

building today

THE OFFICIAL MAGAZINE OF THE REGISTERED MASTER BUILDERS FEDERATION



Dunedin's iconic Forsyth Barr Stadium

Christchurch's forgotten lessons of the past

Tim Bates on the leaky buildings Financial Assistance Package



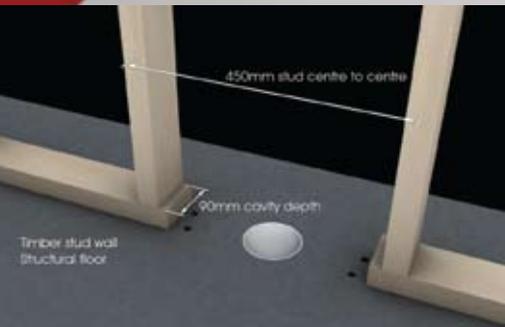
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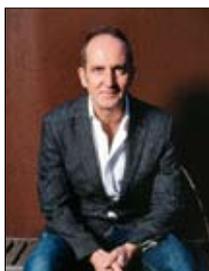
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Win a double pass to see Kevin McCloud of *Grand Designs* fame in Auckland on October 26. See page 31

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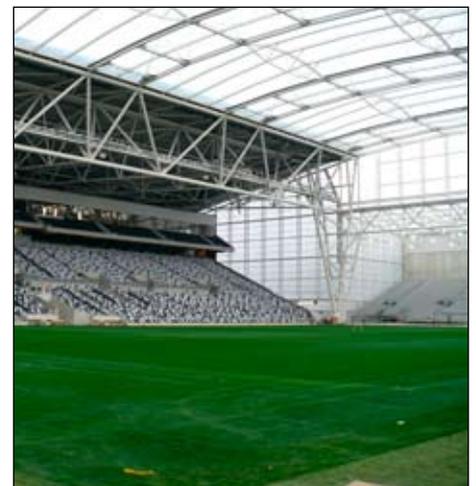
As the Rugby World Cup continues *Building Today* examines what is now perhaps the most iconic stadium in the country — the Forsyth Barr Stadium in Dunedin.

Read from the fabricators' perspective how the stadium was constructed to become the unique facility that has taken over from the outdated "House of Pain" at Carisbrook as the city's premier sporting venue.

Also in this issue RMBF chief executive Warwick Quinn delves into the ins and outs of Amendment No 4 of the Building Act — essential information for all Licensed Building Practitioners.

And don't miss Legal columnist Tim Bates' views on the controversial leaky buildings Financial Assistance Package, a scheme he says still presents significant uncertainties for all parties involved.

Andrew Darlington
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chief's chat

by ceo warwick quinn

The 4th Amendment

Changes to the Building Act continue to be rolled out, with Amendment No 4 introduced on September 3. So what is this one all about?

Well let's recap first so it can be put into perspective. Amendment No 3 was essentially all about the clarification of roles and responsibilities, and reducing the council's exposure by putting the accountability where it is best able to be managed — ie, clarifying the roles and obligations of the councils, designers, builders and home owners through "guidance" in the legislation.

The No 3 amendment also introduced risk-based or step consenting, something which is designed to ensure the regulatory regime adopted by Building Consent Authorities does not treat all buildings as high risk.

It does this through establishing four categories of building consent — low risk, simple residential, standard and commercial. These are not yet defined in detail, and work is under way to define these further.

There are also extensions to Schedule 1 which includes a wider range of work not requiring a building consent.

'Consent completion certificates'

No 3 also confirms the "design to code" and "build to design" philosophy, and changes the "code compliance certificates" (CCC) to "consent completion certificates" (still a CCC but with a different meaning and obligation).

No 3 allows for the owner-builder exemption from the Licensed Building Practitioner regime and, while it does not detail restricted building work, a recent "order" (basically a regulation) introduced that, and guidance notes are being developed by the DBH to assist in interpretation of restricted building work.

So then, what is Amendment No 4 all about?



It introduces enhanced and more comprehensive consumer protection measures, including mandatory written contracts for residential work over \$20,000, mandatory disclosure of certain information by building contractors before a contract is entered into (called pre-contract information) and, while this is yet to be defined, will include things such as a contractor's skill, qualifications, licensing status and track record.

We're not sure what that means, and don't particularly like the sound of it either.

It also introduces new offenses for breaching these requirements — ie, a \$20,000 fine.

It extends again and reformats the exemptions under

Schedule 1 of the Building Act, and adds a power for councils to deal with buildings that are at risk because they are near or adjacent to dangerous buildings. This is predominantly as a result of the Canterbury earthquakes.

The 4th Amendment is also designed to protect consumers in relation to residential building work by implying warranties into residential building contracts, and providing remedies for breaches of these implied warranties.

It requires a builder to remedy a defect notified within one year of completion, and certain information and documentation must be provided on completion of the building work.

Yet to be qualified

Again, this is yet to be qualified (it will be done by regulation), but will most likely be associated with proving product warranty information, and maintenance requirements for the owner and subsequent owners.

What's still to be addressed yet is the joint and several liability question which the Government is investigating.

The 4th Amendment is also designed to protect consumers in relation to residential building work by implying warranties into residential building contracts and providing remedies for breaches of these implied warranties.

Part of this enquiry will need to consider the role of home warranties and the requirement of surety providers that stand behind them.

This is a very complex issue, and the Federation understands the Law Commission may be requested to consider this

matter, given its wider application.

There is still a lot of detail to be delivered through regulation which is where the rubber hits the road in its daily application.

The Federation does not expect these amendments to be through until 2012, although licensing will proceed as planned from March 2012.

Resounding results and reducing risk

By RMBF president
Blair Cranston

It has been a busy few months with regional House of the Year (HOY) and Apprentice of the Year (AOY) events completed.

I attended my final AOY event in Tauranga recently, and consider the AOY competition to be special. I really enjoy the functions as it is such a pleasure to meet good young people starting a career in our industry.

A highlight for me has been hearing feedback from the previous years' AOY winners, telling of their experience at Outward Bound, the amount they have learned since then, and about their exciting plans for the future.

It's also very pleasing to see through some recent research we've done that the vast majority of AOY entrants over the years are still involved in the industry.

Judges in both HOY and AOY competitions have commented on the raised standard from the previous year.

Healthy sign

To me, a consistent climb in the standard of entries is a healthy sign. Both competitions were developed to set and raise the standard, as well as providing unique opportunities to participants.

Finalists have been found, and are no doubt looking forward to the results of the national competitions, to be announced at gala evenings in October for AOY and



November for HOY. Good luck to you all.

Time to take stock

Now is a great time to be checking everything in your personal and business structure is in order.

In my opinion, the building industry has become complex and litigious. We all need to be careful to ensure we achieve compliance and mitigate unnecessary risks.

The fact is we can be caught up in litigation whether or not we are liable. The "scatter gun" approach (where many parties get named in legal claims) is common

these days, particularly in leaky building claims.

The onus can fall on us to prove no liability or innocence. In essence, we can be guilty until proven innocent, and it can be expensive proving that position.

If you have not already, now is the time to take stock of your personal and business affairs.

You need appropriate professional advice to determine whether or not you and your business are organised and structured safely.

There are a number of fundamental questions to consider:

- Are your wills up to date?
- Is your business shareholding and funding structured in a manner that would withstand a personal relationship change?
- Who should own your private property and other assets?
- Who should own shares in your business?
- Should you be a director of your business?
- Is your company constitution current?
- Is the building contract you use current and

appropriate for your type of work and your particular customers?

