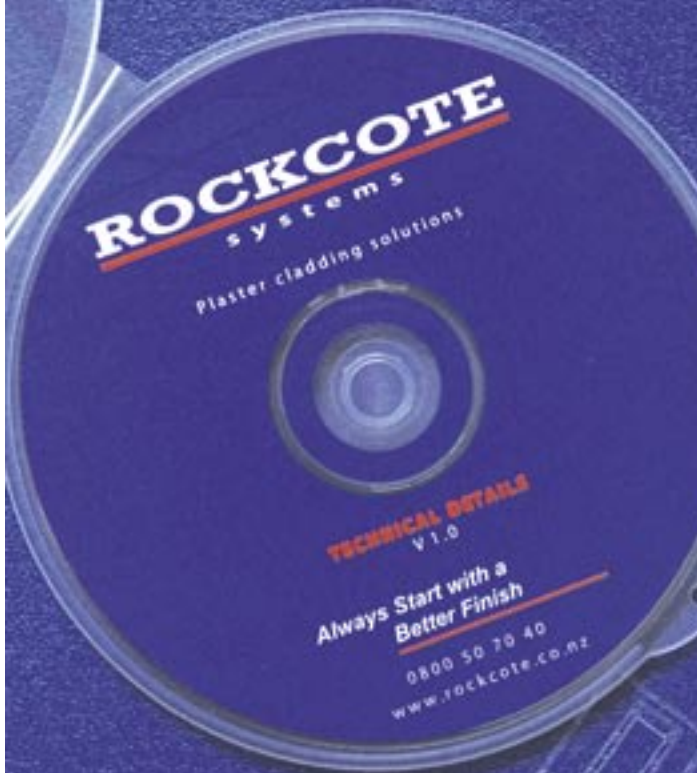
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## Assessing earthquake prone buildings – new requirements under the Building Act 2004

The Building Act 2004 requires BCAs to assess the risk of earthquake prone buildings in their areas of jurisdiction, defined in Section 131 of the Act. To fulfil that requirement, a draft report "Assessment and Improvement of the Structural Performance of Buildings in Earthquake" was prepared in December 2005 by the New Zealand Society for Earthquake Engineering for the Department of Building and Housing and has just been released for public comment. It contains guidelines that BCAs can use to make practical assessments of the risks to a building in an earthquake.

The NZEE report is based on New Zealand experience, underpinned by research which has shown the vulnerability of some structural characteristics of buildings designed to early codes and this has been confirmed by overseas reconnaissance visits to the scene of major earthquakes over the past two decades, such as the Kobe earthquake. Kobe was built very quickly after WW2 and its examples of modern construction (circa 1970s and 80s of high-rises and fly-overs) and geology is quite similar to New Zealand's.

It is also recognised that reinforced concrete structures from the 1940s and 1950s are typically low-rise with regular and substantial wall elements, while those of the 1960s and 1970s are generally taller, less generally proportioned with less redundancy and greater irregularity often in evidence in frame structures. While these buildings have similar levels of strength as modern buildings they do not have the level of ductility or appropriate level of failure now required by current design standards. Steel-framed buildings tended to be riveted up until the early 1940s, with the likely seismic response of these buildings being very dependent on the joint detailing employed. The level of risk posed by buildings constructed as recently as the early 1970s is now more widely appreciated. As a consequence of the awareness of this vulnerability the Building Act was revised to encompass any building considered incapable of an adequate seismic performance in terms of the NZBC 1991.

Such buildings are referred to in the Act as earthquake prone buildings, or those most at risk. Consequently, emphasis in the NZEE document is placed on the most common structural configurations that pose the greatest risk. The seismic resisting elements for which direct guidance is offered in the document are as follows:

- Reinforced concrete moment resisting frames
- Reinforced concrete structural walls
- Reinforced concrete dual wall/frame systems
- Structural steel moment frames
- Unreinforced masonry buildings
- Frame structures (concrete or steel) with masonry infill
- Timber diaphragms and shear walls

The NZEE document outlines assessment procedures for reinforced concrete, steel and unreinforced masonry buildings and provides a grading system which, although not required by the Act, is the method proposed for use by BCAs to determine seismic performance and for classifying the earthquake risk grade of buildings.

