

straight up

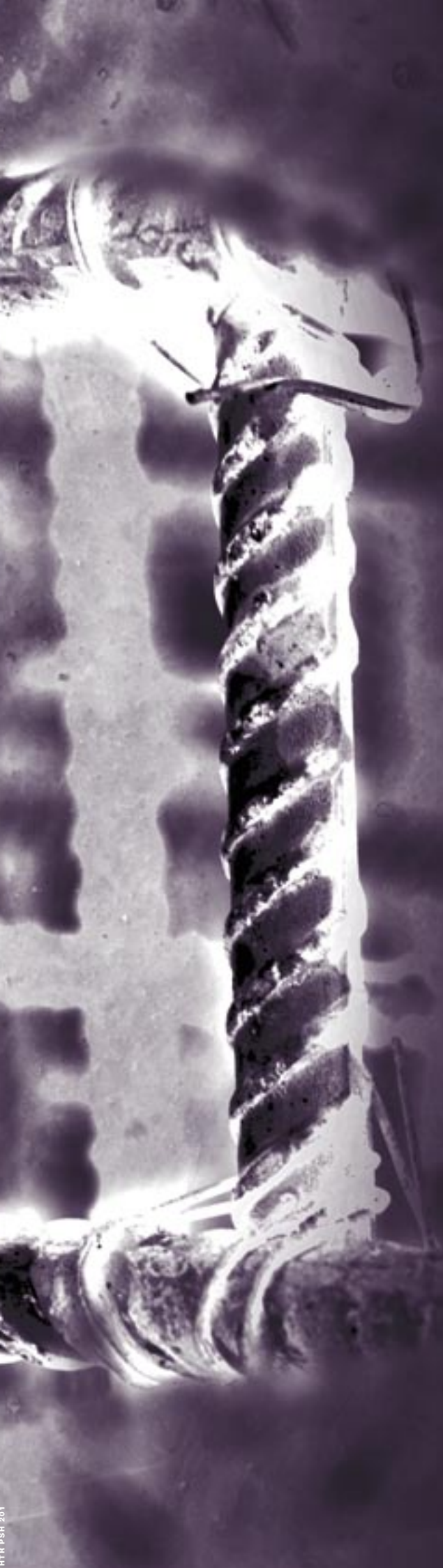
THE MAGAZINE OF THE BUILDING OFFICIALS' INSTITUTE OF NEW ZEALAND

SEPTEMBER 2006



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straight up

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NEWS FROM LEN

Hi Folks

It's amazing to think we are already in September 2006.

On the membership side of things the Institute's membership is continuing to grow steadily

- an average increase of 3% per month
- which is significantly due to the products, benefits and services that we are providing to members. And, on this note, it has been very encouraging to receive a huge influx of registrations for our up and coming events around the country. We aim to provide courses that meet the needs of our members and indeed all of you out there working in the building industry and we encourage you to continue your professional development. Make sure you check out our event calendar online for what's coming up in events/training.

We are already in the early planning stages for our Annual Conference in 2007 where we will also be celebrating the 40th anniversary of the Institute. The exhibitors' prospectus is now available and we are looking forward to a very special event next year that we hope you can join with us. We recently issued a call for nominations for the conference technical committee, so if you feel you have the experience and attributes for this role, we would love to hear from you.

The BOINZ Training Academy is progressing extremely well and we are thrilled to have our licensing scheme being supported by many councils from all around the country. For those who are thinking about applying, please give it some serious thought. This licensing programme will be a tool in demonstrating your competency and training which will ultimately be a component in the BCA Accreditation process.

News on the National Qualification front is that the Institute (BOINZ) will be taking the lead on developing the Qualifications for Building Officials and will be working with the Department of Building and Housing, Local Government New Zealand and the Society of Local Government Managers. A Request for Proposal has been distributed to seek a suitable Project Manager who will manage, on behalf of the committee, the coordination, development and consultation with respect to National Qualifications for Building Officials.

For those who have been on our website recently, our new service - the BOINZ Business Directory - is up and running. This offers a regional location database on our website that can directly assist persons requiring a particular service.

PRODUCT CERTIFICATION

This is a very important topic for everyone in the industry and as members we were aware that an issues and options paper had been collated for comment. A workshop held in Auckland on Monday 7 August with over 90 participants from all aspects of the industry attended to discuss this very important subject.

Presentations to the group were made by me and Steve Alexander of Alexander & Co with the group then splitting into three teams to workshop the various options. One option was that local authorities institute terms and conditions when issuing a consent. The general consensus was that there should be terms and conditions as this prompts the consent holder to be more responsible in the construction process. Equally there was a question about the legality of having such terms and conditions as there is currently wording in the legislation that makes it difficult to place terms and conditions or to mitigate risk away from a local authority.

My personal viewpoint is that, regardless of the legal aspects, morally it is unacceptable for any local authority to accept responsibility when circumstances are outside of their control.

Another option was for having some form of central repository of information that could be shared by the industry and this also received positive endorsement. The general feeling was that a central repository of information on products was needed that could be made available to local authorities and other professional organisations.

Discussions on a manufacturer's declaration were also discussed. This would list potential information such as conformity to the Building Act and the building code; purpose of product; acceptable scope of use; limitations on use; who may use it and under what authority/ approval; compatibility with associated products; expected durability; warranty available; and identification of product.

Also included in the central repository or database could be a list of acceptable or alternative solutions along with assessed and certified products currently being used. Equally there was a suggestion from the group for the need for a robust product assessment process that meets certain requirements that local authorities could utilise in order to be confident that the information given would provide them with adequate documentation to make a decision.

The result was an excellent workshop - the first time that participants had gathered together to look at an industry-led solution. The Institute will be closely following progress and participating in the provision of a solution to this very important issue.

Lennard Clapham

MEMBER PROFILE

Helen Binmore BRP (Hons)

**Building Officer
Wellington City Council
Branch Secretary, Wellington**



I have been working for the Wellington City Council for just over 7 years in a variety of roles. My background is in Planning, I was a Compliance and Monitoring Officer for 5 years in the planning area, this gave me an opportunity to work on large projects within Wellington and get an appreciation for the Building Code.

As time progressed I decided that a change in career was called for and took up a customer services role on the front counter answering queries and this gradually developed into a role checking building consents for the correct information prior to accepting them for processing. More recently I have joined the Building Team as a Building Officer.

I joined BOINZ last year and I am currently the secretary for the Wellington Branch.