- Do you have appropriate and current staff employment contracts?

Unfortunately, in many cases, we learn of our weaknesses

In my opinion, the building industry has become complex and litigious.

only when we are confronted with a major issue. This can be avoided through good planning and by obtaining good advice.

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Strong client relationships key to success

Strong client relationships have played a pivotal part in K Fowler Homes (Ashburton) Ltd's success in the Registered Master Builders PlaceMakers House of the Year.

The company scooped two Silver Awards and four Lifestyle Awards for two separate properties this year in the Ashburton regional competition.

And last year the company took out the national Department of Building and Housing New Homes under \$250,000 category for a property in Ashburton.

Project manager Andrea Lee says the company prides itself on its good relationship with clients.

"I meet the clients from day one when they walk in the door, I hand them the keys when it's finished, and I do a lot in between," Mrs Lee says.

"My husband is one of the builders on site, so we're both directly involved with the whole process," she says.

Mrs Lee acknowledges that it's rare to be a female in the construction industry. "It can be a battle at times, but I enjoy the challenge," she says.

"I think I look at things from a different aspect. I keep a very close eye on the finishing details, and I'm very fussy with painting and obtaining the best results we can for our clients. I go around and clean the house on the last day



This K Fowler Homes (Ashburton) Ltd entry won the Department of Building and Housing New Homes under \$250,000 category for a property in Ashburton in the 2010 Registered Master Builders PlaceMakers House of the Year.

and make sure there's nothing we've missed."

"It's important for me that our clients get the best out of their home," she says.

Mrs Lee says the company's House of the Year awards play a big part in consumer confidence.

"Our clients become so proud of their houses they're happy to recommend us to people, and it gives our new clients some reassurance about the quality of our building," she says.

K Fowler Homes (Ashburton) Ltd's 2010 national award-winning property is a modern style townhouse boasting a range of features which make it an extremely spacious and functional home for the owner.

Judges said this "delightful" house "makes playful use of light, bringing warmth and character to the very liveable open plan layout".

"This is an example of what can be achieved when good design is considered, even in this price category, delivering a lovely home for its owner," the judges said.

Mrs Lee says the competition is "scary" and "nerve-racking", but for builders considering entering, "if you're proud of what you do, don't be afraid to be judged".

This year's competition saw

the Ashburton company receive two Silver Awards in the regional competition — one in the New Homes \$450,000 - \$600,000 category for a property in Ashburton which also won the Ashburton Guardian Interior Style and Finish Award, and another in the New Homes \$600,000 - \$1 million category for a property in Staveley, Ashburton.

The property in Staveley also took out three Lifestyle Awards — the Pink® Batts® Ultra® Energy Efficiency Award, the PlaceMakers Heart of the Home Kitchen Award, and the PlaceMakers Bathroom Excellence Award.

"This is the most unique site we've ever built on," Mrs Lee says. "It was a challenging site, in an extremely high wind zone, perched on top of a hill in a snow area. It has a two kilometre clay road up to it, which became a river when it rained."

Due to the harsh environment, the house has been placed for maximum sun and designed to make the most of the magnificent views, with almost every room looking out across mountains and the Canterbury Plains.

"The whole house was built for comfort and the view," Mrs Lee says.

The Awards are made possible through the support of principal sponsor PlaceMakers, and supporting sponsors James Hardie, Gib Living®, Pink® Batts® Ultra® (Tasman Insulation), Nulook and the Department of Building and Housing.

For more information about the competition, go to www.masterbuilder.org.nz.



Inside the kitchen of the winning entry.

Consistency sets AJ Saville Builders apart

AJ Saville Builders' winning track record in the Registered Master Builders PlaceMakers House of the Year awards continues this year with a spectacular Queenstown home.

Situated high on the Crown Hill Range in Queenstown, the home has already received a Gold Reserve award, been crowned the Supreme winner in the Southern region, and will soon be pitched against Gold Reserve houses in the 2011 national competition.

AJ Saville's homes have been a firm fixture in the House of the Year awards since the Queenstown-based company first entered in 1999. They returned home with third place in the national finals first time round.

Since then, entries have been placed in all but one of the following 12 competitions. Their tally includes 19 regional awards, and they have featured among national finalists and award winners 11 times.

Company director Allister Saville says this year's entry "pushed the architectural boundaries", and required some creative solutions to incorporate distinctive features such as the rounded corners which utilise vertical shiplap cedar weatherboard.

The home has been built to handle the sometimes harsh winter environment in the range, meeting snow load requirements and steeling itself against the elements with thick insulation, slab heating, and accommodation for solar panels and geothermal pumps if desired.

Despite the remote location, the home owners remain connected to the house at all times as it has been fully automated, Mr Saville says.

"The entire house can be run from the owner's home in Singapore on an iPad. Or we could be sitting here in our Queenstown office, opening and shutting the blinds, or turning on the TV and changing channels."

The House of the Year judges have already lavished praise on the home, saying the builders had done a "marvellous job" in creating a home which was "remarkable and architecturally exciting".

Mr Saville says the company's consistent

success in House of the Year has been very valuable, profiling the company's works.

"You might have one winner, and that could be down to the judges, or one house. But when it's on the consistent level that we've achieved, it sets you apart a little."

When AJ Saville Builder was formed in 1994, they did not set out to focus on high-end builds, but have ended up in something of a "micro-climate", Mr Saville says.

The recognition they have received has been significant in securing further work, with customers often seeking them out.

While working on high-end projects brings its own set of challenges, Mr Saville says it is also very rewarding, allowing the builders to use the best possible materials and be involved with some "funky ideas" as well.

Mr Saville says anyone hoping to succeed in House of the Year has to be sure they are presenting their absolute best work, and assembling a like-minded team is crucial.

"It's a team effort. Your attention to detail is one thing, but there's also the attention to detail of your subbies. You've got to make sure everyone is on the same train of thought."

He says success in House of the Year also brings a certain responsibility.

"You can't worry about having an off day. You don't get any second chances at this level.



The AJ Saville Builders entry for a property in Queenstown which won the Southern New Homes over \$2 million category, and is a Gold Reserve finalist in the 2011 Registered Master Builders PlaceMakers House of the Year.



Everybody expects the best, and once you do put your head out there and set the bar, you've got to carry on achieving it."

The Awards are made possible through the support of principal sponsor PlaceMakers, and supporting sponsors James Hardie, Gib Living®, Pink® Batts® Ultra® (Tasman Insulation), Nulook and the Department of Building and Housing.

For more information about the competition, go to www.masterbuilder.org.nz.



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Apprentice of the Year — five years on

Five years on from the first national Registered Master Builders Carters Apprentice of the Year, inaugural winner Rhys Forsyth has come a long way and has already begun to achieve the goals he set out to in 2007.

Now with his own business, Forsyth Contracting, and working out of Taupo, the 2007 Central North Island and national winner has fond memories of his experience in the competition.

"It was cool times, especially with the guys I was working with. The competition capped me off nicely at the end of my apprenticeship," Rhys says.

"The Apprentice of the Year makes you strive for that little bit more and makes you do the best you possibly can. It's a really valuable competition to compete in," he says.

As well as building around the country with his own business, Rhys develops properties with his former employee, Gary Rowe of National Park Construction.

"We team up for certain jobs that we need to do, and do our own smaller jobs as well. We've just renovated two ski chalets in National Park. They were relocatable houses which we fixed up and now rent out nightly," Rhys says.

In 2007, Rhys told Apprentice of the Year judges about his career goal at the time to build accessible homes for the elderly and people with disabilities.

