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Registered Master Builders

The litmus test of success: Living in your own award-winning home

Tauranga RMBs create a little magic

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building today

Building an award-winning home is one thing but living in it is the litmus test of success.

Future Homes owner and Registered Master Builder Alan Baddeley has done both.

He won the DBH Sustainable Homes under $500,000 category in the Registered Master Builders 2008 House of the Year, in association with PlaceMakers, and then lived in the Acacia Bay, Taupo, house for four months before it was sold. Read his story on pages 8 and 9.

Other topics of note in this issue include BRANZ and product certification, and the cheer being spread throughout the country thanks to the charitable work being carried out by Registered Master Builders.

Andrew Darlington
Editor

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Win an Alco Trade Platform or Nokia 3120c online!

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chief's chat

by ceo warwick quinn

Recognising the four-phase 'Product Life Cycle'

Every product goes through what is called "the Product Life Cycle". This concept helps marketers interpret product and market dynamics and to develop strategies to react to changing market conditions.

The product, and the strategies employed to promote it, sit within what is happening to the overall market so this needs to be kept in mind. Basically though, a product has four phases:

- Introduction
- Growth
- Maturity
- Decline

Each of these phases exhibit different characteristics and require different approaches to marketing objectives, product design, distribution techniques, advertising and sales promotion.

An analogy can be drawn to your own building businesses and your approach to how you might contemplate running and promoting your business.

Now this is not a magic formula, but does provide some insights into the sorts of things you may want to consider.

When a product is first introduced (eg, new materials) some of the characteristics that exist relate to:

- Sales — low
- Costs — high cost per customer
- Profits — negative
- Customers — they are innovative
- Competitors — few

So what are the strategies you should generally employ in this phase?

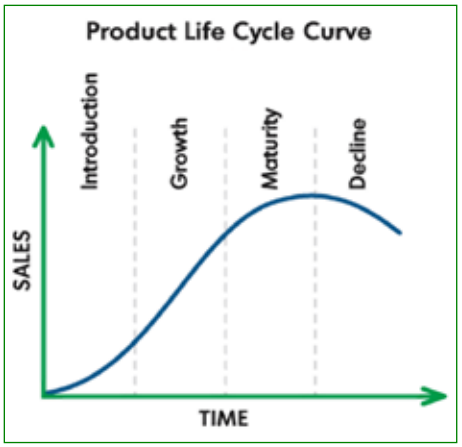
- Marketing objectives — create product awareness and trial
- Product strategies — offer a basis product
- Price — charge cost-plus
- Distribution — build selective distribution
- Advertising — build product awareness among early adopters and dealers
- Sales promotion — use heavy sales promotion to entice trial

Now that the product is introduced it moves into the Growth Phase (hopefully). Its characteristics are:

- Sales — rapidly rising
- Costs — average cost per customer
- Profits — rising profits
- Customers — early adopters
- Competitors — growing number

How should you respond?

- Marketing objectives — maximise market share
- Product strategies — offer product extensions, service, warranties



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• Price — price to penetrate market
• Distribution — build intensive distribution
• Advertising — build awareness and interest in mass market
• Sales promotion — reduce to take advantage of heavy customer demand

The product then enters the Maturity Phase, which is characterised by:
• Sales — peak sales
• Costs — low cost per customer
• Profits — high
• Customers — middle majority
• Competitors — stable number, beginning to decline

So, what should you do?
• Marketing objectives — maximise profit while defending market share
• Product strategies — diversify brands and items models
• Price — price to match or beat competitors
• Distribution — build more intensive distribution
• Advertising — stress brand differences and benefits
• Sales promotion — increase to encourage brand switching

Finally, every product has its day (some take longer than others) and starts to Decline, characterised by
• Sales — declining sales
• Costs — low cost per customer
• Profits — declining profits
• Customers — laggards
• Competitors — declining number

How do you react?
• Marketing objectives — reduce expenditure and milk the brand
• Product strategies — phase out weak
• Price — cut price
• Distribution — go selective: phase out unprofitable outlets
• Advertising — reduce to level needed to retain hard-core loyals
• Sales promotion — reduce to minimal level

As mentioned earlier, this is not a magic formula and a panacea to all woes. The key is to recognise what phase you are in early enough so you can react appropriately and in time.

It is also not to be confused with overall poor economic conditions that affect sales as it is quite feasible to still grow and increase market share during such times. It's just at a slower rate.

Tauranga MBs and Make-A-Wish Foundation team up to make Regan's day

At a recent Tauranga Registered Master Builders Association meeting, members were asked to give up some of their time to build a playhouse for a two-year-old boy called Regan (from Papamoa), as part of a Make-A-Wish Foundation wish.

A number of Tauranga RMBA members generously donated their time to help out someone from their community.

Regan has acute lymphoblastic leukemia and has undergone various treatments since he was just nine months old.

He finished his chemotherapy treatment at the end of March but, because his immune system has been weakened by the treatment, he's unable to join a play centre for at least 12 months, possibly never.

David Shaw from Shaw Builders, along with builders from Gary Walmsley Builders, Form New Zealand, DY Builders and Adobe Builders, arrived at Regan's house one morning, tools in hand and all set to go.

Regan's parents had taken him out for the morning, and the builders had a set time frame in which to build the playhouse so it would be ready by the time he got home.

"The instructions for the playhouse said it would take about four hours to build, but we had it all done within an hour and a half," Mr Shaw says.

"Mind you, we did make a few alterations to the kit set as it wasn't quite up to our standards!"

"I hadn't done anything like this before, and I'd do it over and over again if I had the chance," Mr Shaw says.

"Seeing Regan's face and hearing his screams of delight when he saw what we'd done made for a pretty special moment. Some of us old guys were a little jealous too — we wouldn't have minded a playhouse like that when we were kids!"

Regan was last seen dragging his sleeping bag out to his new playhouse and begging his Mum to let him sleep in it.

Thanks again to Tauranga Registered Master Builders and Make-A-Wish Foundation for making Regan's day. It's one he (and everyone involved) won't forget for a long time.

• If you are a Registered Master Builder and have an interesting story to tell, please contact RMBF marketing communications manager Tracey Bree on 04 385 5638 or email: tracey.bree@masterbuilder.org.nz.

Auckland RMB builds a swing for Skyla

Recently the Auckland Registered Master Builders Association received an email asking if anyone could help with putting up a swing for disabled girl Skyla Radford.

Out of the kindness of his heart, Registered Master Builder Nigel Benton stepped forward and took on the project.

Below is the thank you note from the Radfords.

It's just another example of great community spirit from one of our members — thanks Nigel!

Hi there Sally (Auckland RMBA manager Sally Mehrtens)

My name is Kran Radford. I have a daughter Skyla who has Angelman syndrome cerebral palsy. Skyla doesn't talk or sleep much, and is 21 years old. Even though Skyla doesn't talk I think the pictures show you how much she loves her new swing.

Thank you so much for the all the help to make Skyla's swing. Nigel Benton is such a top bloke — very professional and empathetic.

Skyla's swing looks fantastic. Nigel did an awesome job and it's so safe! She can spin it without hitting her head on the poles. Seeing her swing brings a tear to my eye. Skyla has slept every night since her swing has been up and swinging. She is at the back door first thing in the morning for a swing!

I can't thank you enough for your generosity. I would like to bake a huge chocolate cake or date scones for the staff as thanks for all your help. I just need an address to deliver it.
Kindest regards, Kran Radford

RMBF president Brent Mettrick's column returns next month.

REGISTERED MASTER BUILDERS
APPRENTICE OF THE YEAR 2009
IN ASSOCIATION WITH CARTERS YourBuildingPartner

Apprentice of the Year — be in to win!

Just a quick reminder that it's not too late to enter the Registered Master Builders Carters 2009 Apprentice of the Year, a competition that recognises excellence among young carpentry apprentices.

After all, you are the future leaders of New Zealand's construction industry, and the competition's sponsors (Carters, Registered Master Builders, BCITO and the Department of Building and Housing) want to celebrate your success.

How can you enter?