I couldn't have picked a more interesting and challenging time to get involved with the building industry! As I am new to the business I have been studying towards a Diploma in Building Surveying at Weltec here in Wellington. This study has also been supplemented with a very comprehensive range of in house and regional training on the many new aspects of the Building Act 2004.

Wellington City is part of a regional partnership with several neighbouring local authorities who have been working together to create a more co-ordinated and consistent approach to building processes and issues within the Wellington Region.

My role at present consists of a rotation of providing advice and checking building consents with the public at the front counter, processing building consents and an involvement in field inspections. All this keeps me very busy and enjoying the challenge of my career change into the building industry.

BOINZ life memberships awarded

Graeme Duncan, Manawatu District Council, and Colin Gray, Clutha District Council were each awarded life membership of the Building Officials Institute of New Zealand at the BOINZ Conference in March this year.



Graeme Duncan

The honour "took my breath away" said Graeme. The conference was told that Graeme had been a tireless worker for the Institute since joining in 1991, an avid and active supporter of the Central branch and a person who spent many hours of his own time attending to BOINZ matters.

Graeme is a former branch president national executive member and most recently has been closely involved in a recent Institute initiative to define and

organise a national checklist for building officers. "This allows the officers to go onto the jobs and use the checklist as a memory jogger," he says.

Manawatu born and raised Graeme began his association with the building industry in 1960 when he joined the Palmerston North based firm McMillan & Lockwood, as an apprentice carpenter. Over the next 30 years he qualified as a tradesperson, leading hand, job foreman, construction manager and mentor for many apprentices. His first job as foreman was The Sportsman Inn on Featherston St, Palmerston North, and the biggest, the 7-year-long Palmerston North Hospital Project.

Reflecting on the multiplicity of changes in the building industry over the years Graeme says "the weathertightness issue is the most significant in recent times" and had "led to the establishment of another Building Act". He places high importance on the need for apprenticeships and a "growing need to employ younger people as building officials because a large percentage are aged 55 plus".

As a council building officer, Graeme is involved in site inspections and processing consent applications. Graeme is a fitness enthusiast, foundation member of the Manawatu Marathon Clinic and has 7 marathons to his credit.



Colin Gray

Colin started his apprenticeship as a carpenter and joiner with Stone & Moore Builders in 1954 when he says "the government was building suburbs of houses that were training grounds for apprentices in all the building disciplines".

He describes working on the surface and underground as the sole carpenter at Ohai's Morley Mine workshop in 1959, and before the mines became

mechanised, as a "different experience". Experience in construction at Love Construction in Dunedin in 1962 led to promotion as foreman on multi-storied buildings and motorway structures while studying for Clerk of Works registration, which he gained in 1974.

One of only 4 building inspectors at Dunedin City Council in 1973 his patch included "part of the business section of town along with Otago University and Dunedin Hospital development, hostels, boarding houses, motels and fire safety in commercial premises." "Waterfront and residential sections were also busy" he says.

Becoming Chief Building Inspector in 1985 he says he "did escape the office

at times" where "meetings took up a lot of time that I thought could have been more constructively used". Attending courses on building subjects and organising some of these with invaluable help from merchants and manufacturers was time well spent as was addressing kindred organisations, especially during local government amalgamation and the new Building Act, which helped everyone involved to learn and cooperate in an environment of great change, Colin says. "Being seconded to Civil Defense after the Abotfsford landslip brought home to me that as building officials we can be called on to do anything".

Elected to the Executive in 1974, President in 1992, then in 1993 as Governor of the World Organisation of Building Officials, Colin officially retired to help restore 1930s Morris and Austin convertibles and latterly a 1923 Ford T. He says "these cars have been a challenge as nothing is straight or level, but it is great to see them powered up". Called out of retirement in 2004 Colin became the building control officer responsible for the new corrections facility at Milburn for the Clutha District Council. The site covers 168 ha with 15.5 ha inside the wall. "It would not be often one would get the opportunity to be involved in a \$216 m job from application to code compliance completion. When the project is finished I will have a second try at retirement," says Colin.

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Carpentry apprenticeships increase

The Building and Construction Industry Training Organisation administers various construction trade apprenticeships. The table on page 10 shows statistics on the numbers of carpentry apprentices registered and the numbers who have completed their apprenticeships each year from 1993 to the present.

QUALIFICATIONS AND TRAINING STRUCTURE

At the beginning of 2003, when the BCITO became an Industry Training Organisation, it inherited approximately 800 apprentices from the Government's then Apprenticeship Board. These apprentices were registered under the "8000 hours time served" apprenticeship basis. Many of these apprentices converted to the unit standard basis of apprenticeship introduced by the BCITO in 2003 with support from Government and the New Zealand Qualifications Authority.

The unit standard basis of training requires that apprentices prove their competency. That is, they must be able to repeat the task on demand, unsupervised, within acceptable industry time frames and to the required industry standard to be deemed competent.

The National Certificate in Carpentry, which is the current carpentry apprenticeship, replaced the Trade Certificate in Carpentry. The unit standard based Advanced National Certificate in Carpentry replaced the Advanced Trade Certificate in Carpentry.

Carpentry apprentices are required to achieve competency on 39 theory unit standards in addition to the practical units. This can be achieved by completing the worksheets attached to the resource material which the BCITO sells to them or they can attend off job training at Polytechnics or Private Training Establishments that the BCITO has contracted to deliver this training. For example, this year 22 providers are contracted to deliver theory training at 25 different locations.

The average carpentry apprenticeship takes 3.5 to 4 years to complete, providing the apprentices are getting the required variety of work.

CARPENTRY APPRENTICE STATISTICS FROM 1993 TO 30 JUNE, 2006

Calendar year	No. of apprenticeships registered at year end	No. of apprenticeships Completed during year
1993	1640	420
1994	1752	255
1995	2291	174
1996	2386	353
1997	2426	429
1998	2295	431
1999	2281	617
2000	2216	526
2001	2408	516
2002	2838	526
2003	3305	584
2004	5502	592
2005	7107	646
Mid 2006	7598	434
	Total completions	6069

OTHER QUALIFICATIONS

The BCITO also administers the higher level Diploma in Construction Management. This is delivered and assessed by Polytechnics. In the near future, the BCITO will introduce a Supervisors qualification. This too will be delivered and assessed by Polytechnics. The BCITO also administers a level 2 qualification for high school students called Elementary Construction Skills.

*Jim Kirkland
Operations Manager, BCITO*

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Small-town team delivers big-city projects for Nelson

The building boom that has affected the industry in New Zealand has even touched us here in Nelson. Once known as the retirement capital of New Zealand it has now has a rude awakening with the central city and waterfront undergoing huge transformations with the construction of numerous apartments and the increasing demand for the tourist dollar bringing more motel developments.