He said these homes were about future proofing, "not only in the products we use, but in the design and layout of houses too".

And he stuck to his goal, building his first home with wife Deanna with the entrepreneurial design style in mind. He finished the home in 2008 in time for the birth of their first child, now three-year-old daughter Lexa, and recently finished another accessible house for his mother and grandmother on Waiheke Island.

Rhys says he does a lot of work across the country, building in places including Rotorua, Taupo, Waiheke Island and National Park.

While based mainly in Taupo, Rhys and his family spend up to 14 weeks over the winter at National Park where he also works coaching a freestyle ski team at Mount Ruapehu.

With the 10 regional winners of the 2011 Apprentice of the Year having now been announced and set to take on the challenge of the national competition, Rhys has a piece of advice for the aspiring Apprentices of the Year.

"Keep your record up to date, make sure you're taking lots of pictures of the work you're doing and record it all. Not only does it help with the competition, but it gives you a really good record of what you've done," he says.

The national judging takes place over two days, including a 45-minute interview with the national judging panel and a half-day practical component to test their carpentry skills.

The winner will be announced at an awards evening following national judging on Saturday, October 29.

The Apprentice of the Year competition is owned and managed by the Registered Master Builders Federation (RMBF), sponsored by Carters, partnered by the Building and Construction Industry Training Organisation (BCITO) and supported by the Department of Building and Housing.

Apprentices, employers and those young people aspiring to be a part of the construction industry are encouraged to join up to the Apprentice of the Year Facebook page:

www.facebook.com/apprenticeoftheyear.

Congratulations to the finalists for making it this far, and good luck for your next step in the competition.



Rhys Forsyth, winner of the first National Apprentice of the Year in 2007.

2011 Registered Master Builders Carters Apprentice of the Year Regional Winners

Auckland: Joshua Woodcock, employed by DB Short Builders

Northern: Jonathan Spurdle, employed by Warwick Gair Builders

Wellington: Ben Hanna, employed by Hanna Construction

Southern: Ryan Keogh, employed by Naylor Love Construction Ltd

Upper South Island: Nick Skeggs, employed by Dusty Builders Ltd

Central North Island: Tom Evans, employed by Kynoch Construction Ltd

Central South Island: Andrew Hamilton, employed by HRS Construction Ltd

Waikato: Straun Anderson-Scott, employed by Lobell Construction

East Coast: Matt Saathof, employed by Gemco Construction

Bay of Plenty: Tom Storey, employed by Simon Linton Building Ltd.



Rhys and his wife Deanna's family home in Taupo (above), and the homes that Rhys built in National Park (below).



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Construction industry remains uncertain

Uncertainty is driving New Zealand's property and construction industry as it anxiously waits for the Christchurch rebuild to begin, according to the latest *Construction Sentiment* report by Davis Langdon, an AECOM company.

The quarterly survey of industry decision-makers, conducted in June, found the sector continued to expect a considerable influx of work, with 75% of respondents in Christchurch anticipating work levels will rise over the coming year.

Earthquake-related building approvals rose from NZ\$14 million in June to NZ\$32 million in July, and more than 20,000 buildings have already received emergency repairs, according to Statistics New Zealand.

However, many of those surveyed said when and how the reconstruction work will eventuate was still unclear.

Davis Langdon New Zealand regional director Chris Sutherland says uncertainty continued to persist in the industry.

"There is a lot of anticipation, but a clear picture about

the timing and extent of the rebuilding work is still to emerge," Mr Sutherland says.

"Several survey respondents acknowledged that careful planning and additional design considerations were required before construction could begin in earnest," he says.

Almost 90% of Christchurch participants and 69% in Wellington expect a boost in business from the reconstruction, the survey found.

However, 76% of respondents expect prices will rise by more than 10% in the Christchurch market over the coming year, up 20% from the March survey.

The reconstruction is expected to exacerbate skill shortages, with 82% expecting to find it harder to source trade labour once rebuilding gets underway.

Shortages of electricians, plumbers, construction and project management services and skilled trades generally have increased by between 5% and 10%. Reasons cited include the lure of better prospects in countries such as Australia, and a decline in skills due to lack of training.

Competition remains high across the industry as

businesses struggle to lock in future work, and premium salaries are being offered to secure in-demand talent, despite uncertainty over when rebuilding will commence, several respondents said.

In Auckland and Wellington, industry sentiment is improving, with respondents less worried about the earthquake rebuild negatively affecting new projects in their regions.

Only 4% of Auckland respondents thought the reconstruction would reduce new business prospects, compared to 28% in the last survey, while 44% expect more work on the horizon.

In Wellington, more than 60% of respondents expect industry workload levels to remain stable, compared to 40% in the last survey.

The civil and restoration, and restoration and refurbishing sectors remain the top growth areas in the industry over the next 12 months, the survey found.

This is attributed to the Christchurch rebuild and businesses choosing to revitalise their assets rather than sell into lacklustre housing and commercial property markets.

Inmates progress house build for local family

Since August 8, a team of six Hawke's Bay inmates have been "doing time" constructing a four-bedroom Habitat for Humanity house for the local Hungahunga-Repia family.

This is the first time in New Zealand that an entire house has been constructed "inside the wire" of Hawke's Bay Prison. Inmates from the prison's rehabilitation section are constructing the house from the ground up.

It is the eleventh home Habitat for Humanity Central North Island (CNI) has built for a Hawke's Bay family, and it is taking Habitat one step closer to reaching its ultimate goal — eliminating sub-standard housing in New Zealand.

The project recently reached a major milestone after its start in early August — the house was closed in with all windows and doors in place.

The building is specifically designed so it can be craned over the prison's fence in two pieces on November 8, after which the pieces will be transported to their final site in St Leonards, Hastings.

Habitat for Humanity has acquired the section in St Leonards under the Government's Gateway scheme

which gives housing providers, such as Habitat for Humanity, access to land on a deferred settlement basis.

Following the house being transferred to its permanent site, a team of local volunteers will join the two parts together and finish the house inside and out, including landscaping and fencing.

The Hungahunga-Repia family will move into their home in early December.

"This Habitat build supports the community in more ways than one," Habitat CNI general manager Nic Greene says.

"It allows prisoners to give something back to the community by building a home for a local family in housing need, benefiting the local family and their community.

"At the same time, the project gives the prisoners, who are studying for a national certificate, an opportunity to get practical experience. This improves their chances of stable employment after being released," he says.

The Hungahunga-Repia family is very excited about moving into their Habitat home. The family consists of



Habitat for Humanity site supervisor Ross Mackay (left) and a Hawke's Bay Prison inmate working on the house being built inside the prison.

mum Sharne, a qualified chef, dad David who works at a yard maintenance company, and their three children aged 16, 4 and 2.

The family has not yet seen their new home, and can't wait to get a chance to visit the prison and see the progress.

They are currently helping out in the Hastings ReStore, the local fundraising arm of Habitat for Humanity CNI, and will also be working on their home after the house has been moved to its permanent site.

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STACEY JONES
New Zealand Rugby League Legend
& Project Manager



Unemployed targeted as trainee scaffolders

The scaffolding industry is recruiting new trainees direct from the Limited Service Volunteer programme to help boost the workforce for Christchurch's rebuild.

The Limited Service Volunteer (LSV) programme is a six-week residential course for unemployed youth based at Burnham Military Camp.

The course is funded by the Ministry of Social Development, run by the New Zealand Defence Force and supported by the New Zealand Police. It prepares young people for the workforce and for life.