The Department of Building and Housing issued a Policy Guidance document for Territorial Authorities in June 2005 and its Appendix 2 refers to the grading scheme that has been presented and explained in this latest NZSEE publication.

**Those with an interest in the subject are invited to make comment on the draft until 31 March 2006. Comments should be addressed to the Technical Development Manager, Graham Rowe: [ghr@orcon.net.nz](mailto:ghr@orcon.net.nz).**

# The cost of unauthorised building work

In November last year Manukau City Council successfully prosecuted a commercial building owner for carrying out unauthorised building work in Papatoetoe.

The Judge handed down the following fines:

- \$5,000 plus Court costs for permitting the construction of internal partitions in the factory without firstly having obtained a building consent for the works.
- \$5,000 plus Court costs for permitting the factory to be used as four separate tenancies for which the factory was not safe.
- \$10,000 plus Court costs for permitting the construction of the internal staircase in the factory without having obtained a building consent for the works.

Following the judgment, Bryce Leckie, Team Leader of Council's District Plan and Building Enforcement, said:

"What the public need to realise is that if works are carried out without first obtaining the necessary consents, this may jeopardise the safety of the building and its occupants. Owners and builders have a responsibility to ensure that the work they carry out is built to the required standard. The only way that this can be done is by taking out the appropriate council consents and having the work inspected and approved.

In this case the building was deemed to be dangerous. We believed safety was compromised, and there was a blatant breach of the Building Act. That is why we took action. The new Building Act has put greater focus on those who are responsible for and carry out building works."

Under the Building Act 2004 the maximum fine is \$200,000 or \$20,000 for each day or part day the offence continues.



## NOTICE OF ANNUAL GENERAL MEETING

The 40th Annual General Meeting of the Building Officials Institute of New Zealand (Inc), will be held at the Christchurch Convention Centre, Christchurch on Monday 3rd April 2006 commencing at 3.40pm

### AGENDA

1. Roll call and apologies
2. Obituaries
3. Confirmation of Minutes AGM – on 21 March 2005
4. Matters Arising
5. President's Report for the year ending 31 December 2005
6. Chief Executive's Report and Awards
7. Audited Annual Accounts for the year ending 31 December 2005
8. Future development of BOINZ
9. Notices of Motion
10. Subscriptions
11. Ratification of BOINZ Board
12. General Business

## SPECIFIERS | TERRITORIAL AUTHORITIES



Dynex Extrusions Ltd, manufacturers and marketers of Palliside Weatherboards, are now Silver Strategic Partners with BOINZ.

Palliside Weatherboards incorporate all the stylish good looks of traditional weatherboards with modern, low maintenance materials. Designed, tested and manufactured in New Zealand specifically for the rigours of New Zealand's environment, Palliside comes with a 25-year guarantee and has been BRANZ Appraised.

The Palliside weatherboards system has been successfully tested to the latest E2/AS1 standards and has passed the Verification Method Testing (VM1).

In keeping with the changes introduced to the Building Code under E2/AS1, Palliside remains an Alternative Solution and is able to be installed Direct Fix from 0-12 points or 0-20 points over a Drained Ventilated Cavity applying the Building Envelope Risk Matrix.

BRANZ Appraisal Certificates covering Palliside Direct Fix (490) and Drained Cavity (491) installations are now available on request.

A Palliside Installation Guide, one for Direct Fix and one for Drained Cavity, are now available with a supporting Technical Guide.

Over forty details for Palliside Installation are available from the Palliside Website [www.palliside.co.nz](http://www.palliside.co.nz) under Design Details.



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# GIB® Bracing Systems – What's new for 2006?

## BACKGROUND

High winds and earthquakes are relatively common in New Zealand and as a consequence the New Zealand Building Code (NZBC) requires structural bracing to be installed in buildings to resist the forces generated.