The small stores that were once the attraction of small cities and brought people to town to browse are being overtaken by the "Superstores". Yes, even in Nelson. As is typical with progress some are for, and some are against. I must admit it is sad to see the small hardware, grocery and fabric stores disappearing and being replaced by stores that provide you with a road map upon entry just so you can eventually find your way to the checkout queue with a pile of stuff you didn't know you needed.

Into this scenario is the plight of one small-city BCA that has seen the workload of the inspection team at Nelson City Council outgrow its small-town beginnings while staffing ratios have stayed the same. A small BCA like ours employs 4 inspectors. On average, for 20 weeks of the year at least one will be on leave and occasionally one will be off sick, leaving only 50% of the workforce to cope which can be exhausting for the rear guard. Is the workload for big-city BCAs any less demanding? One might assume so by comparison. A big-city BCA may have 20 plus inspectors. Suppose that at any time 3 of them might be on leave and then another 2 might be on sick leave with 1 at a training course. Is a reduction for them of 25% still manageable? How would they cope if they lost 50% of their staff? Trying to keep up with the changes to the Act becomes difficult in a small BCA once again for resourcing issues. Two at training reduces the workforce by 50%.

OK you say just hire more staff. You're not the first to think of that option and in a large BCA taking on one extra is only an increase of maybe 5% of the workforce but in a small BCA taking on one could be a 20% increase. Try justifying a 20% increase in staff numbers to your superiors and see how far you get.

This, coupled with an Act change and a change in the type of building required stretches the resources of the small city BCA to breaking point when Apartments, Motels and Mega Stores are being built at quite a fast pace.

Nelson City has implemented a few ideas to cope. These include a plan processing team, in place now for over 7 years. This team only checks plans, does not rotate duties and are becoming quite specialised, which has produced a better quality control but is difficult to staff at small BCA level. The next initiative followed on from that, inspectors (BCOs) now only inspect, this means their day is mostly on the sites where they should be and not in the office. The front counter staff are more focused on building as the other functions normally attributed to Customer Services Officers have been carved off, i.e., dogs, WOF, rates etc. Another idea has been to keep the inspectors on the positive side of building control. This has been achieved by carving the regulatory side off so Notices to Fix are handled by a separate department. The inspectors still do control but as soon as there is some resistance it is handed over to the enforcement guys.

Personally, I would like to see the DBH take over all building control with maybe 2 or 3 processing teams and councils being service centres and providing PIMS and inspections and with the possibility of independent inspectors, but that is just my opinion.

*Keith Langham
BOINZ Board member, Nelson/Marlborough*

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TOTAL NEW DWELLINGS

	Auckland City	Nelson City	Auckland City	Nelson City	Auckland City	Nelson City
	Number	Number	Dollars	Dollars	Sqm	Sqm
Jun-96	2,114	232	325,661,636	24,901,605	335,621	31,898
Jun-97	2,273	277	322,386,387	31,950,853	373,622	41,620
Jun-98	2,700	236	382,285,921	29,352,425	377,261	37,404
Jun-99	2,696	150	359,625,573	20,299,440	365,582	26,537
Jun-00	2,939	154	403,649,326	19,707,551	415,464	25,772
Jun-01	1,976	167	258,749,035	23,698,546	286,694	28,140
Jun-02	2,671	223	447,562,036	34,966,835	445,906	40,980
Jun-03	4,780	362	611,079,326	61,788,150	539,501	61,843
Jun-04	5,093	374	710,922,124	81,300,470	606,550	86,759
Jun-05	3,788	254	654,974,532	52,065,726	458,062	45,788

TOTAL OTHER NEW BUILDINGS

Jun-96	150	50	205,567,717	12,143,468	378,686	27,492
Jun-97	307	73	225,241,139	15,755,175	268,155	33,680
Jun-98	247	45	367,300,956	19,844,078	373,032	24,690
Jun-99	258	33	291,666,403	6,193,350	439,312	9,107
Jun-00	222	56	220,042,940	16,295,910	287,809	23,125
Jun-01	220	45	238,848,896	37,344,917	315,707	32,010
Jun-02	221	48	392,101,607	11,776,126	285,909	25,105
Jun-03	202	57	211,655,075	12,649,826	259,721	21,710
Jun-04	201	76	306,992,108	25,458,713	361,694	35,947
Jun-05	230	62	374,418,264	23,218,327	291,093	35,157

Source: Statistics New Zealand.

In relation to the article by Keith Langham, the tables above show how levels of new building activity have increased over the last 3-4 years in Nelson compared with previous years and as compared with Auckland. There are no reliable statistics available showing the number of building officials employed by region.

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High-rise in Wanganui? New retirement village spares no expense on specs

One of the more significant projects happening in Wanganui at the moment is the new retirement home complex developed by the Ryman Group, based in Christchurch. The site chosen, on St Johns Hill Wanganui, was formally a Catholic Girls School, with attached boarding accommodation and church.

The two-storey brick school was demolished years ago and the accommodation remained, being used for a variety of purposes. When Ryman purchased the property it was cleared totally except for the lovely old church, which has now been carefully integrated into the new work. To tie the complex into the history of Wanganui an old pioneering aviators name was chosen - The Jane Winston Retirement Village.

The project has been built in stages - obviously in part to reflect the availability of contractors, which was extremely stretched when the project first launched. The hospital wing built first, incorporates 32 beds, then the adjacent office wing was added and runs through to the three-storey apartment complex.

This 'high rise' is unique to us here in Wanganui, with the ground floor providing a range of support functions, a swimming pool, and a dozen apartments. A feature of the three-storey high enclosed atrium is that it is open top to bottom, with two floors of own-your-own apartments with balconies that overlook the space below.

The building has smoke detection to each room (as separate fire cells), with huge extract fans at high level, in the gable ends of the enclosing roof, for smoke extraction. Part of the ground floor of this building, is separated by 'glazed fire walls', which incorporate drencher sprinkler heads for control.

To the perimeter of the property is currently being completed a range of dual attached houses with attached garaging with direct access in most cases onto the street. These houses are completely self contained, but if the occupants want to, they can meander over to the dining room for a prepared meal, or frolic in the lovely indoor pool, or other recreational facilities.

When first mooted, the project value was approximately \$17 million, and it has been completed in stages.

The labour resources required were huge with the majority of the workforce and 'subbies' sourced from Wanganui, however as work progressed and various stages overlapped a number of subtrades particularly brickies and gib stoppers had to be imported to assist the tight time frames.