Scaffolding and Rigging NZ (SARNZ) has teamed up with Tai Poutini Polytechnic and Work and Income to launch a pilot programme to train LSV graduates in basic scaffolding and rigging skills.

Ten young people, some recent graduates of the LSV programme, have taken part in a six-week pilot training programme, and are currently undertaking work experience in the scaffolding industry.

SARNZ president Graham Burke says the general

principles of the LSV programme ticked all the boxes as the scaffolding industry wants to make a difference as well as attract new blood.

"This is a bit of a personal crusade for many of us. Society is responsible for many of these kids' issues, and we get to help instill work ethics and new skills and hopefully plug some staff shortages too," Mr Burke says.

The lack of a trained labour force has been identified as an issue that could hinder the speed of the Christchurch rebuild.

"The industry is right behind this pilot programme. There are jobs for those who want them," Tai Poutini Polytech scaffolding head of department Vadim Spice says.

"The pilot had a combination of LSV graduates and other unemployed people. The guys off the LSV course already had a sense of discipline and a level of confidence which was great," Mr Spice says.

We have even set up a scaffold at Burnham Military Camp that was donated by Layher Scaffolding and co-ordinated by SARNZ," he says.

Matt Wieblitz, 24, has been unemployed for seven

months after being laid off from his loader job after the earthquake.

Work and Income supported him to attend the pilot programme, and he has already got a permanent job with Christchurch company Elliot Scaffolding.

"I never thought about being a scaffolder, but I am really enjoying it. I think I can make a career out of this — you earn good money and work outdoors which I like," Mr Wieblitz says.

Jo Aldridge, Work and Income's labour market manager for the Canterbury region, says the partnership is a win-win situation.

"We work very hard to connect young unemployed people into employment. Scaffolding can be a great career opportunity, especially for some of the very keen and confident LSV graduates.

"Graduates find self confidence and the motivation to work. Connecting them directly from the course into a scaffolding career is a fantastic result," she says.

A further scaffolding training course will be held as the demand arises.

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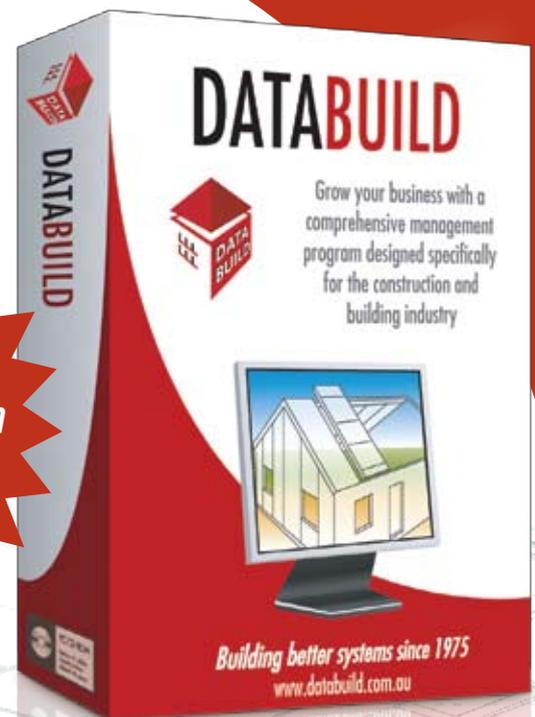
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Team highlights energy efficiency innovation overseas

The Energy Efficiency and Conservation Authority (EECA) has congratulated Victoria University's First Light team for its impressive achievement at the United States Department of Energy Solar Decathlon in Washington DC.

The team gained third place overall, after being the first team from the southern hemisphere to qualify for the American college competition.

"The student team has worked really hard, and this placing is well-deserved," EECA chief executive Mike Underhill says.

"It sourced and highlighted some of the best Kiwi innovation and technology, and put it together in a

package that was both appealing and affordable."

The team won first place in the engineering contest, second in architecture, and third in market appeal.

Raising awareness

"More importantly for EECA, the First Light team did a great job of raising awareness among New Zealanders of the value of energy efficiency when designing and building a house.

"Good design will make your home warmer, drier, more comfortable and cheaper to run. It will also make it a joy to live in.

"EECA is proud to be a sponsor and supporter of the First Light team," Mr Underhill says.

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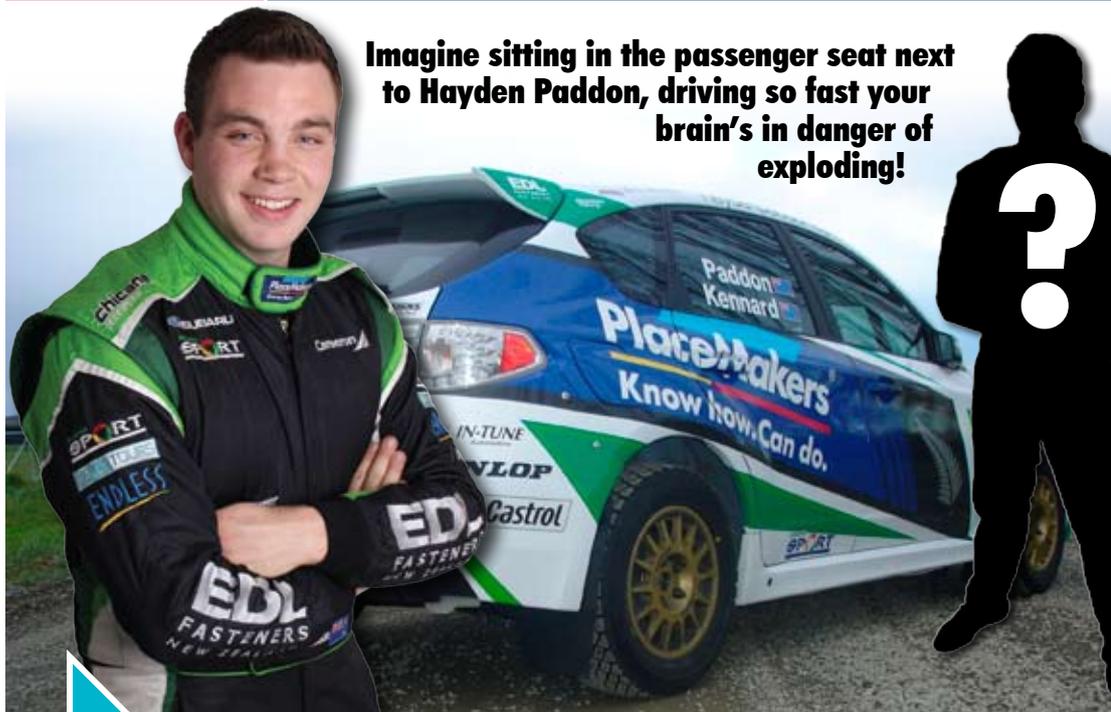
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PlaceMakers branch raises thousands for Prostate Cancer Foundation

It was a close shave for the guys from PlaceMakers and the chief executive of Fletcher Building on September 22 at the PlaceMakers Mt Wellington "Shave Off" to raise money for the Prostate Cancer Foundation.

As part of PlaceMakers' national support campaign for Blue September, Mt Wellington PlaceMakers branch manager Chris Fairbairn, PlaceMakers general manager

of commercial Vaughan Grant and Fletcher Building chief executive Jonathan Ling were given "number ones" by All Black legend Andy Haden.

PlaceMakers Mt Wellington hosted a BBQ and brews event for local customers, the trade and suppliers. Andy Haden was there to do the shave and answer everyone's burning RWC questions, and MC Murray Deaker provided shave-off commentary.