All you need to do is go to www.masterbuilder.org.nz, www.bcito.org.nz or www.carters.co.nz and download an entry form. Otherwise, you can contact the BCITO or Registered Master Builders, or visit your local Carters store.

The entry form is pretty simple. We just need:

- your name and contact details, and your employer's too,
- a couple of reasons why you're the best apprentice in your region,
- comments from your employer and training provider about why they think you deserve to win, and
- a short description of a building project that you're proud to have worked on. Entries close on Friday 31 July, so get your entries in now!

What about the judging?

A regional panel of judges (some good guys from Registered Master Builders, Carters and BCITO) will read your entry form and invite you to have a chat with them to find out more about why you are the best apprentice in your region.

After the interviews, up to 10 regional finalists will be selected and the judges will visit each finalist's place of work to decide who the regional winner and placegetters are.

The judges will be keeping an eye out for a few things so, as a bit of a heads up, they'll be looking for:

- your personal attributes (communication skills, teamwork, appearance and presentation, reliability and contribution),
- your knowledge of the sector, the law (acts and regulations) and building materials,
- your practical skills (presentation of projects, quality of work and attitude), and
- endorsement by other parties (your employer, training organisation and reference reports).

What can you win?

As well as getting a cool trophy and being known as the best apprentice in your area, each regional winner gets to go on a specialist Outward Bound Leadership Programme tailored for Apprentice of the Year winners (valued at up to $2600 plus travel).

They also receive a scholarship towards study in any construction or business course (valued at up to $2000), or a Carters voucher to be used for a substantial purchase (ie, a major tool) within 12 months following the competition (valued at up to $1500).

Regional placegetters are given regional placegetters certificates, and win awesome prize packs from Carters and their suppliers, including tools and products from Makita, Stanley, Irwin Industrial Tools and Wholesafe, as well as merchandise from the BCITO and material from the Department of Building and Housing.

And that's not all! Everyone who enters the competition also receives an apprenticeship membership to the Registered Master Builders Federation for one year, including a subscription to *Building Today*.

Now for the fine print

The competition is open to all carpentry apprentices — you don't have to work for a Registered Master Builder or be training with the BCITO to take part.

There are just a few conditions: to enter, you must have completed a minimum of two years of your National Certificate in Carpentry employed on site, or have completed your apprenticeship within six months of the closing date — Friday 31 July, 2009 — and be aged 26 years or younger as at 31 December 2009.

You need to be employed with a building company or individual builder at the time of judging. However, for the 2009 competition the management committee will consider requests to waive this requirement where the apprentice has lost their full-time employment due to the recession.

You'll just have to submit a reference as part of your entry from your most recent supervising employer.

What's next if you win?

Good news! The winners of each regional competition automatically become a finalist in the national competition, and will be flown to Wellington (along with three members of your family — or your best mates) in October to go head-to-head with the other top apprentices from around New Zealand.

The national winner of Apprentice of the Year in 2009 will receive a trip for two to a trade show worth $3000, a Carters Future Development Grant towards business or management study courses to the value of $5000, as well as more prizes to be confirmed.

Expert advice from last year's winners

What to expect . . .

"I think the judges wanted to see that entrants had demonstrated a level of leadership on their jobs. I also spent a lot of time preparing my entry material, researching aspects of the Building Code and talking to people in the industry — you can never be too prepared!

Shane Swan, Registered Master Builders Carters 2008 Apprentice of the Year for the Tauranga region.

Worth giving it a go?

"I think there were a lot of eligible apprentices last year who just didn't give it a shot. I would definitely say 'do it' — you might surprise yourself."

Roger Townley, Registered Master Builders Carters 2008 Apprentice of the Year for the Nelson/Marlborough region.

Still need more information?

If you need a hand with anything, call Kate Cooney on 04 494 5121 or email kcooney@dazzleevents.co.nz.

The litmus test of success – living

Building an award-winning sustainable home is one thing, but living in it is the litmus test of success.

Future Homes owner and Registered Master Builder Alan Baddeley has done both.

He won the Department of Building and Housing (DBH) Sustainable Homes under $500,000 category in the Registered Master Builders 2008 House of the Year, in association with PlaceMakers.

He has built 14 sustainable

in the home you built

Future Homes in the central North Island, where temperatures can soar, or plunge, with equal ferocity.

Mr Baddeley lived in the 4-bedroom, award-winning house, in Taupo's Acacia Bay, for four months before it was sold.

'It was cool in the summer months and, as winter came on, it attained its ambient temperature of between 18° and 23°, within minutes of turning on the heating."

Current owner Sue Pearce agrees.

"This is such a comfortable house to live in. I'm a painter and I particularly appreciate the clever use of skylights to flood the house with light. They're double glazed so they let in the warmth when the sun is out but keep the cold air out when it's not."

Mr Baddeley says keeping the envelope of a house well insulated, making clever use of materials and passive heating sources such as the skylights, will minimse energy consumption and lead to a much healthier home.

According to DBH deputy chief executive for building quality Dave Kelly, this is exactly why the department is sponsoring the under $500,000 House of the Year category again this year.

"We want kiwis to have good information and examples of how they can build and renovate their homes in a way that's good for them economically and environmentally, and Alan Baddeley's home provides that," he says.

Mr Baddeley installed a polystyrene panel and reinforced concrete wall system in the house. He also used under-floor insulation, double-glazed windows, solar/wetback hot water heating, a heat transfer system to redistribute warm air caught in peaked ceilings to cooler parts of the house, and skylights which take full advantage of passive heating sources.

Outside, he used cedar weatherboards — "because they're a sustainable product and look great" — and the German-made Sto Plaster System. He also installed a bio-cycling sewage system to channel all grey and black water (sewage) into an electronically-timed, property-wide irrigation system.

Mr Baddeley, who is currently building his next show home in conjunction with the Taupo District Council, says the DBH's sponsorship of this particular category of the House of the Year competition is particularly important.

"It shows that the department, as an authoritative sector leader, is committed to reducing the running costs of a home by modelling practical solutions, and that's great," he says.

Classically crafted to perfection

P.W Design and Build's stunning rendition of a 19th Century mansion was the deserving winner of the New Homes over $1 million category in the Registered Master Builders 2008 House of the Year, in association with PlaceMakers.

P.W Design owner/operator Paul Williams says it took just under two years to complete the stunning property.

"With a project of this magnitude there are always going to be challenges," Mr Williams says.

"The woodwork and intricate detailing was time consuming, but with a bit of kiwi ingenuity we got a great end result."

The stately property was modelled on Governor Sir George Grey's 19th Century home on Kawau Island, a design that impressed the competition's judges.

"The builder has painstakingly crafted many of the aesthetic details — from the battened ceiling to the exterior fretwork, posts and veranda — all of which mimic the ornate feel of the period in which the original property was built," competition judge Guy Evans says.

"It will stand proud for the next 100 years."

Mr Williams says the project commanded great patience, careful planning and close on-site supervision.

"The key to success is based on strong links between three parties — the client, architect and the builder. It's a team effort so if everyone has the same vision you'll get a very successful result."

P.W Design and Build specialises in the upper end of the market, a segment that Mr Williams believes is driven by quality and reputation.

"Clients building in the higher end of the market are less likely to shop around for the cheapest price.

"It's more about personal service and providing top results, something a smaller company like P.W Design and Build is able to deliver."

Mr Williams believes winning an award in the House of the Year competition is a great way to increase the company's exposure.

"It's hard to pinpoint exactly what gives you an advantage in this market, but winning an award like this is bound to help develop the company's reputation. It also gives you a good edge over your competitors."

Mr Williams has always had an innate interest in the construction industry, a passion he says evolved very early on.

"The ability to express creativity was what initially captured my interest in building," Mr Williams says.

"But in order to start your own company it's really important to understand everything from marketing to account management — you need a holistic approach."

And 44 years later, Mr Williams is still learning from those around him.

"Although you can't beat experience, it's really important that builders stay in tune with architects and what's happening in the market. We are always looking for new ways to improve."

REGISTERED MASTER BUILDERS mb
HOUSE OF THE YEAR. 2009
IN ASSOCIATION WITH PlaceMakers Know how. Can do.