With initial good planning, the project has been able to be occupied in stages, and there has been no call to use Section 363 provisions for public protection in partially completed buildings.

The project is currently on Stage 7, with a couple of more stages to go before full completion.

*Jeff Jamieson
Board member, Wanganui*



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What is green building... and what will it mean for you?

The New Zealand Green Building Council held workshops in Auckland, Wellington, and Christchurch earlier this year. More than 200 people from a wide range of industry sectors (see pie chart below) attended these workshops. Although the immediate focus of the NZGBC is on the commercial property sector there was also strong interest at the workshops in the uptake of green building objectives for the residential sector.

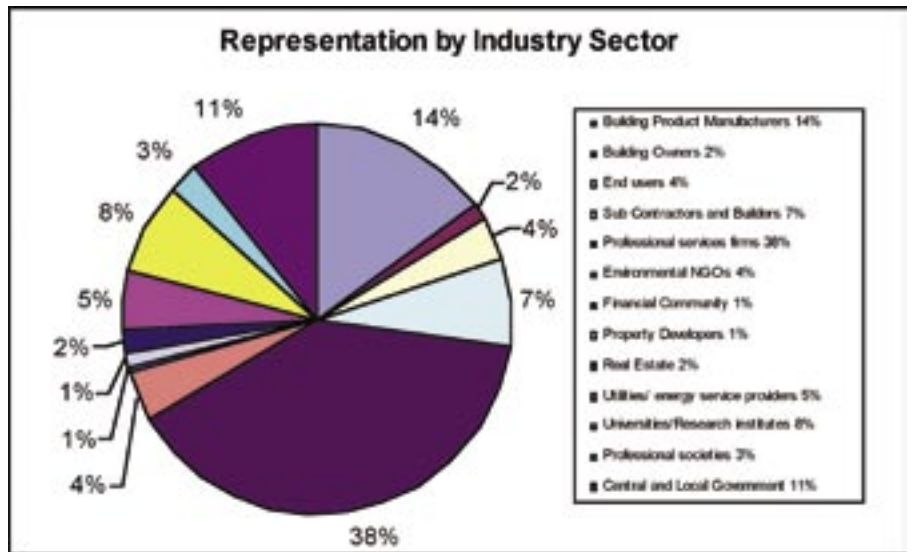
Having workshops in each of the "main" centres has provided the Council with data that show clear regional differences, that will be considered when deciding weighting for the importance of the different topics in the final building rating tool.

For example, in the table, the topic "Energy Efficiency" might include some of the following rating measures:

1. Energy rating incorporated into design
2. Level of energy use
3. Electrical sub-metering for different tenants, uses and floors
4. Office lighting energy requirements
5. Presence of peak energy demand infrastructure
6. Renewable energy sourcing (type and quantity)
7. Passive heating and cooling design
8. Presence of a lighting control system
9. Potential for passive solar energy collection and storage

The table shows that energy is emerging as the top overall priority in all three centres.

Building control staff I hear you saying...



Ranking of importance (1=highest)

Topics measured	Overall	AKL	WTG	CHC
Energy efficiency	1	1	1	1
Environmental quality within the building	2	2	2	5
Transport	3	3	6	8
Materials	4	5	6	6
Management systems, procedures and plans	5	6	4	3
Land use and ecology	6	4	3	3
Water efficiency	7	8	9	9
Flexibility and adaptability	8	9	5	2
Emissions, effluent and pollution	9	7	8	6
Quality, service and risk	10	10	10	10

Table 1: Importance ranking of the topics measured by 10 rating tools.

In the event that these require your evaluation, is this likely to bring about another Acceptable or Alternative Solution?

Quite possibly in the future, as in Australia energy rating tools have recently been incorporated into the building code. One

of the challenges for the Green Building Council is to work in partnership with the organisations that have already developed rating tools to look at possible barriers to uptake and opportunity that exists for more widespread use of rating tools.

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Green building - how will our buildings measure up?

Many commentators have blamed the lack of a back up grid for Auckland for the June blackout in New Zealand's largest city but this is only one event underlying the real issue that is the growing population and the increasing energy demand by households and businesses for lighting and appliances.

"The importance of overcoming adverse conditions was shown in the recent Auckland power blackout when most corporates ground to a halt", said Sydney based Simon Carter, Director of Innovation for Colliers International. "Many so-called A-grade buildings didn't have back-up systems or had systems that failed. We had A-grade buildings with diesel generators but no diesel. One had a generator with an electric start-up motor" he said. The Dominion Post 9 July 2006.

The Australian Green Building Council urges owners to incorporate green building principles into building designs, "a field in which Australia is well ahead of New Zealand" according to Simon Carter. However, he says while "we are very good at designing green buildings. We are not so good at creating demand for them" though this is changing with a move to recognise the benefits of future-proofing by the Australian property industry. It is, Simon Carter says, "Australian federal government policy that departments only enter into new tenancies in buildings that meet green standards". So how can New Zealand future-proof its buildings?

NEW ZEALAND GREEN BUILDING COUNCIL EVOLVES

Last year a property and building sector industry meeting was held to discuss the formation of a New Zealand Green Building Council. The inception of a New Zealand council follows on the formation of Green Building Councils in the US, Canada, Australia, Mexico, India and Taiwan.

The aim of the NZGBC is to reduce the impact of development and use of the built environment. The council aims to do this by focusing on three main areas; the establishment of Rating Systems to standardise and improve the design and performance of buildings; develop



education programmes to increase levels of knowledge and market awareness; and develop an information hub that will provide data, case studies and resources that will empower business to adopt green building practises.

The NZGBC has started a project to review a number of existing sustainable building rating tools and assess them for suitability for widespread use in New Zealand. Industry consultation into this process began in March 2006 (results attached) in Auckland, Wellington, and Christchurch. The outcome will be to recommend a suitable scheme for adoption in New Zealand, and an implementation plan for the scheme.

Organisations that have supported the activities of the interim council so far include Building Research, the Ministry for the Environment, Beacon Pathway, Dow Property Group, Sinclair Knight Merz, Matisse, Stephenson & Turner, Warren & Mahoney, Massey University, the Defence Force, the Sustainable Business Network, Jasmax, Beca, URS and Winstone Wallboards. Contributions have been made by way of both donations for pre-establishment costs and in-kind support.

More information about the New Zealand Green Building Council can be found at www.nzgbc.org.nz

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Bob Tidd

Digital processing and storage of Building Consent documentation

WHAT IS DIGITAL PROCESSING?