The event raised more than \$50,000 for the Prostate Cancer Foundation.

In a brief speech, PlaceMakers chief executive John Beveridge acknowledged that prostate cancer is a significant men's health issue in New Zealand.

"PlaceMakers works in a male-dominated sector, so it makes sense to raise awareness (and money) for the Prostate Cancer Foundation. We are really proud to support Blue September," Mr Beveridge said.

Over September, PlaceMakers stores across New Zealand raised approximately \$400,000 for this worthy cause.



Andy Haden shaves Fletcher Building chief executive Jonathan Ling.



PlaceMakers chief executive John Beveridge (left) and Jonathan Ling.



Firing up the barbie.



Post shave, from left: Chris Fairbairn, Jonathan Ling, Vaughn Grant and Andy Haden.

Young Mum already a double-winner project manager

At just 27 and a Mum, Hayley Tribble is one of a few female project managers in the construction sector, yet already she's won two New Zealand Institute of Building Awards for Excellence which recognise the best in the construction industry.

In a male-dominated construction industry in a city facing so many challenges, it's rare to meet someone with such a sound and settled career path.



Hayley Tribble

Ms Tribble's recent win in the Highly Commended award for the Arrow International Queenstown project of St Johns Church Hall was quickly followed the same night with another Highly Commended award for the Young Achiever under 35 category.

At 27, she is the youngest winner in both categories.

She still has stars in her eyes when she talks about that night.

"The awards recognise potential and excellence. I can't describe the feeling, it was such an amazing buzz, and I couldn't believe it," Ms Tribble says.

When she was 19 she saw the movie *Proof of Life*, starring Meg Ryan. At the beginning of the film, Ryan's co-star Russel Crowe was depicted working as a big construction manager in China.

That was the catalyst. "I knew I wanted to do the same, and even if I didn't have to work, I'd still want to be in construction. I simply love it," she says.

Ms Tribble began her construction career in Auckland while still studying, and became CBD Streetscapes ambassador and project assistant for the \$30 million upgrade of Auckland's Queen Street.

After three years in that role, she was offered the job of assistant project manager for Arrow International in Queenstown. This led to the project management of the aforementioned award-winning ventures.

She now joins Arrow in Christchurch to help with the rebuilding of the city. She'll be working on the earthquake recovery for the Methodist Church of New Zealand properties.

"It's very exciting to be in Christchurch at this time, as we've so much to look forward to. I can't wait to get building."

Positive and passionate, Ms Tribble has brought her family to Christchurch. Eight month-old daughter Hollie is at pre-school, and her husband has his own business in the construction industry.

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Forgotten lessons of the past

Following the Christchurch earthquakes, engineering experts have recommended replacing heavy tile roofs with lightweight metal roofing.

Inspections revealed that extensive damage was caused to houses by chimneys falling through heavy tile roofs or by the tiles coming loose and falling, whereas metal roofing generally did not collapse under falling chimneys and was able to withstand the quakes themselves.

That was one of the main findings of Wayne Brown, a trained civil/structural engineer and mayor of the Far North.

Mr Brown was part of Operation Suburb, which involved a team of 400 building inspectors and 300 welfare officers visiting all homes in the affected suburbs to assess damage following the February 22 earthquake.

Building inspectors red-stickered any dangerous or uninhabitable homes, and Mr Brown was one of a group of 12 engineers that provided follow-up to further assess borderline, tricky or dangerous structures and land subsidences, and to confirm or remove the red stickers.

Following that work during the first week of March, Mr Brown produced a report to Christchurch mayor Bob Parker and the Minister for Building and Construction Maurice Williamson, outlining his findings.

In it, he says: "Simply put, house damage fell into some obvious categories and some simple rules were agreed among the engineers that would have reduced the damage cost by billions if they had been in place.

"Flexible structures performed way better than rigid ones and the choice of cladding made a big difference. Earthquake responses are worse with increased structure weight, particularly weight up high.

"Heavy roof tiles and brick chimneys consistently failed, and as they fell they created more damage and danger to anyone below. Conversely, corrugated iron roofs performed well, even when the chimneys fell as they kept the inhabitants safe.

"If this had been at night many would have died from falling tiles and chimney bricks. Why not ban both and use iron roofs and steel chimney flues?"

Echoing those findings is a report by the Royal Society of New Zealand, the Institution of Professional Engineers New Zealand, the Structural Engineering Society New Zealand, the New Zealand Geotechnical Society and the New Zealand Society for Earthquake Engineering, who co-ordinated science and engineering expertise from across New Zealand.

In a section concerning improving earthquake safety,

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the report recommends: "When building, use 'earthquake-friendly' materials such as piled or waffle-slab foundations, timber (or light steel frame) walls and lightweight roofs.

"Remove heavy roofs such as concrete tiles and replace them with lightweight materials such as steel."

The report also recommends that larger brick and masonry buildings can be earthquake-strengthened by either internal steel bracing or an external steel frame.

Another report, compiled by Professor Andy Buchanan and Michael Newcombe of the University of Canterbury, points out the damage done by falling chimneys, and how metal roofs were better able to withstand the impacts.

Their report says: "The most common type of damage for older buildings (more than 15 years old) was chimney collapse. This occurred in many thousands of buildings.

"Falling chimneys could be interpreted as a violation of the 'life-safety' criterion required by New Zealand Standard (NZS1170.5:2004) for current building seismic design. Falling chimneys resulted in damage or piercing of the surrounding roof structure, damage to neighbouring properties and vehicles but (luckily) no loss of life.

"Chimney collapse on to corrugated steel roofing often caused no further damage, depending on the height of the chimney, but some fell through the roof or caused rafter failure.

"Chimneys falling on to tile roofs (concrete or clay tiles, or slate roofs) more often fell through into the house, sometimes causing further structural damage

and potential loss of life."

The experience in the United States has been the same where structural and civil engineers in Southern California say home builders and home owners should increase their use of lighter weight roofing systems.

"When you put a heavy mass on your home, like a concrete roof versus lightweight steel or cedar shake, it causes problems when the ground shakes," said James A Bihl, a structural engineer and co-author of a study on the effects of the 6.8 Northridge earthquake on residential roofs in 1994.

The study, conducted by The McMullen Company, said lightweight materials "tended to withstand shaking and appeared to not contribute to other structural damage".

Yet hundreds of heavy tile roofs were damaged "where no other significant structural damage was obvious".

In Mr Brown's report, under a section titled *Forgotten Lessons of the Past*, he makes this point:

"ECANZ have posters reminding of the swarm of earthquakes that damaged Christchurch Cathedral in the 1859 to 1870 period, yet it was widely reported that only the recent earthquakes have had this effect.

"Locals built in timber frame and iron roofs for the 50 years following those 1870 earthquakes but, slowly, they forgot and moved to brick and tile with tragic consequences.

"The lesson of the metal chimney flue doesn't seem to have made it south into Canterbury, yet these brick chimneys virtually all failed, often landing in the upstairs bedrooms."

Also in the report in the section titled *Restoration Recommendations*, Mr Brown observes: "Many houses with timber frames but tile roofs and brick veneers looked dreadfully damaged after the walls had fallen off and the tiles had fallen through the roof structure but, in many ways, these houses have been made much safer than they were.

"There are thousands of houses in this situation, and it would be a waste to demolish these. Repairs are relatively simple. Reclad the roofs in corrugated iron (or if they must have tiles, use metal tile strips). This requires no structural change as this is a much lighter solution."