Achieving new heights

The unusual job of building two ski lift terminals 2322m above sea level was a highlight of 2008 for Stanley Construction.

Not only was the project a great success for the client, it was also national winner of the Pacific Steel Industrial and Utility Project in the RMB 2008 Commercial Project Awards, in association with PlaceMakers.

Stanley Construction construction manager Craig Davison says while they had previously done a range of work for the client, Ruapehu Alpine Lifts Ltd (RAL), this was a project that provided some exciting challenges.

"We were really keen on this particular job because we could see its potential as a flagship project for the company," Mr Davison says.

"We knew it would demonstrate our specialist skills in tackling challenging and remote construction jobs."

The project involved constructing two terminals, to be used for the loading and unloading of the new six-place chairlift on the Turoa ski field, located on the southern side of Mt Ruapehu.

The terminals, situated at 1950m and 2322m, had to be able to withhold the extreme climate of the mountain, with gale-force winds and temperatures of well below freezing during the winter months.

This meant the Stanley Construction team was not only challenged with ensuring the strength of the buildings, but also by the remote location of the project and its harsh climate.

"There were so many extreme demands faced by the team. Nailing the logistics around inserting the main panels on both structures was incredibly difficult," Mr Davison says.

"We used a Russian Mill helicopter, at a cost of $7800 an hour, and with the wind and cloud at altitude, ensuring it was steady enough to install the panels was a difficult and, potentially, very costly exercise."

The unique location also meant health and safety was of paramount concern.

"We had daily meetings attended by the client, our team and our contractors. We even had a stock of essential supplies on site with us at all times in case the weather really deteriorated and we had to stay put until we could be reached by a rescue team," Mr Davison says.

Mr Davison has been working for Stanley Construction since he started his building apprenticeship with the company 23 years ago. Rising up through the ranks, he has been a project manager and is now a shareholder in the business.

He says the current economic climate is one of the biggest challenges he's faced in his career to date.

"While I can remember a couple of downturns it's hard to think of a time when it was this extensive. We are restructuring and finding new ways of cutting costs to make sure we get through this time, but I think our point of difference – that we are experts at challenging, unique commercial projects – is a big drawcard for us," Mr Davison says.

"We also focus on adding value – for all clients and for any type of project we do."

Stanley Construction has entered the RMB Commercial Project Awards again this year, and Mr Davison says the company definitely considers the competition worth entering.

"With the company motto being 'gold for a reason', we are really compelled to enter! But it is pretty cool to see your work on the big screen in front of all your peers and the client. It's a satisfying end to a lot of hard work and effort by your team."

Recession – manage your people resources

In the current economic climate it is more important than ever to manage your resources, including people resources, to best effect. Hard times can bring issues that have been simmering in the background to a head, and raise new ones that you may never have dealt with before.

If you're recruiting you need to ensure you get the right person. Prior to the downturn people were able to move on if they weren't satisfied with their job for some reason.

But now they're likely to stay put, and resist being moved on. As financial pressures increase there's potential for misconduct issues such as theft or fraud. Stress can take its toll and manifest itself in staff performance issues and compatibility issues between staff.

However workplace dissatisfaction arises, employers bear the brunt of it. Managing it and the demands of keeping the business running can be a challenge.

In the last of a three-part series of articles, RMBF in-house counsel Leoni Carter looks at restructuring and redundancy, and some things to consider at the beginning, middle and end of an employment relationship.

You may be faced with having to make some positions redundant. Redundancy is a form of dismissal, so it is essential you go about it in a "substantively justifiable" and "procedurally fair" manner, as well as following the terms of the employment agreement.

Don't plead redundancy if the issue is really about a particular employee's performance — it is the position that is redundant, not the person.

The courts will respect your commercial judgement in making a position redundant, but have little sympathy if the real motivation is to get rid of someone.

Ensuring "procedural fairness" is neither difficult nor complicated. As with most employment issues there's a process to be followed. Give yourself sufficient time to get through it.

Generally, "fairness" means:

• Genuine commercial reasons: That you have done an analysis of your business and prospects for work into the near future.

• The employment agreement: That you have checked the employment agreement and followed any process laid down.

RMBF in-house counsel Leoni Carter

• Criteria: That you have decided a criteria to select which position/s the business will no longer require to do the foreseeable work programme ("last on, first off", qualifications, skills, experience).

• Consultation: That you arrange a meeting with all employees to discuss the state of business and listen to their feedback. Consider what you have heard — you may be pleasantly surprised! If there genuinely is a choice of employees with the same job description, apply the criteria fairly.

• Notice: That you have given a reasonable notice period (if not specified then at least one pay period).

• Compensation: Check the employment agreement. Is there a redundancy clause? Is compensation payable?

Assistance

You should think about what assistance you can give to the employee, even if it is only information.

Refer them to the "Restart" programme for example: www.workandincome.govt.nz/individuals/a-z-benefits/restart.html.

Not managing these issues well can result in a personal grievance (PG) against you. Unfortunately, in hard times, PGs are seen by some as a means of getting some money out of an employer, and even as a means of leaving a job and being eligible for the unemployment benefit with no stand-down period.

Earth housing a new low-cost option

An Uku house will be built in Northland as part of a University of Auckland engineering research project into sustainable, low-cost housing options for rural Maori.

Civil Engineering PhD student John Cheah is working with the Ahipara community to develop the Uku house by the end of 2010. Uku, Maori for earth, is a building method which involves mixing earth and flax with cement to build quality, affordable housing.

"The research follows the principles of papakainga development. It aims to equip rural Maori communities with the knowledge to use their own earth and labour to build desirable housing," Mr Cheah says.

"Rural Maori are an important and significant component of the New Zealand population who have a lower average quality of health and accommodation due to issues with housing. This research seeks to address this imbalance."

Mr Cheah says Uku technology is ideal for rural Maori communities where land is owned by the local hapu, rather than individuals, and when financial barriers may prevent them from developing that land.

The earth and flax for the Ahipara Uku house will be sourced from within Ahipara, and the community will work together to build the house to New Zealand building and council standards, including the New Zealand earth building standards.

Ahipara residents attended a workshop at the University's Faculty of Engineering this month where they learnt how to prepare the flax, how to mix it with earth and cement, and how to compact it into walls.

Mr Cheah also verified the suitability of Ahipara earth and flax for Uku housing, and conducted seismic tests on the finished walls as part of his research. Another workshop will be held at Ahipara in November when four practice walls will be built on site.

Ahipara resident Rueben Taipari Porter, from Te Rarawa iwi, is leading the project in his home town, and is building the first Uku house in Northland for his hapu.

He will support the building of additional Uku houses in his community once Mr Cheah's research project ends. Mr Porter, whose whanau stretches back 20 generations in Ahipara, says he has an obligation to provide better conditions for his descendants.

"Improving the standard of living for my people is an important factor in my leading this alternative concept. I am very grateful to the University and the Engineering Faculty for their support," he says.

Mr Cheah hopes his study will help validate the performance and viability of Uku housing so it can be adopted by more communities. The results will be compiled into a design guide, which will be available in English and Te Reo Maori.

The University's Faculty of Engineering has been involved in the construction of three previous Uku dwellings — at Haumingi papakainga on Lake Rotoiti, Te Kura Takawaenga O Piripono in Otara, and Waimango papakainga on Tikapa Moana (Firth of Thames).

Mr Cheah's three year project is funded by a Top Achiever Doctoral Scholarship, awarded to New Zealand's top scholars by the Government.

Previous Uku research at the University has been supported by the Foundation for Research Science and Technology, and Nga Pae o Te Maramatanga.

• For more info: Ph University of Auckland communications adviser Danelle Clayton, 09 373 7599 ext 849539

Standard revised for thermal insulation

Standards New Zealand has published a revised Standard specifying Thermal insulation – Housing and small buildings, NZS 4218:2009, which supersedes NZS 4218:2004.

NZS 4218 specifies thermal insulation requirements for housing and small buildings for users of the Standard — architects, designers, building consent authorities and window and glass companies.

"The Standard is also useful for the building industry, including window and glass manufacturers, insulation manufacturers, and manufacturers and suppliers of building products so they can provide advice and stock appropriate products," BRANZ committee chairman Michael Camilleri says.