The bracing of buildings can be achieved one of two ways;

1. Specific design; requires engineering calculations to determine loads and resistance specific to the building design and location
2. Non-specific design; offers a more general solution for light timber frame buildings that fall within the scope of NZS3604

GIB® Bracing Systems work within the scope of NZS3604 by providing one of the best tools for designers, builders and installers to incorporate the required bracing elements into a specified project. The performance of a NZS3604 compatible bracing element is evaluated using the BRANZ P21 test method and results are expressed in "Bracing Units" (BU's). The P21 test method has undergone a number of minor changes over recent years. This combined with the fact that a number of existing GIB® Bracing Systems were tested before the changes and offered only moderate performance were key factors for undergoing a review of all the GIB® Bracing Systems.

Winstone Wallboards are committed to continuous improvement, and employ a product development team who are dedicated to providing the market with the best performing GIB® products and systems. This team completed a thorough review of GIB® Bracing Systems, with a desire to deliver a simpler, easier and more convenient set of systems for customers to use.

## NEW TOOLS TO AID SPECIFICATION AND INSTALLATION

In March 2006 a revised version of the GIB® Bracing Systems Technical Literature will be launched. This publication will reflect the significant changes that have been made to GIB® Bracing Systems and the new bracing software - GIB® EzyBrace™.

One of the key differences is the change to

a more logical naming convention. This is designed to make the specification naming and identification of specific bracing elements more transparent. The table below shows how the new specification system works.

EzyBrace™ Specification Numbering System	
GS	= GIB® Standard Plasterboard
BL	= GIB Braceline®
BLP	= GIB Braceline® / Plywood
BLG	= GIB Braceline® / GIB® Standard Plasterboard
1	= lined one side
2	= lined both sides
a	= angle brace

Another key aim of the review was to reduce the number of bracing elements required to achieve the bracing number for a specific building. The revised GIB® Bracing Systems table reflects this by offering higher ratings and only 6 bracing element types as opposed to 21 in the previous version. This effectively makes designing with GIB® Bracing Systems a far simpler process.

Type	Length (min)	Width	Earthquake
GS1a	1.8	65	55
	2.4	75	65
GS2	1.2	70	60
	1.8	80	70
	2.4	90	80
BL1	0.4	120	115
	0.6	125	115
BL1a	1.8	130	115
BLP	0.6	145	135
	0.9	145	145
BLG	0.6	145	130
	1.2	150	135

Other changes include a more consistent construction method. For example, hold downs are required at each end of all GIB Braceline® ("BL") bracing elements, but are not required for GIB® Standard ("GS") bracing elements. The use of metal angle braces has been restricted to systems "GS1a" and "BL1a" only.

Yet another advantage of the new GIB® Bracing Systems is that higher bracing unit ratings have been achieved compared with the previous version, which will result in economies and a reduction in GIB Braceline® requirements.

Increased design flexibility has been added with the introduction of a shorter 0.4m GIB Braceline® ("BL1") element. This new element replaces the existing BR9, and unlike the BR9 does not require any special framing requirements. The opportunity to install the bracing systems horizontally has been further enhanced. Furthermore, provided a modified fastener pattern is used, GIB Aqualine® may be substituted for GIB Braceline® in bracing elements 900mm and longer.

The updated GIB® Bracing Systems literature is supported by new GIB® EzyBrace™ software, and is available as a free download on [www.gib.co.nz](http://www.gib.co.nz).

## BRANZ APPRAISED FOR NEW ZEALAND APPLICATIONS

GIB® Bracing Systems March 2006 have been independently assessed and received BRANZ Appraisal (Certificate No. 294, 2006). Unlike a one off test report a BRANZ Appraisal represents regular and ongoing assessment of a number of key performance elements such as; fitness for purpose, compliance with the NZ Building Code and manufacturing quality assurance, so GIB® Bracing Systems can be specified with confidence.

An important point to remember is that, to meet the published performance ratings, the complete system must be constructed as tested and specified. Any substitution of products within the system may compromise the bracing performance of the building it has been installed in.

## GIB® ESSENTIALS ROADSHOW

Along with changes to the GIB® Bracing Systems literature, at Winstone Wallboards we have also updated the GIB® Fire Rated Systems and GIB® Noise Control Systems literature. In order to explain the full detail of the system changes the GIB® technical team is travelling the country in May and will be in a location near you. Further information regarding specific dates and locations will be available shortly.