Mr Brown goes on to make these points about the Building Code:

"From this operation it is clear that complicated codes of recent years were of little benefit as they simply had not been followed or, most likely, not even understood or in wide public acceptance.

"Simple, sensible, widely accepted rules would have done far more good than toughening up what is already a laughably long and complicated residential building code that concentrates on the wrong things.

"This earthquake has focused us all on what really matters, and that is the choice of safe, reliable, easily built and inspected building products and systems.

"The excellent performance of very old timber frame, corrugated iron houses that precede any current building code proves this. Good structural performance of houses was not code-related, but was impacted by the type of structure and the cladding and roofing choices, and the flexible ones proved the best.

"The recent code's fixation on 50-year reliability has produced unexpected, unwanted poor results (a lot of houses didn't last 50 years), and was probably behind the widespread use of concrete floors in the low lying flat suburbs that suffered from liquefaction.

"If timber subfloor structures had been used that were designed for easy, re-leveling post-ground movement, they probably would be disallowed under the 50-year rule. This needs a revisit."

Mr Brown also worries that mistakes of the past may be repeated if the insurance industry insists on sticking to the letter of agreements for replacement cover of damaged housing.

He says "it would seem unwise to replace a failed brick veneer and tile roof with the same products that have performed so poorly. Surely a better result is a reclad in weatherboards and a corrugated iron roof, but it is possible that the insurance contract wording might work against this."

However, having sighted the report, the Insurance Council of New Zealand says it would expect insurers to work with home owners for the best possible outcome, and contracts could be reworded to guard against any future events.

• *Wayne Brown is a trained civil/structural engineer, founder of Brown and Thomson Consulting Engineers of Northland and Auckland, owner of a construction company specialising in domestic construction, house removal and restoration of Historic Places listed buildings.*

He is experienced in post-disaster engineering reporting, and is also the mayor of the Far North. He has extensive experience at chairman level of large infrastructure companies that have experienced major failures before his arrival, such as Vector, Transpower and the LTSA.

He has designed and developed a number of projects in Christchurch, including Hoyts on Moorehouse.

• **Story courtesy of *Scope* magazine.**



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Partnership promotes faster consents turnaround

In a first for the country, a new private-public partnership will bring faster turnaround times for home building consents and a reduction in building inspections while still ensuring a top-notch product.

In a ground-breaking partnership between the Hamilton City Council and Generation Homes, building consents will be issued within 48 hours and the number of required building inspections reduced considerably.

The first building development from the elite partnership between Generation Homes and the council is the Edgeview subdivision in the Hamilton suburb of Glenview.

The initiative is described as a "win-win" for everyone.

Generation Homes Waikato director Alana Savage says the partnership shifts the emphasis on compliance away from the local authority to the developer, who must meet certain partnership criteria.

Some of these include having a recognised history of excellence in the construction industry, being a member of a recognised organisation that expects superior construction standards of its members, (this includes quality control measures and complaints processes), having sufficient insurances for public liability and professional indemnity, and using local authority-approved subcontractors.



Hamilton City Council building control manager Phil Saunders and Generation Homes Waikato director Alana Savage at the Edgeview subdivision in Hamilton.

Ms Savage says Generation Homes has been approved for the Gold Card level of partnership, the top level currently on offer.

"The Gold Card means that not only are we able and committed to processing building consents in 48 hours and are authorised to manage the inspection regime, we also offer a range of recognised sustainability options," she says.

Hamilton City Council building control manager Phil Saunders says that "without being too cliched, the partnership is a win-win for all parties".

"Only top-quality companies achieve Gold Card status," he says. "The process is streamlined for the developers and home owners while, as a local authority, we have the surety that our customers — and home owners are our customers — are going to get a top-notch service and product, and that we are going to get improved compliance with the building code.

"Our time frames will come back, plus we are still getting the best possible quality assurance," Mr Saunders says.

The lead-in time for consent applications will be dramatically reduced. This process generally takes between seven and 12 weeks for the developer/builder.

The partnership programme will cut the actual time frame for producing a building consent from up to 20 days down to 48 hours.

"With lead-in times reduced and surety of time frames around consents, this effectively means our customers can build more buildings, more quickly and make significant cost savings," Mr Saunders says.

For example, if the local industry is busy then demand on council resources is high, making it difficult to get early bookings, he says. The programme allows for the successful partner to manage their own inspection regime, with the council being positioned well ahead of time.

There may be some reduction in processing costs, but Mr Saunders says this is not what the partnership programme is all about.

"It's about getting a better end product, more quickly, with more certainty of quality."

He says it particularly suits a developer who is building a large volume of similar homes, because it allows them to build quality homes more quickly.

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NZGBC: Rebuild and renovate homes for long-term sustainability

Green City Dialogues forum focuses on solutions for Canterbury residents

Bettering Canterbury's housing stock for greater sustainability should be a key pillar in any rebuilding planning, according to the New Zealand Green Building Council (NZGBC).

This issue was discussed in Christchurch recently at the second in a series of three "Green City Dialogues" hosted by the NZGBC.

The meeting was a forum for building industry representatives to discuss how rebuilding and renovating Canterbury homes sustainably could deliver better long-term outcomes for the region.

"Cantabrians are facing significant renovations, and in some cases rebuilds, and for some members of the community it is the first time that they have faced doing this," NZGBC chief executive Alex Cutler says.

"Our discussion centered on how they can rebuild affordably and sustainably, as well as how a home owner who is facing structural repairs or rebuilding can

incorporate suitable insulation or double glazing or energy efficient heating, for example, in their rebuild solution," Ms Cutler says.

"There is an opportunity for the industry to deliver sustainable solutions in the rebuilding and repair plans. There is also a strong need for leadership and creative solutions, as well as help and guidance for Canterbury home owners that focuses on pragmatic solutions for the community."

Bettering housing stock

The panel of industry representatives at the meeting addressed how the industry and residents could overcome the technical and financial challenges of bettering the housing stock, and the current barriers to achieving this in Christchurch.

Ms Cutler says the challenges were acknowledged and potential solutions were discussed.

She says the Homestar home rating tool (www.homestar.org.nz) is a key measure of the environmental performance of stand-alone homes that is already available to the community, and could greatly support the greening of the residential sector in Canterbury.

"Homestar is the comprehensive home rating system developed by the New Zealand building industry, and backed by the Government, that aims to help Kiwis create healthier, more comfortable and energy-efficient living spaces," Ms Cutler says.

"It provides a benchmark for rating the environmental attributes of New Zealand homes to increase their warmth, health and comfort, alongside practical guidance for how to achieve this."

Tool could provide vital assistance

She says that as the Homestar tool was developed for New Zealand conditions, it could provide vital assistance for people and organisations across the wider Canterbury region that are thinking about the environment and sustainable communities as part of the rebuild.

The audience at the Green City Dialogue included representatives from a range of organisations, including construction, project management offices, community trusts and universities, as well as individuals interested in how sustainable homes could be delivered as part of the rebuild.

Panel members included Russell Devlin of Solarchitect, Duncan Joiner from the Department of Building and Housing, Brent Mettrick of Registered Master Builders Federation company Stonewood Homes, Annette Purvis of IAG New Zealand, Nick Collins of Beacon Pathway and Chrissie Williams, representing Christchurch City Council. Colliers International, Westpac and Wynn Williams & Co sponsored the event.

The third and final of the Green City Dialogue events in Christchurch will be held on Thursday, October 27 at 5.30pm, at the Westpac Business Hub. Anyone interested in registering to attend can do so through the New Zealand Green Building Council web site at www.nzgbc.org.nz.