"Ambiguities in the previous version of NZS 4218 have been resolved, and there is additional guidance with more worked examples."

The revised version of NZS 4218:

• includes modified R-value tables and brings the Standard into line with these increased performance requirements. The construction R-values in this Standard result in a low life-cycle cost, based on current knowledge of insulation costs, energy costs, and heating behaviour,

• clarifies the three different ways of working out R-values (schedule method, calculation method and modelling method), and ensures consistency between the different methods, and

• includes clearer definitions.

Some of the most significant changes are:

• adjusted R-values to reflect improved energy efficiency,

• changes to the calculation method to ensure adequate thermal performance is not compromised by large glazing areas,

• a revised modelling method to take account of recent research, and to make it easier to use with recent computer modelling packages,

• new requirements for high thermal mass construction to ensure the thermal mass is adequate and effective,

• a revised appendix (now Appendix C) on windows and glazing,

• a new informative Appendix D provides guidance on alterations and how they can achieve higher thermal resistance,

• more worked examples in informative Appendix F,

• the new term construction R-values has been introduced to distinguish the performance values in this Standard from insulation material R-values.

"There is more clarity on the use of doors, skylights, decorative glazing and louvres, Glass Association of New Zealand (GANZ) Technical Advisor and committee member Allan Sage says.

"Appendix D – Windows and Glazing has been revised, offering more glazing options and guidance for users wanting to calculate other glass and frame combinations.

"A new term (RWindow) has been introduced to overcome confusion over the R-value for glass only (RCOG) and the total window R-values (RWindow)."

'The major change for the window industry is the reduction of the limit on glazing area from 50% to 40% for the calculation method. The modelling method must be used for a glazing area over 40% of the total wall area.

"This will see more modelling of complex houses in the future, which GANZ believes is a positive move to stop over-heating and under-heating issues with modern house design."

• For more info: Ph Standards Customer Services 0800 782 632
On the web: www.standards.co.nz

BRANZ able to constructively work with product certification

By BRANZ marketing manager Richard Arkinstall

The Department of Building and Housing (DBH) recently published new and updated information regarding the introduction and workings of its new Building Product Certification (CodeMark) Scheme as required under the 2004 Building Act.

BRANZ has been offering product and system appraisals for more than 30 years. They remain the most prevalent and recognised form of independent third party assurance, readily accepted by Building Consent Authorities in the current market.

BRANZ has been closely monitoring the development of the DBH Product Certification Scheme, and now that the final shape is becoming clear, BRANZ's optimal involvement in the scheme is also becoming clear.

We believe there is a very workable model for the scheme that will provide the right solution for the New Zealand construction industry, as outlined in the diagram at right.

Internationally, the rules associated with product certification (ISO Guide 65) prevent an organisation such as BRANZ being both the Building Product Certification Body (BPCB) and the actual testing agent for the product/system.

While there is a slight modification to this requirement in the New Zealand Product Certification (CodeMark) rules, in practice it will be extremely difficult for any organisation to be both a BPCB and the testing agent.

Should BRANZ become a BPCB, therefore, we believe we would forfeit the ability to assist the industry through the appraisal product testing and development service that we are currently recognised for.

The Building Product Certification scheme essentially has two main steps:

• Products and systems submitted for certification are processed by BPCBs, who are the overarching approving authority.

• For BPCBs to certify that a product is compliant with the New Zealand Building Code, the product must have undergone independent and rigorous authoritative testing work carried out by a recognised testing agent against testing criteria developed to conform with the New Zealand Building Code.

Accordingly, BRANZ is actively working with the BPCBs who are most likely to operate in New Zealand to ensure BRANZ becomes a nominated testing agent — ie, when a manufacturer/product distributor approaches a BPCB to have a product certified, BRANZ will be the testing agent a product manufacturer can use for testing.

So, in that regard, BRANZ can assist its appraisal clients to get their products through to the product certification level, if that's what they decide is the best route to market for their product.

The Product Assurance Staircase

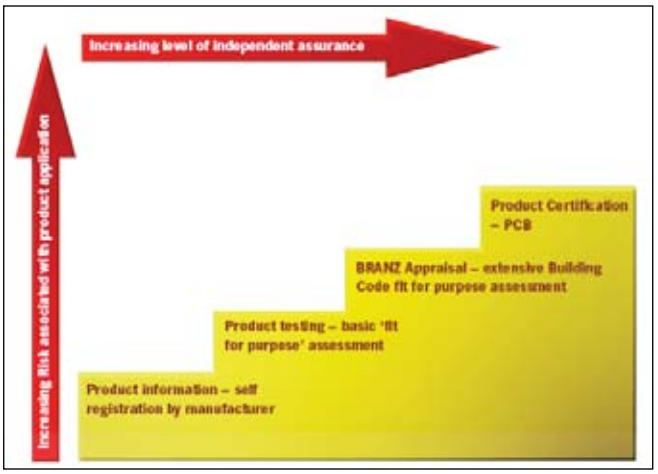
The construction industry has recognised — as well as the DBH — that product certification might not apply to, nor be workable across, all products in the industry, and that there is a general need for a more progressive "product assurance" process.

BRANZ, therefore, has been working on the design of a "staircased" product assurance framework.

This staircase model allows manufacturers, designers, specifiers, builders and clients to align the relevant product assurance methodology with the appropriate level of risk in use (eg, compare door knobs which are low risk, and exterior claddings which are potentially high risk) applicable to their product.

BRANZ intends to use this staircase model to underpin our strategy in the product assurance area.

Currently, a BRANZ appraisal ensures nationwide coverage and a smoothed path of acceptance for the product with all decision makers, including designers, specifiers and Building Consent Authorities.



The Product Assurance Staircase

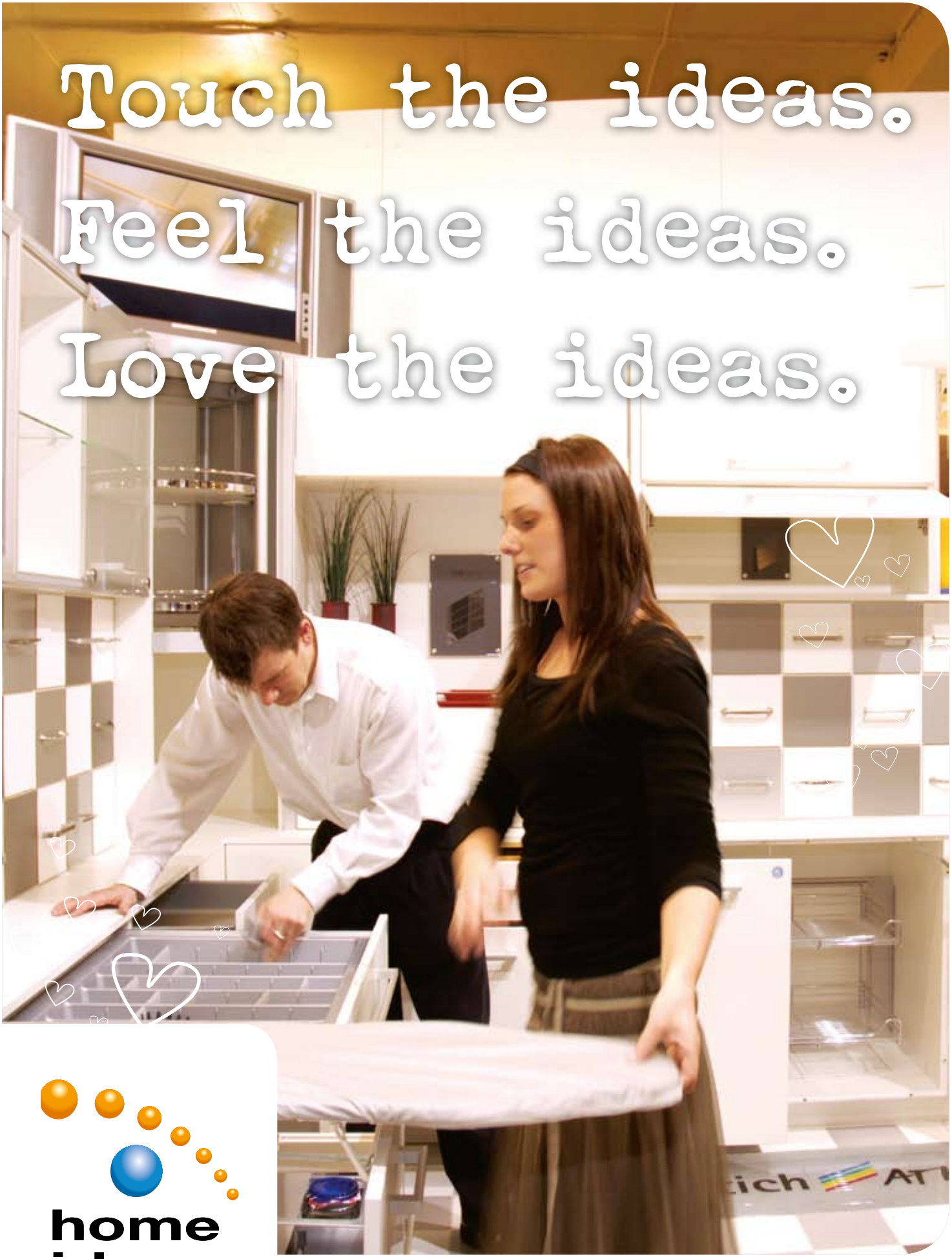
The staircase model means BRANZ has the ability to work with manufacturers to develop the right solution for their product/market segment — whether that be "upstream" in the area of product certification, or "downstream" in the area of product assessment.