## Pieter Burghout, CEO, New Zealand Registered Master Builders Federation



**Pieter Burghout**

Pieter has been CEO of Registered Master Builders Federation (RMBF) since late 2005, and brings both private and public sector experience to the Federation. Pieter graduated with a law degree from Victoria University of Wellington in 1985, and practiced in a local firm for a time before realising that he needed a different

challenge. He pursued a childhood career dream to become a builder and took up an adult carpentry apprenticeship – enabling him to build 3 of his own homes over the last 15 years. Shortly after qualifying as a builder, Pieter saw an opportunity to return to the legal realm as the legal advisor to Federated Farmers.

Pieter went on to successfully take up executive positions in both private and public sectors, including the New Zealand Contractors Federation, Ministry of Forestry, Department of Internal Affairs and Transfund. Pieter also gained an MBA from Massey University in 1998.

Pieter became the Chief Executive of Building Construction Industry Training Organisation (BCITO) in 2002 and initiated a process of re-designing and re-building the organisation – making sure it remained relevant to the industry and provided a quality service to its customers. As Chief Executive of the BCITO, Pieter saw his key role as creator of an environment where people can and want to excel – both within the industries represented by the BCITO, and within the BCITO itself.

On joining the Federation, Pieter began by building its capability with the appointment of two new senior managers in the areas

of membership servicing and marketing and communications and he has started the process of re-asserting the Federation's position as the premier industry organisation for the hands-on part of the building and construction industry. This requires having the right strategy, sound business planning, giving people the right tools, and having the right HR approach to maximise the motivation and productivity of everyone in the organisation.

“One of the great aspects of my position is that I have to be a very good generalist, which I enjoy – having to be in any one day a marketer, report writer, analyst, motivator, crystal ball gazer and of course leader by example. I'm also a great believer in communication and making sure that stakeholders and staff are kept well informed. There also needs to be clarity of direction – which you don't get unless everyone understands where the organisation is heading.”

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# The cost of building consents for solar water heating systems

Brian Cox, Executive Officer of the Solar Industries Association, writes of current solar water heating industry activities to improve the cost and processing time of applications for Building Consents for the installation of solar water heating systems.

Building Consents can be a significant barrier to the increased uptake of solar water heating systems. The cost of a Building Consent can be up to 10% of the cost of an installed system. In addition the process of obtaining Consents can in a number of situations be far from smooth. This can generally be put down to the limited experience by the solar industry of seeking Building Consents, and of Council officers in processing Consent applications.

The Solar Industries Association represents manufacturers and importer of solar water heating systems. There are currently 12 complying products on the market, but a multitude of new entrants to the market aiming to import new product. There are also 210 Approved Installers throughout New Zealand.

The Association has been working towards ensuring that products meet appropriate technical standards and installers are fully trained and experienced. The Association has established a suite of quality based processes that will distinguish the good products and good



installers from those inexperienced installers whom we all need to guard against. The use of the information available from this quality based processes will make the handling of Consent applications a lot easier. The quality processes developed by the industry include:

- Website publication of information on solar water heating – The Association publishes on its website [www.solarindustries.org.nz](http://www.solarindustries.org.nz) (for free downloading) information about best industry practices.
- A Code of Practice – This code sets out the standards and best practice that suppliers and installers are expected to meet. The Code of Practice is a voluntary code which follows the format of the Building Code setting out Requirements and Acceptable Solutions.
- Complying product – to be considered a complying product the system supplier is

expected to be able to demonstrate that the product meets AS/NZS 2712. To assist this BRANZ are currently developing their criteria for Appraisal of solar water heating systems.

- Accreditation – A system supplier can become Accredited for Supply and Installation of Solar Water Heating Systems. The industry and government promotion is based on the premise that the public should only purchase from an Accredited Supplier. An Accredited Supplier must install only complying products.
- Approved Installers – Accredited Suppliers can notify the Association of their Approved Installers and they are listed on the Association's website.
- Training – The Association has worked with the Waikato Institute of Technology (Wintec) to establish a course that leads to

a:

- Certificate in Solar Water Heating System Installation – for registered plumbers, or a
- Certificate in solar Water Heating System Installation Management – for non-plumbers.