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The specifiers have spoken

By Lifetime Design Ltd general manager Andrew Olsen

Since joining Lifetime Design in September 2010, I have decided it was time to ask the design industry some nitty gritty questions. What are architects and designers really thinking about the Lifemark?

So we ran a survey to around 2000 industry professionals to get their feedback.

First, we stated one of the pertinent trends which is starting to have an impact on the industry.

Fact: The Silver Tsunami is upon us! By 2030, one quarter of the New Zealand population will be 65+ years of age.

Problem: The current design of New Zealand housing stock cannot accommodate the demands of an ageing population.

Solution: Lifetime Design provides a set of common sense design principles to assist designers to design houses which will allow people of all stages in life to live independently in their own home.

So, the above information (and the chance to win an iPad2) was all it took to initiate a huge response — and it soon became obvious that this is a trend that is grabbing the industry's attention.

The responses started flooding in and we were very excited to digest the results.

Question 1: Have you heard of the Lifemark? 80% of respondents had never heard of the Lifemark. This was

not a good start but, if we are honest, this didn't really come as any surprise.

Around 70% of respondents were designing housing projects for the 50+ age group, whether it was a new home build or renovation. Respondents expect this number to increase in the years to come due to the rapidly ageing population and lack of housing stock to easily accommodate them as they age.

It seems that gone are the days of simply "what the client wants, the client gets." There was a sense that these professionals feel it is their role to educate and recommend design solutions that their 50yrs+ clients should consider.

Some clients may feel insulted but, in fact, 85% of respondents are already including specific design features which will accommodate them as they age, because the clients are asking for it.

So the majority are already designing homes which already meet specific Lifemark standards, without even knowing it.

Respondents said they feel the Lifemark standards would be a beneficial design solution to engage with their clients at the planning stage. One respondent commented: "Most people are interested in safety,



Lifetime Design Ltd general manager Andrew Olsen.

security and longevity, as well as the beauty of their asset. It'll help them to think of their future, and maybe include things in their build that they might not have considered."

One respondent suggested: "It would provide tangible third party evidence for decision making and consideration by both client and designer." And others went on to say things such as:

- "I think this is an excellent concept."
- "Sounds very sensible and timely."
- "Future proofing is sadly lacking in today's industry — great idea!"

And results also confirmed what we had already assumed — that a designer/builder promoting the Lifemark would give them the competitive edge in the market. Even though the respondents hadn't heard of us before now, it was obvious from the free flowing comments throughout the survey that we have now got their attention.

So based on these results, what are we going to do about it? Why should specifiers and builders consider the commercial benefits of using the Lifemark? After all, are they not just common sense design principles? This is a challenge our team regularly faces in the industry.

The Lifemark team will be working on a focused strategy within the industry to increase the awareness of the Lifemark and the design standards. It is obvious there are key influencers in the industry who perhaps require more education about the value of the Lifemark and what those commercial benefits to industry professionals are of using the Lifemark design standards in their projects.

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The Forsyth Barr Stadium — by the fabricators

By Roy Kane

Now that we've read all of the superlatives written about the Forsyth Barr Stadium, it's time to hear from the SCNZ fabricators who between them put 3887 tonnes of steelwork, bracing and purlins into the now world-famous icon.

It was fitting that one, Christchurch-based Pegasus Engineering, represented the South Island, while Auckland-based Grayson Engineering kept honours even for the North Island.

The kick-off of the Rugby World Cup set the initial deadline for a contract period at 25 months, but this had to be shortened to 18 months to allow the playing surface grass to be grown in time. Bear in mind that the stadium roof was to be fully covered with EFTE (ethylene tetrafluoroethylene). While this material has the unique property of being transparent to ultra-violet light, Dunedin is located at 42° south!

Main contractor Hawkins Construction invested in a full 3-D time-programmed model that enabled its team to sequence all the building components on screen. The steelwork was very much on the critical path.

Grayson Engineering Ltd, as the lead steel constructor, fabricated the five 105m-long arched roof trusses, each 10m wide and up to 10m tall and weighing more than 200 tonnes.

They also fabricated the 140m-long South Stand Primary truss weighing more than 700 tonnes, which has chord members 711mm in diameter with a wall thickness of 60mm, the largest on the project.

Meanwhile, Pegasus was subcontracted to do the North, East and West Stands, all the stair structures and lift shafts, and would add five prismatic and four planar trusses to the South Stand roof.

In the end, Pegasus contributed 1827 tonnes of steel to the project and Grayson 2060



The primary truss centre section lift by Grayson Engineering weighing 390 tonnes.

tonnes.

All the shop drawings for the project were prepared by Grayson's subsidiary Cadtec Draughting — 8578 Strucad drawings for 20,642 members.

The 3-D modelling technology was critical to the success of the project as the erection methodology meant that pre-cambers had to be allowed for in the fabrication. The two external arch trusses of the five had the added complexity of "twists" that were incorporated to compensate for the eccentric loadings of the facades that hung off them.

Since all of the roof steel consisted of Circular Hollow Sections, both Grayson and Pegasus had imported high-tech CNC (Computer Numeric Control) pipe profiling equipment.

In addition to the time this saved in profiling, the accuracy of the fit-up meant there were considerable savings to be made in weld time and the cost of consumables.

The sheer size of the steel members and the need for total accuracy in conforming to the demanding geometry compelled Grayson and

Pegasus to invest in more workshop space.

Grayson simply added another bay to its new plant in Wiri, South Auckland, while Pegasus rented another factory.

The dimensions and heavy weight of the steel they were fabricating made test assemblies imperative to prove that it would all go together on site without any hitches.

All splice points were meticulously pre-planned. Once they were satisfied, the two fabricators would dismantle the large steel assemblies into smaller units and paint them in preparation for shipping to Dunedin.

Here Pegasus had the advantage of its closer proximity to Dunedin, making 128 round trips — a total of 90,880 kilometres. Grayson sent 124 truck loads from Auckland — most of these being over-dimensional, with the heaviest weighing 30 tonnes plus.

The first route was Auckland to Wellington by road, Wellington to Lyttelton by sea, and then by road to Dunedin. However, when shipping to Lyttelton was cancelled, the sea-crossing terminated at Pictou, thus increasing the



The completed stadium.

distance of the road journey. Each Grayson delivery was a four-day round trip.

"There were several advantages in following this methodology," Pegasus Engineering managing director Gavin Lawry says.

"It virtually eliminated on-site welding and, thus, saved time on the construction programme. It was also good practice in terms of safety. Very importantly, it enabled both fabricators to draw up ITPs (Inspection Test Plans) that intensified Quality Assurance and Quality Control activity.

"Every plate required for bolted flange connections was subjected to a three-stage non-destructive testing, specifically to detect steel delaminations. Ultrasonic testing was then carried out by qualified third party inspectors."

All told, approximately 71,000 bolts were used on this project. The bolts for the flange connections were Grade 10.9 manufactured to a JIS B 1186 specification, and then tested in Australia to determine the tensioning procedure to be adopted.

Each flange connection was bolted up by two experienced erectors, closely watched by a supervisor who ensured the correct torque values were applied.

The torque values were pre-determined by an engineering algorithm, which also prescribed the exact bolt sequence.

Strictly following this sequence, the riggers first tightened the bolts to one third of the required torque value. Then, following the same

sequence and using a hydraulic wrench, the riggers tightened the bolts to two thirds of the required torque value.

In phase three, the bolts were tightened to the full required torque value. The last stage was to then loosen each bolt off and retighten back to the full required torque value. A 20-bolt connection took about two hours to complete.