It is becoming harder than ever to fit consent documents into an ever decreasing available space for document filing. Councils are therefore resorting to digital storage of these documents to save space and improve access to these files.

This article describes some pros and cons of digital processing (ie scanning documents and electronic storage). It deals with how you should go about scanning and printing hard copy, how to process files supplied in digital form and discusses the file formats that work best.

SETTING UP THE SYSTEM

To process consents digitally you will need a user friendly scanning and processing program to store documents such as plans, letters etc electronically. Documents that you would normally file as hard copy can, with the appropriate computer hardware and software, be scanned and become ideal for use as an electronic storage and retrieval library. I cannot suggest in this article what program you should use, but here are some points you might consider.

It is critical that advice is taken from all relevant parties prior to making a commitment to obtain a particular scanning machine or program. You need to make sure that the computers are of sufficient speed and memory to handle all the digital images that are created from the digital scanning process. You may find that you need to have a specific program that will allow you to store the scanned documents along with other documents you wish to store. For example, some processing programs have their own simple storage system that will store scanned images, but they may not store other documents such as Word or Excel files.

Also critical is ensuring that there is a very good training system in place for your staff to change over to a digital system, and that there is an ongoing method of training staff for changes and upgrades etc. For example, you may find it advantageous to provide processing officers with a dual screen computer set-up, as this allows for greater flexibility when dealing with images of plans and the many documents that can be processed. In addition, it is worth considering appointing a designated staff member to do the scanning work.

I therefore recommend that you investigate what is available, ask for a demonstration and a trial period that a designated operator could test in house. The web site of the company we use is <http://www.onstreamsystems.com>. There you will also find a case study done by them about our system (Hastings District Council), which may give you some more information.

USING SCANS AND DIGITAL PROCESSING TO CREATE ELECTRONIC FILES

The convenience of digital processing techniques can benefit everyone in a building controls environment because everyone has access to viewing documents in the system, and the system allows only one person at a time to edit files, which is reassuring to know. Also advantageous is that stamps and endorsements need only be appended to one set of plans and this, also, can be achieved

digitally. Most programs will allow you to create stamps that can be used on the plans, or free text with surrounding boxes or background infill, lines, arrows, boxes and circles and many other features. Some will allow you to paste in files from a digital folder location, where extracts from the Building Code, etc have previously been saved. Also, a page or part page can be inserted from a digital version of a Code or Standard.

You will therefore also find it advantageous to have digital versions of the Building Act, the Building Code, as well as Standards, included in your system. Start at least with the main ones, but make a point of getting the digital version as well as a hard copy of a Standard, when ordering new Standards.

As to the method of scanning, there are a few tips worth noting.

It is generally more appropriate to scan any Building Consent documents in black and white. Then, any endorsements or stamps, etc, placed on the plans during the processing stage, will stand out more clearly for the builder and the inspecting building officer. Saving in black and white as opposed to colour will also minimise the file size.

The quality of an image is reduced each time a document is copied, scanned or faxed so original prints are preferred for scanning purposes. It is not advisable to scan faxed documents. Also, do not accept reduced size plans as they are often a lesser quality if reduced through a photocopy reduction.

Be wary about "compressing" scanned images and only use this after extensive testing, to ensure that all the files remain legible when a detail is zoomed into on the computer screen. Some compressions are not suitable for the likes of scanned Building Consent Plans and specifications etc.

RECEIVING DIGITAL COPIES OF BC DOCUMENTS

When scanning hard copies you should be aware of the disk space they will take up on your system and this also applies to the size of the documents you receive. An average set of plans and other documents ranging from A4 to A1 can, on average, take up 1 or 2 MB through to about 10 MB of disk space, some will be larger. The file size of a single page scanned in black and white might only be 26kb, but the same page scanned in colour (with just a colour received stamp on it) might require 2 MB of disk space.

You also need to ensure that the files you receive will be compatible with your computer software. The best file types to work with are PDFs and TIFs. TIF images can be edited and are not large in size. However, it is preferable that designers save documents as multi-page PDFs (as opposed to JPEG or GIF type files which have only 1 page per file), because, if each page of a document is saved as a separate file then each page would need to be processed separately on your system. Many draughting programs can readily convert files they create into PDF format. However, designers should be advised not to compress multi-page documents. Your processing program may not be able to read their file compression type and you will probably find the image is unreadable when you zoom into it.

Receiving documents electronically will save the scanning team time as they will only have to convert the images from PDF (recommended format to receive in) to the normal operating TIF image (which can be edited). Information sent electronically on CD or by email to and from the building officer avoids the need for such documents to be scanned (although hard copy replies need to be).

PRINTING APPROVED BC DOCUMENTS FOR ON SITE INSPECTION

Scanned and endorsed pages will require a good size capacity printer for printing the required documents for on site. Make sure the printer can produce prints of sufficient size and clarity.

You need to decide if you are going to print off approved plans on A2 or A1 if supplied in that size. Both councils I have been involved with doing digital processing of BCs, decided to print all plans on A3 in colour to show endorsements and stamps.

A colour printer of A2 or A1 sheets will not only be much more expensive to obtain and maintain, you will require a lot more floor space to operate it. Also as new copies are required, or if errors are made, there will be a great deal of very expensive wasted paper. An A3 plan can easily be photocopied in almost any town or city, unlike A2 or A1. One drawback experienced by site inspectors and builders is that a cluttered A1 plan printed off as A3 is very difficult to read. I therefore recommend discussion between designers and councils to consider options to reduce this problem. Most processing programs will allow you to select a smaller section of that plan and save it as a separate page (zoomed in to that section).

More and more modern designers are moving towards producing plans on A3 as this is a more user friendly size for their clients to be able to readily get extra copies. The larger cities may have places that you can get an A2 or A1 photocopy done, but most small and large towns do not have this facility.

There is still a legislative requirement to retain an archive set of hard-copy documents. These can be stored off site as they rarely need to be accessed. For large numbers of multi-page plans and specifications it is best to receive 2 sets of plans, return one set to the customer with attached endorsed pages and retain the other for the council archives.