- Supplier and installer support – the Association provides ongoing support to its supplier and installer members and through audits and general monitoring attempts to identify problem areas and assist individual suppliers improve their installation practices. Installation problem areas are referred to the Master Plumbers Association to draw to plumbers' attention, and to the Wintec training course.
- Complaints process – The public can approach the Association if they have a complaint about their installation.

To assist with the obtaining of a Building Consent the Association has developed model application and Producer Statement forms that Councils can use. If installers also use the model forms to provide Council with the necessary information then obtaining a Consent should present no difficulty. Those applicants and Councils that use the model forms find them a useful guide for identifying the appropriate information for a solar system, particularly when they are attached to Council standard forms.

The biggest concern to Councils is the installation of tank-on-roof systems on an existing roof. For these applications Council needs to be assured that the installer has checked roof strength. These differentiate from pumped systems where there is only a collector on the roof, and therefore no structural issues. Because there are no structural issues, pumped systems are considered by most Councils as a minor plumbing application. System fixing to the roof and pipe penetration through the roof are also areas where it is important that the installer knows what they are doing.

The Association encourages Councils to have different Consent fees and application information requirements for the two different types of system. Councils are also encouraged to look for supplier accreditation as a sign that the supplier or their installer has had their installation practices vetted and that they meet best industry practice. Some Councils accept self certification from Accredited Suppliers and it is hoped that as Councils and the industry become more experienced in solar installations that this will become more commonplace.



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# Standards NZ Update

## NOW AVAILABLE:

### **CABLE CARS FOR PRIVATE RESIDENCES: DESIGN, CONSTRUCTION AND MAINTENANCE (NZS 5270:2005)**

This new Standard, which will help avoid potentially fatal accidents by ensuring home-owned cable-cars are safe, is now available.

Unfortunately, some residential cable-cars have traditionally lacked basic safety features, resulting in several serious accidents and one death.

In December 2005 a Wellington family survived a 10-metre fall when their cable-car sped out of control down steep terrain – with them in it. When a shaft in the engine snapped, one man was thrown from the cable-car as it hurtled to the ground and three people ended up in hospital. Although the cable-car had been regularly tested and had passed inspections every 6 months, if the car system had been manufactured and installed according to the new Standard, the accident would have been unlikely to happen.

The critical item that was missing from the cable-car was a speed activated brake, which is now specified in the new Standard. The cable-car only had a wire tension brake that seldom protects against winch failures, which is what occurred in the incident.

“Many old home-made cable-cars operating around Wellington have been badly constructed, poorly maintained, and owners were not supplied with safe operating instructions,” says Mark Galvin from cable-car design and manufacturing company Access Automation Ltd.

This concern and the rising accident toll prompted the inclusion of residential cable-cars in the Building Act 2004. The Department of Building and Housing then initiated the development of the Standard.

“The new Standard sets a bench mark for minimum safety requirements,” says Mr Galvin, who was also a member of the committee that developed the Standard. “It will also be useful for all cable-car owners, as it clearly defines their maintenance and inspection responsibilities.”

Mark Batt, Business Relationship Manager at Standards NZ, says manufacturers and Territorial Authorities now have clear performance and safety measures to meet, and home-owners can be reassured that cable

cars that meet the Standard will be safe.

From March 2008 all buildings that are attached to, or serviced by, a cable car are required under the Building Act to have compliance schedules. The schedule will specify how often the cable car needs to be inspected, by whom and the obligations on cable car owners.

### **CONCRETE STRUCTURES STANDARD (NZS 3101:2006)**

A major revision of the Standard for concrete design is available from the end of March 2006. It will result in safer and improved design quality of structures using concrete.

Jointly funded by Standards New Zealand, the Cement and Concrete Association, the Department of Building and Housing, and the Earthquake Commission, NZS 3101:2006 Concrete structures will be used by engineers and Territorial Authorities.

Engineering design knowledge is constantly evolving as a result of New Zealand and international research, experience gained from evaluating the damage caused by major earthquakes around the world, and the introduction of new materials such as steel fibre reinforcing. New Zealand is recognised internationally as a leader in safer earthquake design. Therefore, periodically updating the concrete design Standard ensures that our world class knowledge is available to engineers to apply in designing our buildings.