Anyone interested in reviewing the details of how the Australian CodeMark scheme functions, or for more information, should visit www.abcb.gov.au/go/products/codemark/whatiscodemarkwww.dbh.co.nz.

We will continue to explore the most suitable approach for the industry — and for BRANZ — to keep our clients and stakeholders suitably informed.

• For more info: Ph Richard Arkinstall, 04 238 1399

On the web:
www.branz.co.nz



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New lamp beams Mountaineer into 21st Century

A Victorian-style coach lamp built by a Queenstown craftsman is set to bring old and new together at the tourism town's newly-renovated Mountaineer building.

The 2.13m-high coach lamp was constructed by David Watts of Springbank General Metalwork, with the design based on photographs of the Victorian lamp that graced the original building in the 1880s.

"The lamp took seven weeks to make," he says. "It was constructed using the same techniques that would have been used on the original Victorian lamps, including lead and silver soldering."

The four-storey Mountaineer building in the heart of Queenstown has undergone an extensive two-year renovation, including restoration of an original historic facade on Rees and Beach Streets.

The lamp was eased into place recently in its original location on the corner of Rees and Beach streets, casting its welcoming beam over the building.

The new lamp forms part of the conservation plan

which owners Westwood Group Holdings Ltd followed during planning and construction.

Old features were maintained as much as possible, alongside more modern areas of the building such as the entranceway, a 12m-high atrium with double-glazed doors, a curving staircase, large fireplace and an opening glass skylight.

The distinctive original first-floor window frames were maintained, along with some original stone walls, combined with new glass canopy and large ground-floor windows to allow for natural light.

Mr Watts says he was delighted to have worked on such a distinctive feature for the Mountaineer. "Work like this is the icing on the cake for tradesmen."

Mr Watts also constructed the lamp outside Eichardt's, Queenstown's oldest standing building.

"On a personal note, I feel both these projects highlight the need to preserve the facades of our historical buildings," he says.

The new lamp sits proudly on the restored building.

With two new floors in the upper level and a new basement for two ground-floor retailers, the newly-renovated Mountaineer building is home to a wide range of retailers, from fashion and outdoor clothing, through to jewellery, food and flowers.

• For more info: Ph Jo Smith, Westwood Group Holdings Ltd marketing manager, 03 442 9879

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FLETCHER ALUMINIUM

BUFFALO/FA1062

House gets highest energy efficiency rating

A Golden Bay holiday home may be New Zealand's most energy-efficient house, achieving nine out of ten stars under the Home Energy Rating Scheme — the highest rating awarded yet under the scheme.

The Golden Bay Hideaway's "Little Greenie" house in Wainui Bay is so efficient that its room heating and hot water bills are expected to cost less than $50 per year. Its energy-efficient features include:

- large double-glazed windows orientated towards the sun,
- smart use of building materials — a concrete floor and adobe walls collect the sun's warmth on sunny days and release it overnight,
- super insulated roof, walls and floor (more than double that required by the Building Code), and
- solar water heating.

The annual heating demand of the house is about 85% lower than for an average new build house, and about 97% lower than for an uninsulated house. It is the first home to receive a 9-star home energy rating under the government's Home Energy Rating Scheme (HERS).

The voluntary scheme rates a home's energy performance and recommends improvements. Homes are awarded a rating from 0 to 10 stars.

• For more info: Ph EECA, 0800 358 676
On the web: www.eeca.org.nz

Fieldays fun!

Carters site hard to miss at Fieldays

The gumboots were out in force, there was a deafening sound of machinery and the unmistakable smell of hot chips — it was that time of year again!

For a second year running Carters joined more than 1000 exhibitors drawing in eager crowds at this year's 41st National Agricultural Mystery Creek Fieldays in Hamilton recently.

The tough economic climate and poor weather conditions did not deter the public, with 117,000 attending over four days from 10 to 13 June.

The Carters site was hard to miss, marked by a 50ft pole, which was climbed four times each day by Canadian Sterling Hart, who is currently rated third in the world at pole speed climbing.

The Carters pole shed was a hive of activity, with great rural product displays and demonstrations. Cocksy was also on site entertaining the crowds and providing commentary on the Kiwi Lumberjack team who hosted axe throwing and cross sawing competitions throughout the day.

In keeping with the rural theme, Carters gave away a Yamaha AG100 farm bike. Congratulations go to the winner Viv Simmons, a dairy farmer from Hamilton.

This year has marked the launch of Carters' rural range, including fences, wire, culverts and pole sheds.

Carters has been in the game a long time and, due to its extensive network and knowledge, is well placed to provide cost efficiencies, products and advice to help farmers become more efficient while growing their business.

For more information on Carters' rural range, pop into your local branch, speak to their rural specialists and discover how they can make rural building easier for you.

Thanks to all those who contributed to the fieldays success. See you there next year!

• For more info: Ph Carters 09 272 7200
On the web: www.carters.co.nz

NOT ALL BARS ARE CREATED EQUAL.

NOT ALL METHODS OF MANUFACTURE ARE THE SAME:

High strength (grade 500MPa) reinforcing bars are generally made using one of two methods: Micro-Alloying (MA) or in-line Quench and Tempered (QT). These two methods can produce reinforcing bars with the same strength and ductility, but their practical uses can be vastly different. Essentially only MA bars can be welded, hot bent and hot re-bent or threaded.

MICRO-ALLOYING:

This produces high strength reinforcing by adding special micro-alloying elements – commonly vanadium – during steel making. The bars are air cooled after they have been hot rolled. This is called the Micro-Alloying (MA) process. MA reinforcing bar, unlike QT bar, has a homogenous cross-section in terms of crystal structure, strength and ductility. It is a more expensive process, due to the need for the micro-alloys, but the end product benefits justify the additional cost.

QUENCH & TEMPERED:

Internationally the most common method for producing high strength reinforcing steel is to quench the red hot steel in-line immediately after the last stage of hot rolling. The surface of the bar is quenched with water to give a very hard layer which is then tempered to a strong, but more ductile steel by the residual heat from the centre of the bar. This process is referred to as Quench & Tempered (QT).

Task	Grade 500E MA	Grade 500E QT
Hot Bending or Hot Re-bending	✓	✗
Butt welding	✓	✗
Lap welding	✓	✗
Tack welding	✓	✗
Threading	✓	✗

It is essential to understand the differences between these processes and the additional benefits of MA reinforcing bar over QT bar. This understanding will enable the Engineer to specify the appropriate product at the design stage and to make the appropriate decision on re-bending and welding issues encountered on site.