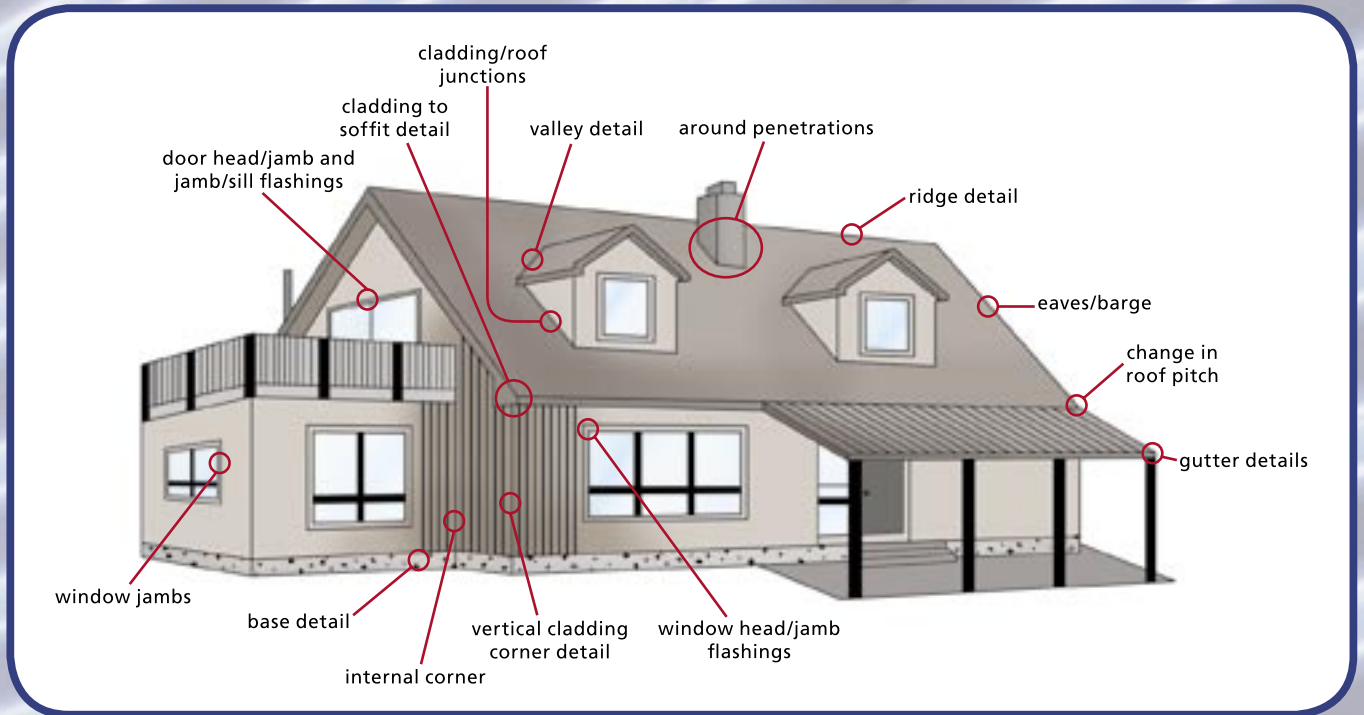
WANT TO KNOW MORE?

We have had several councils come and visit us to see our system and seek further clarification. Likewise you could visit other councils, which have similar operations.

There is also a user group for councils that would like assistance, or wish to discuss issues relating to digital functionality and storage systems. It is under the LGOL website, www.localgovt.co.nz or email lists@localgovt.co.nz and ask to be added to the user group called 'INFOMGRS' Information and Records Managers.

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Solar water heating Standards

Introduction

The Energy Efficiency and Conservation Authority (EECA) has been working closely with the solar water heating industry since 2001 to support the development of a sustainable industry. This includes quality assurance for products, installation, and system performance.

EECA also administers a finance assistance programme for consumers, and aims to increase demand for solar water heating through generic marketing.

EECA has been focusing on the development of joint Australian and New Zealand Standards for the manufacture and installation of solar water heaters, as well as the inclusion of solar water heating in the New Zealand Building Code. The following information provides an update on this work:

Building Code Acceptable Solution G12/AS2

The Department of Building and Housing is developing an Acceptable Solution for Clause G12 of the New Zealand Building Code (G12/AS2). G12/AS2 will provide plumbers, building inspectors, and the public with a guide on how solar water heaters should be installed to meet the requirements of the Building Code. It is anticipated that G12/AS2 will help to reduce the barrier of obtaining a building consent for solar water heating systems, assist building inspectors identify specific installation requirements, and help give guidance to installers so they are aware of requirements.

G12/AS2 will not be a mandatory requirement but, as the title suggests, an acceptable approach to installing a solar water heating system in a manner that complies with the Building Code. There will be full consultation on the draft G12/AS2 later this year.

AS/NZS 2712 - Solar and heat pump water heaters – design and construction

This Standard specifies the requirements for product manufacture, durability and safety.

Relevant government agencies and industry groups are reviewing the latest draft of this Standard to ensure it is appropriate for the New Zealand industry.



Like many Standards, AS/NZS 2712 has undergone frequent review in recent years, and changes to date have seen it become increasingly performance-based, rather than prescriptive.

The current revision will help ensure that customised systems, and ancillary equipment such as pumps and controllers, are appropriately dealt with in the Standard. A substantial number of solar systems sold in New Zealand are customised or pumped systems.

AS/NZS3500.4 – National Plumbing and Drainage – Hot water supply systems

Section 4 of this Standard refers to the installation of solar hot water systems.

Although AS/NZS 3500.4 is already referred to in the New Zealand Building Code, it is being reviewed to ensure it is still relevant and appropriate for the New Zealand solar water heating industry.

As the Acceptable Solution G12/AS2 is developed, this Standard will also be updated so there is consistency between the two documents.

Solar water heating building consents survey

In March this year EECA conducted an email survey of local authorities to establish their current practice and policies when issuing building consents for solar water heating installations.

The results from this work are helping EECA, the Department of Building and Housing and the solar water heating industry develop the Acceptable Solution for clause G12 of the Building Code, as well as informing EECA's ongoing quality assurance programme.

Key survey findings

Survey result: The most important factor for councils is evidence that products have been appraised

and/or tested.

Applied Research Services, a Nelson-based laboratory, are now able to test to Standard AS/NZS 2712 Solar and heat pump water heaters – design and construction.

Survey result: Councils have confidence in installers who have a solid reputation, have undergone training, and have suitable accreditation.

The Solar Industries Association and EECA have assisted the Waikato Institute of Technology (Wintec) to establish a solar water heating installer training course.

Survey result: The Building Code is the most common reference document for installation compliance.

EECA, the Department of Building and Housing, and the solar water heating industry are now developing an Acceptable Solution for the Building Code to provide guidance on installation processes and requirements. EECA and the industry continue to work on joint Australian and New Zealand Standards committees to review key Standards.

Survey result: There's usually an increased cost to obtain consent for a system that has the cylinder on the roof. This is because of the need for structural support analysis, and the increased number of inspections this involves.