Key updates to the Standard include:

- The Standard includes new information on Grade 500 reinforcing steel
- Design section - now component based as opposed to force based
- Seismic design section - now compatible with the recently released loading Standard NZS 1170.5:2004 structural design actions – earthquake actions
- Wall section - reflects the latest developments in ACI318 and testing conducted in New Zealand, including new formulas to address the potential issue of buckling of thin panel walls
- Fire section - The fire amendments to AS3600:2001 Concrete structures have been included
- Durability section – Now includes:
  - New information for structures with a specified life-span of 100 years
  - Revised provisions for Zone C marine exposure classifications
  - Guidance on chemical exposure,

aggressive soils, abrasion resistance and fastening protection

- The appendices have been revised and include:
  - Design information on strut and tie models (based on ACI318)
  - Provisions for the seismic design of ductile jointed precast concrete structural systems

Copies of the Standard are available for purchase on-line: [www.standards.co.nz](http://www.standards.co.nz) or call: 0800 782 632.

### **CHEMICAL PRESERVATION OF ROUND AND SAWN TIMBER (NZS 3640:2003)**

A small amendment to this Standard was published in October 2005.

## UNDER DEVELOPMENT

Current projects underway in the building sector include:

### **TIMBER FRAMED BUILDINGS AMENDMENT 2 (NZS 3604:1999)**

An amendment to NZS 3604:1999 is underway to incorporate changes in the structural properties of timber, which are set out in the recently revised NZS 3603. This amendment will involve changes to the span tables.

### **TIMBER FRAMED BUILDINGS REVISION (NZS 3604:1999)**

Scoping work has also commenced on a full revision to this widely-used Standard, which gives practical guidance to effectively help the Building Code to function. The key purpose of the revision is to achieve safer, healthier, more weather-proof and durable houses as a result of the updated Standard. It is also timely that the Standard is updated to reflect current and future industry needs. The revision is intended to take into account advances in materials, construction techniques and other recently revised Standards and acceptable solutions to the New Zealand Building Code. Industry feedback to guide the revision process has been collected via both telephone and online surveys.

### **BUILDING UNDERLAYS (NZS 2295)**

A revision and reinstatement of this NZ Standard is underway to supersede AS/NZS 4200. This revision will incorporate new materials and technological advances in building underlays for wall cladding and roof applications. Publication of this Standard is expected in early 2007.



# Out and about

## Detailing around windows: spot the difference



Window A



Window B

## Identical twins? Not this time

This little pair of windows are identical in almost every detail – but on closer inspection...



Window A

Note the tight abutment of Window A to the bevel of the weatherboard and compare the notched grooving and packing under Window B (below) with the absence of this in Window A.



Window B

A metal strip was inserted behind and below the sill of Window B and timber flashing placed over it. My guess is that the cut out for Window B was made too large. Any other suggestions?

Chippie Block, SU Building

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## EVENT CALENDAR

### MARCH 2006

<b>BOINZ Frontline Lodgement Staff Training Series</b>	Invercargill, 13 March 2006
<b>BOINZ Frontline Lodgement Staff Training Series</b>	Dunedin, 14 March 2006
<b>BOINZ Frontline Lodgement Staff Training Series</b>	Christchurch, 15 March 2006
<b>BOINZ Plumbing and Drainage SIG Forum</b>	Auckland, 20 March 2006
<b>BOINZ Frontline Lodgement Staff Training Series</b>	Wellington, 27 March 2006
<b>BOINZ Frontline Lodgement Staff Training Series</b>	Palmerston North, 28 March 2006
<b>BOINZ Frontline Lodgement Staff Training Series</b>	New Plymouth, 29 March 2006

### APRIL 2006

<b>BOINZ Annual Conference and Expo</b>	Christchurch, 2-5 April 2006
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### JULY 2006

<b>BOINZ Plumbing and Drainage SIG Forum</b>	Wellington, 7 July 2006
<b>BOINZ Clerk of Works SIG Forum</b>	Auckland, 28 July 2006