SEISMIC® QT

SEISMIC® MA

For hot bending procedure refer to NZS 3109 Clause 3.3.8
For all welding requirements refer to AS/NZS 1554.3

PACIFIC STEEL GROUP

Steel gaining major competitive boost

Steel construction is gaining a major boost in its competitive advantage over concrete structural systems, with steel long product prices expected to continue to fall in coming months, and fabrication capacity and productivity increasing.

Steel long product prices are expected to drop substantially in coming months, in line with steel scrap prices, from the highs reached in mid-to-late 2008. This effect will be fully realised once inventories have destocked to current levels of demand.

Production reinstated

Steel mills are keen to reinstate production for long and flat products, leading to what will be excellent supply conditions for purchasers.

However, the strength and weakness of the New Zealand dollar will influence the extent of price changes.

Steel decking rates have also become increasingly competitive as new profiles have come onto the market and flat product rates soften.

In conjunction with this, steelwork fabrication capacity and productivity has grown in recent months, with new fabrication facilities and equipment coming into production around New Zealand.

This is all leading to some exceptionally competitive bidding on steel construction tenders and development proposals.

The steel construction sector is well known to be one of the most transparently competitive and responsive in the construction market.

The expectation is that these conditions will remain for some time as global economic conditions show signs of stabilising and then entering a gentle recovery over the next two years.

Structural steel framing systems have consistently proven to be the most cost-effective choice for multi-storey buildings in recent years.

A structural steel frame also has significant collateral benefits to the overall project by reducing time scales and variable cost items such as foundations, cladding and services, leading to significant project cost savings.

• For more info: Ph SCNZ, 09 263 5635

On the web:
www.scnz.org

SCNZ manager capped at Auckland Uni

SCNZ manager Clark Hyland was capped with a PhD in Civil Engineering at the University of Auckland in May.

Mr Hyland investigated the development of running fracture in structural steelwork assemblies under severe earthquake loading, leading to the development of a new method to assess their expected ductile endurance.

In 2000 he commenced post-graduate studies in a part-time capacity, after being encouraged by then HERA director Dr John Meikle to give it a go.

A fees, materials and travel grant was made by the Heavy Engineering Education and Research Fund to aid the study.

The work was eventually completed after many hours of after-hours work and unpaid study leave, along with the patient endurance of his wife and family.

SCNZ manager Clark Hyland (right) is capped by Auckland University chancellor Roger France.

His PhD research was jointly supervised by Professor George Ferguson of the Department of Chemical and Materials Engineering and Associate Professor John Butterworth of the Department of Civil Engineering.

A copy of the thesis can be downloaded at: http://researchspace.auckland.ac.nz/handle/2292/3381.

Sustainable charter launched recently

Steel Construction New Zealand (SCNZ) recently launched the Sustainable Steel Construction Charter, benchmarked to the acclaimed sustainability charter of the British Constructional Steelwork Association.

The Charter is a practical way to manage and communicate improvements in the sustainability performance of the steel construction industry.

Improved environmental responsibility

This allows the steel construction industry to effectively meet government and consumer demands for improved construction industry environmental responsibility.

With upcoming changes to legislation and tendering processes, SCNZ says it is vital that the industry takes a position of leadership, and develops management systems that will let those in the industry effectively compete in tomorrow's construction market.

• For more info: Ph SCNZ, 09 263 5635

On the web:
www.scnz.org

Buying a leaky house

From page 30

internal ceiling beneath the deck some time before November 2001.

Decision

The Tribunal, satisfied that the second respondents were, in fact, the head contractors and/or project managers of the construction of their house, held that the Kerkins were in breach of the warranty given in the Sale and Purchase Agreement, and that such a breach of clause 6.2(5) resulted in the damages claimed by the claimants.

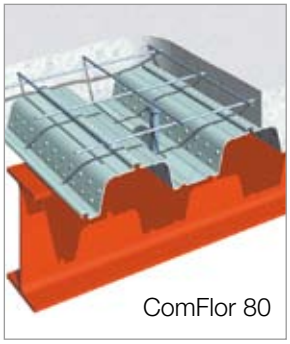
The Tribunal deemed the second respondents to be liable to the claimants for the full amount of the damages sought, being $316,002.68.

Case study #21
Chews Lane

corus

Simplicity:

Simplicity of construction



ComFlor keeps 'Chews Lane' construction simple

ComFlor is a composite steel decking range developed by Corus, one of the world's leading providers of steel construction materials. ComFlor offers major advantages in constructing high-rise mid-floors, all of which were recently demonstrated at 'Chews Lane', a high profile, 20 storey, Wellington CBD project. It will eventually contain 90 apartments, a 200 bay car-park, offices for 600 employees, food and beverage outlets and leading retailers. ComFlor was chosen as the flooring system for the apartments on the top twelve storeys of the project, for the following reasons:

Performance:
Longer spans meant that the apartment's large uninterrupted interior grids were easily created, and with fewer beams than would otherwise have been needed, saving weight and construction time.

Simplicity of construction:
ComFlor was able to be installed quickly. Bundles containing 80m2 of deck were able to be craned directly from the flatbed truck to the floor level under construction, reducing disruption to central city traffic and overcoming the issue of site congestion.

Cost efficient:
The speed with which the project progressed meant that tenants could start moving in earlier, giving earlier access to rental revenue and construction cost payback.

Sustainable:
Corus uses 12% recycled materials in the manufacture of ComFlor, and of course all steel is 100% recyclable at the end of the building life.

To learn more about ComFlor, the Chews Lane project, or other projects that have used ComFlor to their advantage call 09 271 1780 or email us at comflor@corusnz.com and we will arrange an in-practice presentation from one of our representatives.

ComFlor

Composite floor decking
www.comflor.co.nz

future-proof building©

Enjoy payback now and in the future by reducing carbon footprint

There are many ways to reduce the environmental footprint, including choosing environmentally-friendly products, reducing water consumption and better waste management.

When yesterday's buildings were designed and constructed there were no issues such as water restrictions or high energy costs, and little concern over volumes of waste.

There is now enough scientific evidence that today's lifestyles, at home and in the work place, are having a major environmental impact on the earth.

A key goal of Future Proof Building is to minimise the impact on the planet.

When building, renovating or improving homes, builders should be helping clients choose more eco-friendly products, recycled materials and renewable resources to help reduce the carbon foootprint, and protect the planet for future generations.

If builders can reduce energy, water consumption and waste during construction, and if their clients can do the same while living in the house, significant steps will have been taken towards producing and using a greener home, and contributing towards a more sustainable environment.

Better still, it will provide a financial payback, both now and into the future.

• For more info: Ph CMS Group, 09 589 2050 or 0508 FUTURE
On the web: www.fpb.co.nz

FPB helps trade connect with customers

New-look interactive web site launched

Future-Proof Building (FPB) has launched a new web site — fpb.co.nz — with the dual purpose of helping consumers manage the building process and supporting tradespeople to work smarter within their businesses through this challenging environment.

The new site, which operates like a social networking site, offers a treasure trove of information and online tools for home builders, buyers and renovators wanting to improve their homes to add value, both financially and environmentally, well into the future.

"fpb.co.nz is designed to attract people looking to create sustainable and healthy homes for them and their families. It simplifies what can become a complex building process with cumbersome plans, permits, documents and files to manage, and a number of contractors to deal with," according to Future-Proof Building education manager Jamie Fear.

Customers can connect with tradespeople, establish and communicate with their building project teams, and share information, documents and ideas online.

The other purpose of the website is to support the construction industry.

"In New Zealand, we have moved away from a building boom to a more challenging time," Mr Fear says.

"In order to survive and thrive, business owners need to work a lot smarter and focus their attention on core business activities. They also need to develop deeper relationships with their customers and, despite the inclination to cut back on marketing spend, make sure they are telling more potential customers about their business."

"The web site empowers tradespeople to participate in conversations about options, provide real time advice, develop a deeper understanding of their customers' needs and provide a level of customer experience that helps their business to stand out."

Trade professionals can register their companies with fpb.co.nz to provide quotes to home owners, create a searchable company CV, and use advanced tools to participate online in home owner projects.