The Solar Industries Association (SIA) has developed a guide titled the 'Manual for Structural Assessment for Installation of Solar Water Heating in Domestic Dwellings', which is available from www.solarindustries.org.nz. During the development of the Acceptable Solution, the manual will be revised and updated.

For more information about the solar water heating industry in New Zealand, please also visit www.solarsmarter.org.nz or www.eeca.govt.nz

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Which side of the fence?

That there exists another point of view to the mindless meddling of bureaucracy in people's private lives is alluded to in the refreshing article 'Never the Twain' by Douglas Lloyd-Jenkins, an extract from which was published in Straight Up June 2006.

Frankly, as a New Zealander living in what is held to be a western country philosophically grounded in the concept of individual freedom and the right to enjoy private property rights without interference from the state, I was disgusted with the treatment of singer Shania Twain by Queenstown Lakes District Council when she purchased land near Wanaka a few years ago. Was this the same Council that more recently so piously decided, this time, not to prosecute another property owner for mowing a sign in the grass on his own property?

Douglas Lloyd-Jenkins is Associate Professor of Design in the School of Design, UNITEC, Auckland, and is an architecture and design commentator. In his original article published in the N Z Listener 23/07/05 he referred to some '...rather strange attitudes to the regulation of new buildings in the rural environment...' and he commented about 'myths' regarding 'natural landscapes'. It would be interesting to know what Professor Jenkins thinks is driving these strange attitudes, and if he might agree that the following two influences are the cause.

Firstly there is the Resource Management legislation that nowhere even mentions private property rights, but places the age-old battle for control of land in the hands of Resource Managers. In western society the purchase of Motatapu Station should have been a private matter

between the willing seller and Twain, the willing purchaser. The design of her house should have been her business as the new property owner.

Secondly there is the new cultural imperialism of environmentalism which enables all manner of busy bodies to dictate with religious zeal what owners will do with their own property. As Professor Deepak Lal (past) Professor Emeritus of University College in London said, 'The ecological movement is the latest manifestation of the various secular religions in the west once the Christian God died for so many with the Scientific and Darwinian revolutions' (ref google: The new cultural imperialism: The greens and economic development. Part 2, paragraph 5.)

What is the answer to the question raised by Straight Up in the abbreviated article 'which side of the fence does your opinion sit'? Perhaps pylons are neither ugly nor not ugly. Only necessary, and the business only of property owners directly affected who may negotiate recompense for any loss suffered. As for Professor Lal's new age secular religionists, the environmental storm troopers who rampage through other people's back yards and private properties holding aloft their Resource Management degrees, well, I think I'll remain with the Building Act. If New Zealand ever has a Bastille Day, the peasants will guillotine the Resource Consent Officers long before the Building Officials.

Chris Seymour
BOINZ member, Wellington

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Plumbing failure of polybutylene

featured in *The Dominion Post* on 20 May 2006.



Timber that has rotted due to leaks in a polybutylene piping joint, uncovered when an infinity system was being installed and the piping ruptured.

“On a par with the leaky homes issue” said Dr Eric Palmer of Master Plumbers.

I do 5 jobs a week repairing failures due to “leaks from crimped fitting joints and less commonly on sections of piping that have split” said one plumber.

I’m on “3 callouts a month” said another.

“I send them [the manufacturer] a Christmas card every year thanking them for their faulty product” joked one plumber.

Also, as stated in *The Dominion Post* article, we learn that:

- Insurers are reluctant to pay out after repeated claims for these failures.
- Re-plumbing an average house costs \$5,000.
- In these instances reported by the newspaper, faulty installation was not considered to be a factor in the failure of the product.

According to George Skimming, director of licensing services for WCC, “manufacturers...and the person who supplied [the product] are to blame, not his department for issuing a building consent.” “We suffer from damned if we do and damned if we don’t. People should always investigate the plumbing when they buy a house” he said.

The life of this product clearly falls short of what was originally expected from it and so often when a product fails it becomes a case of buyer beware for the end users. I therefore believe that there should be a register of claims against in situ building products that have a poor track record, or turned another way, some other provision whereby construction workers and home owners can consult a register for independent ratings on the durability of products that either substantiate or challenge what the manufacturer has said about the product. I hear some of you say “a sort of Dog and Lemon Guide for household products.” Well, maybe. If not a register or the like then it wouldn’t hurt to insist at the time applications are made for consents to renovate and build that products with a faulty track record have to be removed as part of the work.

Technology is enabling more and more products to be (1) produced and (2) to be sold on global markets. What come back is there on a product that is planned for obsolence within 2, 5 or 10 years? Price and country of manufacture are not necessarily indicators of a product’s performance as once they might have been. So how can we rate products on the market today in a way that protects consumers and is a fair cop for manufacturers?

*Darrell Spout
SU Plumbing*

Quality construction through better building control

By Dr David Nelson, International Code Council

Quality construction remains an elusive dream in many areas of the world, including the more prosperous, industrialized countries which have the resources for quality. Simple governmental mandates that construction will meet minimum codes is not the solution – this has been tried for years by nearly every country, with poor results when these are opposed or ignored by construction interests. Often, the reaction to an authoritative “cop-on-the-beat” approach to building control is that the cost of compliance exceeds the benefit to the public, and will thus not be funded by the building owner. Governmental regulation of construction ultimately drives up the cost of construction, and places very real limits on the authority of the engineer, contractor, and building owner over construction practices and materials. Quality construction cannot be the sole responsibility of government but must be accepted and used by construction professionals and building owners to protect lives and property from poor construction.

Quality construction requires voluntary collaboration between the public and private-sectors to generate a viable system of building control. This collaboration leads to greater public awareness that construction standards and building codes provide positive value to the quality and safety of construction, leading to greater support by the public and the construction trades. In the United States, there is now unprecedented collaboration between public and private-sector construction interests, leading for the first time in US history to adoption of a single series of construction codes (the International Codes – “I” Codes) by states throughout the country. Internationally, the “I” codes also serve as the basis of new national codes in several countries in Latin America, the Caribbean and the Middle East.

In recent years, natural and man-made disasters have brought widespread destruction to property, and tragic, widespread loss of life in countries throughout the world. Earthquake damage in India and other countries, hurricane flood damage in the US, and tsunamis in Indonesia surprised all of us with the level of devastation and loss of life, leading to a greater international commitment to higher quality construction codes and practices. While no construction is immune to all disasters, it is also clear that risks to property and humans may be reduced through better planning and quality of construction. The public is more aware that quality construction is a good investment for society, ultimately reducing the risk to the property and occupants, and to the public at large in terms of the costs of disaster recovery. National adoption and enforcement of construction codes is now seen as a priority by many countries.