### AUGUST 2006

<b>On-Site Wastewater Training Series</b>	Hamilton, 1-2 August 2006
<b>On-Site Wastewater Training Series</b>	Rotorua, 8-9 August 2006
<b>On-Site Wastewater Training Series</b>	Napier, 15-16 August 2006
<b>BOINZ Senior Building Consent Officials SIG Forum</b>	Wellington, 17-18 August 2006
<b>On-Site Wastewater Training Series</b>	Palmerston North, 22-23 August 2006
<b>On-Site Wastewater Training Series</b>	New Plymouth, 29-30 August 2006

# APEX VALVES

## Installation of Pressure Control Valves for Hot Water Cylinders

Apex Valves Ltd is a privately owned New Zealand company specialising in the design and manufacture of Control Valves for low and high pressure hot water and filtration systems. With 25 years experience in the NZ market the R&D team at Apex Valves continue to design a comprehensive range of control valves with NZ conditions in mind. Apex Valves are manufactured using DR Brass from reputable sources in NZ and Australia.

A high level of uncertainty exists in the market in relation to "good trade practice" when installing control valves on domestic hot water systems. This is certainly the case with the installation of Tempering Valves.

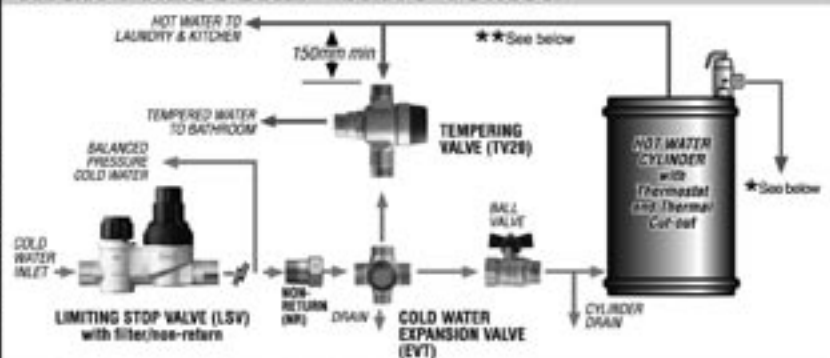
The NZ Building Code Clause G12 stipulates the need for 1 metre of copper between the Hot Water Cylinder and the Tempering valve. (page 37, figure 16)

In addition to the 1 metre rule, it is good trade practice to provide a heat loop when installing a tempering valve or relief valve. 150mm is sufficient to reduce the heat exposure and significantly prolong the life of the valve.

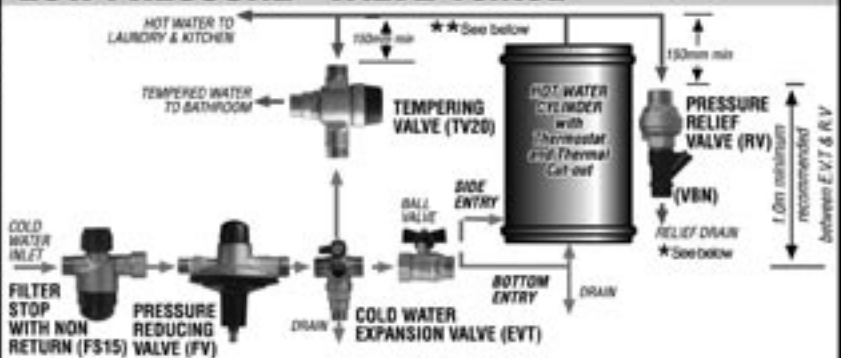
Apex Valves Ltd include installation diagrams in their Pressure Control Valve Catalogues, with these same images replicated on the Apex Valves website at [www.apexvalves.co.nz](http://www.apexvalves.co.nz)

The following illustrations are provided by Apex Valves Ltd in the interests of good trade practice.

### HIGH PRESSURE - Valve Vented



### LOW PRESSURE - VALVE Vented



\* R.V and E.V drains may be combined provided discharge is via a minimum airbreak of 25mm. Drain must have a minimum size of 20mm diameter and be one size larger than the largest relief valve outlet.

\* \* 1.0m minimum copper pipe length from cylinder to Tempering Valve.

\* If the drain exceeds a factor of 12 as a combination of length in metres and number of bends (eg. 7 metres & 5 bends). We recommend the installation of an SVB vacuum Break



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