"Beyond connecting trade professionals directly with potential new customers, the site provides sales and marketing advice, and tools to help tradespeople more effectively promote their businesses," Mr Fear says.

By aligning their offering with the FPB principles, tradespeople also raise their own credibility and reputation for building better homes for New Zealanders.

Access to fpb.co.nz and all the tools and advice it offers is free to home owners, and is currently running a special early adopter trade membership until 31 August 2009 for tradespeople who are aligned with FPB merchants.

If you fit this criteria visit fpb.co.nz or email web.support@fpb.co.nz.

• For more info: Ph CMS Group, 09 589 2050 or 0508 FUTURE
On the web: www.fpb.co.nz

New advances in architectural masonry

New Firth DRYbloc and Dricon DRYbloc Mortar are advances in architectural masonry incorporating key ingredients within the blocks and mortar that reduce the rate of water ingress, help stabilise the colour, and minimise the effects of the units from efflorescence.

DRYbloc is not waterproof. However, it improves the performance of masonry buildings by offering a second line of defence against rainwater ingress, adding peace of mind.

The new masonry replaces the former Stevenson DryBlock system following the acquisition of the Auckland and Northland masonry assets of W Stevenson & Sons Ltd in March 2009.

Besides providing structural strength, aesthetic appeal and extra protection for weathertightness, DRYbloc also provides the additional masonry benefits of thermal mass, fire protection, sound control and durability.

As with standard masonry, when using DRYbloc, all aspects of design and construction should follow NZS 4210, 4229 and 4230.

Available in the fashion colours Slate and Stone, it is available ex-stock in Auckland and in all other regions throughout New Zealand on a made-to-order basis.

Firth understands that building a home is one of the largest investments most New Zealanders make in their lifetime.

With such investments, home owners need to feel comfortable that their masonry homes will stand the test of time, be durable, warm and easy to sell should they decide to move on.

Firth's product range is being constantly updated to meet changes in technology, building techniques, codes, practices and fashion to provide this confidence.

• For more info: Ph 0800 4BCITO (0800 422 486)
On the web: www.firth.co.nz

The tradesman's choice

Telecom's new XT Mobile Network, which is based on 3G Wideband Code Division Multiple Access (WCDMA) technology, launched just over a month ago.

The preferred Telecom dealer for the RMBF and BCITO, Total Network, understands the power of the XT Mobile Network. The company is encouraging RMBF members and BCITO apprentices and employers to switch over to enjoy the benefits the new network provides.

Total Network Wellington sales manager Chris McKelvey says Telecom's network coverage is now a big winner for builders. The XT Mobile Network provides coverage in an impressive 97% of places where New Zealanders live and work.

"Builders will now benefit with better voice quality and consistent coverage, meaning fewer dropped calls and a reduction in broken or interrupted conversations," he says.

The world-class 3G coverage is just one benefit the network provides. Others include a great choice of mobile phones and seamless global roaming, allowing you to use your mobile phone in 210 destinations around the world.

Mobile phones on the network include world-leading brands but, most important for builders Mr McKelvey says, "is the Telecom R90 mobile phone, otherwise known as the 'tradesman's choice'."

Another popular model with the builders has been the Nokia 3120c.

He says they'll help make the switch easy by offering RMBF members and BCITO apprentices and employers a discount on their new Telecom mobile phone when they sign up to a 24-month Association plan on the XT Mobile Network (ask Total Network about the terms and conditions that apply).

Total Network is 100% New Zealand-owned and operated. Its Wellington office includes a nationwide telesales centre, where RMBF and BCITO members can call the free calling number and sign up to Telecom products or services.

• For more info: Ph Total Network, 0800 44 44 75
On the web: www.totalnetwork.co.nz

The new helper on your building site

Following customer feedback, the new Trade Platform in 1m and 2m lengths has been designed to cater for the hard working tradesman.

Based on the versatile Alco Aluminium Plank, the fully adjustable unit allows individual settings of each leg, giving flexible use on uneven ground. The height adjustment ranges from 0.58m to 0.89m, with a reach from 2.6m to 3m.

What differentiates the product from the competition is the load limit of 300kg. This makes it one of the most durable in the market, and allows the builder to load the Platform with materials for maximum building efficiencies.

When coupled with the industry-leading 12-year warranty, Alco's Trade Platform design and specification is in a class of its own.

Other features are the wide spread angle allowing access to the very ends of the platform, the convenient folding legs for portability, and the rubber inserts and knurling on both edges of the Platform for sure footed operation. The cross brace on each leg offers a convenient step in the extension mode, and the Platform is ideal for internal and external use.

Alco's Trade Platform is manufactured by MCK Metals Pacific, a Taranaki-based New Zealand-owned company, which has more than 50 years' manufacturing experience.

The company is proud to offer its customers a wide range of New Zealand-made aluminium access equipment. As part of MCK Metals Pacific's commitment to the environment, the company is committed to reducing harmful emissions, and has implemented sustainable manufacturing practices.

MCK Metals Pacific has the Enviromark Diamond status certification, an international standard of environmental management performance developed in Britain.

Alco products meet all the performance requirements of AS/NZS Standards, and comply with AS/NZ 1892:1.1996 specifications. Should any part of a product require replacement, the company also provides spare parts kits through the supplier network.

• For more info: Ph MCK Metals Pacific Ltd, 0800 252 652
On the web: www.mckmetals.co.nz

The true cost of guestimating

What is the value of 1% to your business, and are you missing items in your quantities take-offs?

If you miss a quote by as little as 1% on your jobs it can cost your business more than $50,000 a year, money that could be better spent in growing and developing your business.

This doesn't even take into consideration the cost of unhappy clients facing delays in their builds, supervisors' down time while driving to the merchant and collecting additional material, or extra delivery costs.

Databuild software provides you the ability to cost jobs quickly and accurately, using your price from your suppliers and build rates.

The use of the rapid graphical and question-based estimating allows the system to prompt you with questions that calculate accurate estimates. These estimates become your schedule of quantities, which becomes your orders to the suppliers.

The suppliers issue invoices back to you which are accurately costed, giving the user live feedback as to the financial forecast build costs and income on a job-by-job basis. Very powerful reporting puts you back in the driver's seat for your business.

A comprehensive general ledger accounting system ties all of your business together, and ensures information is entered correct the first time.

This allows you to bring all aspects of your business together with one system, and spend your limited time growing your business while giving you more time with the family.

Databuild consultants are available to meet with you and review your business needs. For a free onsite business review, contact 0800 080 009, or email sales@databuild.co.nz.

• For more info: Ph Databuild, 0800 080 009
On the web: www.databuild.co.nz

Improved qualifications to meet industry's needs

It is widely recognised that the Building and Construction Industry Training Organisation (BCITO) continuously evaluates and develops its qualifications to better meet industry's needs.

This year the BCITO's qualifications team is reviewing the suite of existing, and developing a number of new, cement and concrete qualifications that recognise the skills and knowledge of tradespeople working in the following sectors:

- Concrete production (ready mixed concrete)
- Concrete construction
- Placing and finishing
- Pre-cast concrete manufacture
- Concrete block manufacture (masonry)
- Concrete pipe manufacture
- Concrete tank manufacture
- Concrete sawing and drilling.

The first step in the process was to develop and release the National Certificate in Concrete Core Skills (NCCCS) — a Level 2 qualification that acts as a stepping stone into any of the concrete sector trade-level qualifications currently under review and development.

The NCCCS qualification provides a basic grounding for all cement and concrete workers, particularly those new to the industry.

As with most industry qualifications in New Zealand, the NCCCS consists of a collection of unit standards. These are the individual building blocks that break down a full qualification into a series of skills in which trainees must be assessed as being competent.

The Concrete Core Skills qualification requires a mixture of theory and practical units, as well as several elective units.

In addition to the NCCCS being a stand-alone qualification, five of the theory units are available as a separate package for current employees of the industry.

This enables them to complete the underpinning theory for all of the trade-level cement and concrete qualifications prior to entering into the higher-level, sector-specific concrete qualifications.