As a result, there is voluntary collaboration between the public and private-sector in the application of national codes to US – including the American Institute of Architects (AIA) and the National Association of Home Builders (NAHB) - have made quality construction codes a high priority, greatly enhancing the effectiveness of these national quality construction initiatives.

Building codes providing for quality and safe construction tend to be very technical, dry reading, with effective use requiring a good deal of training. To encourage professionalism by construction professionals, it is common in the US for these professionals to be “certified” or “licensed” to recognised standard of competency. These professions include:

- Contractors and Tradespersons, who are often required to be licensed by local or state contractor boards, however, requirements vary widely. In many rural areas of the US, construction trades are

unregulated.

- Architects and Engineers, who are licensed by state governments. Many of these also participate in various private-sector certifications, including those sponsored by the American Institute of Architects (AIA). Except for unusually large or complex homes, residential construction does not often require design by a licensed architect or engineer.
- Building Control Officials (called “building officials” in the US), who participate in the non-profit International Code Council (ICC) certification programs. The “Certified Building Officials” (CBOTM) credential is commonly recognised, and requires completion of examinations in various areas of construction and management.
- Construction inspectors, who work for local or state government, are often required to be certified. For residential construction, a “combination residential inspector” certification is usually required – and covers building, electrical, mechanical, and plumbing systems.
- Home inspectors in the US are private-sector real-estate inspectors of existing dwellings. These inspectors are licensed in a number of states, and voluntarily participate in national or state certifications. One of the best of these programs is the “California Home Inspector Exam,” sponsored by the California Real Estate Inspectors Association (<http://www.creia.org>).

International trade agreements are rapidly expanding to address international trade in professional services relating to certification of personnel – with international standards of quality under the International Standards Organization (ISO). The New Zealand-based International Accreditation Forum (<http://www.iaf.nu>) coordinates international interpretation and national accreditation to these standards.

In a similar manner, laboratories which test and approve construction materials are also moving towards ISO standards, with a link to global trade agreements. In the US, various national listing agencies provide free Internet-based reports, with an expectation that these reports will be checked by the design professionals and local building control agency.

Governmental building control agencies themselves are also voluntarily participating in national accreditation, with several accreditation agencies specializing in this area. Internationally, these include the US-based International Accreditation Services (IAS – <http://www.ias-online.org>) and the International Accreditation New Zealand (IANZ – <http://www.ianz.govt.nz>).

Quality construction protecting both lives and property requires a collaborative effort between the public and government, quality personnel and quality materials. New international standards of quality are rapidly becoming mandatory to compete in the global marketplace. Individuals who are in public service have a special obligation to the public to encourage recognition of quality standards which are internationally recognised, with objective/third-party accreditation. New Zealand’s leadership in promoting quality construction is internationally recognised, with significant benefits to the global community.

Dr David Nelson is Vice President of Certification and Testing for the International Code Council (ICC). He is based in Birmingham, Alabama, USA (dnelson@iccsafe.org). ICC’s website is <http://www.iccsafe.org>.



David Nelson

EVENT CALENDAR

SEPTEMBER 2006

On-site Wastewater Management Training Course	Auckland, September 5th & 6th
Reading and Interpreting Consent Documents Workshop Series 2006	Hamilton, September 5th
Reading and Interpreting Consent Documents Workshop Series 2006	Tauranga, September 6th
Barrier Free New Zealand Trust Training Seminar	Oamaru, September 7th & 8th
BOINZ Fire Safety Special Interest Group Forum	To be advised; September 8th
On-site Wastewater Management Training Course	Whangarei, September 12th & 13th
Reading and Interpreting Consent Documents Workshop Series 2006	New Plymouth, September 12th
Building Update Workshop	Wellington, September 14th & 15th
Pool Compliance Workshop	Wellington, September 28th

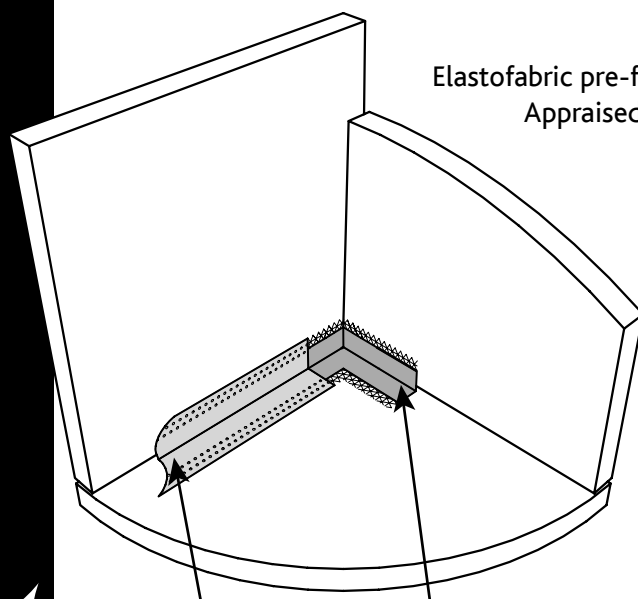
OCTOBER 2006

National Small Water Conference & Expo 2006	Wellington, October 2nd & 3rd
Building Update Workshop	Palmerston North, October 5th
Building Update Workshop	Wanganui, October 6th
Barrier Free New Zealand Trust Training Seminar	Hastings/Gisborne Oct 9th & 10th
Pool Compliance Workshop	Christchurch, October 12th
On-site Wastewater Management Training Course	Nelson, October 18th & 19th
Building Update Workshop	Nelson, October 19th
On-site Wastewater Management Training Course	Christchurch, October 24th & 25th

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On-site Wastewater Management Training Course	Dunedin, November 1st & 2nd
BOINZ Local Govt Managers Meeting	Wellington, November 3rd
On-site Wastewater Management Training Course	Invercargill, November 6th & 7th
On-site Wastewater Management Training Course	Queenstown, November 9th & 10th
Barrier Free New Zealand Trust Training Seminar	North Shore, Auckland, Nov 9th & 10th

Elastofabric pre-formed corners and tapes overcome the challenges at movement zones that often compromise waterproofing longevity



Elastofabric reinforcement tape

Elastofabric pre-formed corner - internal (external corners also available)

Elastofabric pre-formed corners and tapes, form part of our BRANZ Appraised duro™ systems and provide high elastic recovery while maintaining high tensile strength, two key properties that enhance long term protection



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