These essential theory units encompass skills such as knowledge of concrete materials and the concrete production process, the concrete industry, power tools used in concrete work, quality assurance requirements, and routine methods of testing concrete.

One of the added benefits of this new National Certificate (and the other new and reviewed cement and concrete qualifications being released in the next 12 months) is the inclusion of embedded literacy.

Embedding literacy skills into the qualification involves the trainee completing "self check" pages to ensure they understand the material in the unit before completing the worksheets.

Successfully completing the "self check" questions helps trainees retain what they have learnt, a very important part of effective industry training.

See contact details below for more information on Concrete Core Skills or other BCITO qualifications.

- **For more info: Ph 0800 4BCITO (0800 422 486)**
  On the web: www.bcito.org.nz/qualifications

Raising the bar on Old Father Thames

Dr Kerry Rodgers finds he is dammed if he does and dammed if he don't

The Thames Barrier is the world's second largest movable flood barrier. It was constructed between 1974 and 1984 at Woolwich Reach to provide flood control of the River Thames.

Flooding of the Thames has long caused a problem for London. Samuel Pepys knew it well. On 7 December 1663, his diary notes: "There was last night the greatest tide that ever was remembered in England to have been in this river, all Whitehall having been drowned." Fourteen died in the 1928 floods and 307 in 1953.

When a low pressure system in the Atlantic Ocean tracks eastwards past the north of Scotland, the resulting storm surge can be driven into the shallow waters of the North Sea and, thence, funnelled into the narrows of the English Channel and the Thames Estuary.

Dangerously high water levels occur in the Thames Estuary when such a surge coincides with a spring tide. The barrier's job is to control such levels.

As all Doctor Who *fans know, the top-secret agency Torchwood has a secret base beneath the Thames Barrier. And, in the fifth episode of the 10th series of* Top Gear, *Jeremy Clarkson drove a high-speed racing boat through the barrier in a race across London at rush hour — as you do.*

The barrier occupies a 523m-wide stretch of the river. Nine concrete piers and two abutments divide the river into four 60m and two 31m navigable passages, plus four small non-navigable channels.

The openings are spanned by rotating flood gates made of 38mm thick steel, and having circular segmented cross sections. They fill with water when submerged and empty when raised to allow for underspill. For maintenance they can be rotated 180°.

The four central gates are 67m long and 10.6m high, weighing-in at 3500 tonnes. The outer navigable gates are 30m wide.

The barrier is raised only for the duration of the high tide. It is lowered at ebb to release upstream water backed up behind it.

Prior to 1990, the number of barrier closures averaged one to two per year. Since then the number has increased to four per year, but in 2003 the barrier was closed on 14 consecutive tides.

On 9 November 2007, the barrier was closed twice following a massive storm surge from the North Sea comparable to that which produced the devastating floods in 1953.

A near catastrophic incident occurred on 27 October 1997. The dredger, MV Sand Kite, collided with one of the Thames Barrier's piers. As she sank on top of one of the barrier's gates, the ship dumped her 3300-tonne load of aggregate. Initially the gate could not be closed as it was covered in a thick layer of gravel.

If flooding had occurred before the vessel was refloated, the damage was estimated to have been around £13 billion.

The concept of the rotating gates was devised by Charles Draper. The barrier was designed by Rendel, Palmer and Tritton for the Greater London Council and tested at HR Wallingford Ltd.

The site at Woolwich was chosen because of the relative straightness of the banks, and because the underlying river chalk was strong enough to support the barrier.

Work began in 1974, with construction undertaken by a Costain/Hollandsche Beton Maatschappij/Tarmac Construction consortium. It was largely complete by 1982, and officially opened on 8 May 1984.

The total construction cost was about £534m.

Assuming the global warming pundits know what they are talking about, it is currently estimated that the barrier can continue to cope with projected sea level rises until around 2060 to 2070.

A suggestion has been floated to eventually replace the Thames Barrier with a 16km-long barrier across the Thames Estuary from Sheerness in Kent to Southend in Essex.

Buying a leaky building: Can a subsequent purchaser rely on their sale and purchase agreement?

Tim Bates of Auckland law firm Legal Vision examines whether a claim can be brought against a vendor based on their Agreement for Sale and Purchase.

The Weathertight Homes Tribunal (WHT) decision of Paul White and Wilna White v Rodney District Council & Others (TRI-2007-100-000064) involved a leaky home in Whangaparaoa, sold to the claimants by the vendors, Mrs Kerkin and her late husband, who became the second respondents to this claim.

Whilst the usual claims in negligence were brought against both the council and the Kerkins by the claimants, the Weathertight Homes Tribunal was also asked to consider whether the claimants would have a further claim, in contract, against the Kerkins based on the vendor's warranty and undertaking clause in the Agreement for Sale and Purchase.

Background

The two-storey home at Army Bay, Whangaparaoa, was constructed between June 1993 and November 2001, with a final Code of Compliance Certificate being issued for the home by the Rodney District Council on or about 30 November 2001.

The second respondents lived in the home from early 1994, and, at some stage after moving in, but prior to the council issuing its CCC in November 2001, they retro-fitted a length of tin to the internal ceiling under the large northern deck to address a leak.

On or about 15 December 2001, the Kerkins entered into an agreement for the sale and purchase of the property to the claimants. Shortly thereafter, and most likely after the purchase agreement had gone unconditional, the claimants, Mr and Mrs White, engaged a building inspector to carry out an inspection of the home.

The building inspector's report identified a number of significant water ingress concerns, and outlined a number of short and medium term remedial works recommendations.

Whilst the claimants did obtain building quotes based on the building inspector's recommendations, no remedial works were, in fact, carried out. The house continued to leak.

In late September 2002, the claimants approached their conveyancing lawyer to seek remedial action from the second respondents, the vendors, for serious defects in the construction of the home.

Discussions between the parties were unsuccessful, and so the claimants filed a claim with the WHT alleging negligence against the Rodney District Council and alleging negligence and breach of contract against the Kerkins.

The Sale and Purchase Agreement

The sale agreement entered into between the claimants and second respondents on or about 15 December 2001 was standard, with the parties using the Real Estate Institute of New Zealand and Auckland District Law Society form of Agreement for Sale and Purchase of Real Estate (7th Edition, 2 July 1999).

The agreement included the then standard Vendor Warranty and Undertaking Clause 6.2 (5) which reads:

"6.2 The vendor warrants and undertakes that at the giving and taking of possession…
(5) Where the vendor has done or caused or permitted to be done on the property any works for which a permit or building consent was required by law:
(a) The required permit or consent was obtained; and
(b) The works were completed in compliance with that permit or consent; and
(c) Where appropriate, a Code Compliance Certificate was issued for those works; and
(d) All obligations imposed under the Building Act 1991 were fully complied with."

The claim in contract

The claimants alleged that in breach of clause 6.2(5), the second respondents caused or permitted work to be done which required a building consent (which was obtained on 3 June 1993) and that the house was not built in accordance with the Building Act 1991, nor did it comply with the Building Code.

The expert witnesses all agreed that water ingress had occurred, particularly to the balconies, cladding, internal roof gutters and roof parapets and, accordingly, the house did not comply with the Building Code in January 1992.

In determining whether the second respondents did, in fact, breach clause 6.2(5) of the Sale and Purchase Agreement, the Tribunal looked closely at the role the Kerkins played in the development of their house.

It was found by the Tribunal that the Kerkins' involvement in the construction of the house was considerable, with Adjudicator K D Kilgour going so far as to say the Kerkins were "the genesis of the leaky house".

Mr Kerkin had carried out works on the home himself, including tiling the decks and later painting the tiles with a defective sealant. The second respondents made decisions to depart from the plans and specifications, and decided on the types of material, cladding and roof, and how the decks were to be clad.

Moreover, the second respondents engaged the services of various contractors to do distinct portions of the building work and, in doing so, failed to give sufficient attention to what was actually done by each contractor in that it was much of this construction work that was later deemed defective, and which subsequently allowed water ingress, resulting in damage to the house.

There was also evidence that the house was leaking before the second respondents sold it to the claimants, in that a tin sheet had been retro-fitted under the

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