By following this procedure, the erection team ensured that no stresses or fractures had occurred in the final bolt assembly.

As much work as possible was assembled on the ground into large modules, which were then lifted into place with large cranes.

Continued page 24



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Primary truss fabrication at Grayson Engineering.



Pipe profiling at Grayson Engineering.



A prismatic truss, picked up from a jig 70m away, is crane-walked into the lift position.



Prismatic truss trial assembly in the Pegasus Engineering yard ensures a perfect fit.



After sandblasting and coating, the prismatic truss component is ready for the journey from Christchurch to Dunedin.

From page 23

Grayson Engineering commercial manager Colin Berger describes the erection of the primary truss:

"At 140m in length, and supported by legs at each end, it weighed 701 tonnes. It was assembled on the ground as three truss sections. First, the legs were raised and supported by temporary props. The two end truss sections were then attached to the tops of the legs and also supported until the long middle section could be lifted and secured.

"Weighing 390 tonnes, this was the heaviest lift of the entire project. One end was picked up by a 400-tonne crawler crane, while the other end was attended to by two 280-tonne crawlers.

"The three cranes, provided and operated by Daniel Smith Industries, were each working close to their capacity as they walked the section into position and completed the lift," Mr Moore says.

From the South Stand primary truss to the North Stand

Right: Each arch truss weighs 200 tonnes, and at 105m spans the width of pitch.

opposite is a distance of 105m, as the gull flies. That's the length of the five roof arch trusses that span the pitch below.

Once again the 400-tonne crawler crane of Daniel Smith Industries was in action, walking each truss into position before lifting to an internal clearance height of 37m.

A concrete box drainage culvert constructed in 1930 presented an underground obstacle. The crane circumvented this simply by setting down the 200-tonne truss, crossing the culvert and picking up its load on the other side.

Neither Grayson Engineering nor Pegasus Engineering lost time because of injury or accident.

It would be appropriate to acknowledge the teamwork and contributions made by all the other subcontractors, from those who drove the 550 piles to the engineers who defined the seismic differences between the stands and the roof, while minimising any shadowing of the grass growing on the stadium floor.

But their names are legion and have been carried in hundreds of other articles. However, one company deserves to be honoured because more than all the rest, it bore the full weight of responsibility.

That's how it was for Hawkins Construction, the main contractor, whose project director Andrew Holmes endorsed Shakespeare's words: "Uneasy lies the head that wears a crown."

If it wasn't 10,000 cubic metres of crushed building concrete to be re-used in haul roads and hard stands, it was the steel supply chain and the need to hit those lift dates.

"Our mantra was 'Plan, plan, and plan again: then check, check, check again and sign off!'" Mr Holmes says.

"We had to win by reducing our collective risk, which is like the spiritual opposite of the sport and performances that will take place here in the future. Yet for those who built this wonderful stadium, it was no less emotional."



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NZGBC appoints new director for Homestar

The New Zealand Green Building Council (NZGBC) has appointed Krista Ferguson as its new director for Homestar, with responsibility for leading the strategic direction and managing the delivery of the Homestar rating tool to New Zealand.

Ms Ferguson was educated in New Zealand, and has lived and worked in the United Kingdom and Ireland. Her career has spanned charities, Crown agencies and local government entities overseas and in New Zealand, including chief executive roles for the New Zealand Gambling Helpline and the Auckland Communities Foundation.

Ms Ferguson says she is thrilled to be joining the NZGBC in this new capacity, and bringing her experience in national and international strategy development and service delivery in complex environments to the work of Homestar.



New Zealand Green Building Council director for Homestar Krista Ferguson.

"I have always pursued work that makes a difference in the community, and this role is no different. The potential for Homestar to effect a real positive change

to the health and comfort of New Zealand's housing stock is immense. It's something I'm accepting as a personal challenge."

NZGBC chief executive Alex Cutler says she is looking forward to Ms Ferguson increasing public awareness of the Homestar rating tool, following its successful launch in November 2010.

"Homestar's uptake by the public has exceeded our expectations in its first year. Thousands of Kiwi home owners have already used it to find out how their home can perform better, but there are still a million homes in New Zealand that are under-performing in terms of health, warmth and comfort," Ms Cutler says.

"Krista's leadership will be vital for continuing the NZGBC's journey towards improving on that, for the benefit of all New Zealanders."

For more information on Homestar visit www.homestar.org.nz.

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BCITO back to school

As New Zealand's building industry gets set to enter a period of unparalleled growth, many are wondering where all the extra people are going to come from to make it happen.

Undoubtedly some will come from foreign shores, but we will be competing with flood-stricken Queensland and tsunami-devastated Japan.

So we can't simply lean against the shovel and hope for the best — the reality is that we are not going to get (much) help from overseas.

It seems inevitable then that our industry capacity will fall short in the interim, but this doesn't have to be the case down the track. If we take a long-term outlook, rebuilding Christchurch and leaky building remediation isn't going to happen overnight — it will take years.

About four years of intensive training is needed to produce a builder from scratch, so we have the opportunity to gear up for the future.

As with most career paths, the majority of new people entering the industry do so from high school. The BCITO has had to fight hard to attract young talent into the building industry, as our youth are increasingly attracted to more academic pathways.

So when work does pick up, the BCITO has a big challenge to not only attract more school leavers than ever before, but to also attract smart, motivated people who can work in an industry which is becoming more complex and professional every day. So how do we do this?

For starters, the BCITO is putting more focus back on schools. From a year of an industry-driven approach, it's time to start making young people aware of the awesome opportunity in front of the building industry.

Those giving career advice need to understand that bright and motivated people who enter the trades usually end up as business owners with long, successful careers, and with lifestyles that most corporate professionals could only wish for. So the challenge becomes more than simply promoting trades to schools — it's about repositioning our industry as a profession worthy of consideration next to more academic pathways.

And the industry is becoming more professional anyway. Licensing takes effect from March 2012, ensuring New Zealand builders undertake continual professional development.

The trades are also becoming increasingly complex, with innovation and technology shaping the future. Christchurch is a game changer, where we will need smart, switched on people to ensure buildings can withstand their environment. This will take precision, dedication, lateral thinking and, above all else, professionalism.

The BCITO is certainly going to lead this charge to ensure we get the best candidates possible for the industry, and we have a number of initiatives in the pipeline to make this happen.

But it is the industry itself which also has a part to play — we need to demonstrate the industry's worth to society and the immense knowledge and skill within it.

The BCITO recently held a building site tour in Christchurch for school principals and careers advisors. They were blown away with the complexities and challenges faced on some of the commercial sites. As an industry, this is the reaction we need.

We believe that a bit of demonstration will go a long way and, hopefully one day, we will get to a point where professions in building will attract more young talent than ever before.

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If you seek his monument look around

Dr Kerry Rodgers indulges in some self-gratification in Bristol, England



From time to time while writing this column I have the opportunity to treat myself. When Isambard Kingdom Brunel is involved I become shamelessly self-indulgent.

I had a business lunch in Bristol in May. I had asked if we might meet in the Avon Gorge Hotel. This enabled me to ignore mine host and feast my eyes on a superb piece of engineering initiated by Brunel: The Clifton Suspension Bridge.

This is no mere superb construction — it is a work of

art and is most easy on the eye.

The good burghers of Bristol had long wanted a bridge across the Avon Gorge to link Clifton in Gloucestershire with Leigh Woods in Somerset.

In 1753 a Bristol wine merchant had a dream. He left a legacy of £1000 with instructions that when the interest had accumulated to £10,000 it should be used to build such a bridge.

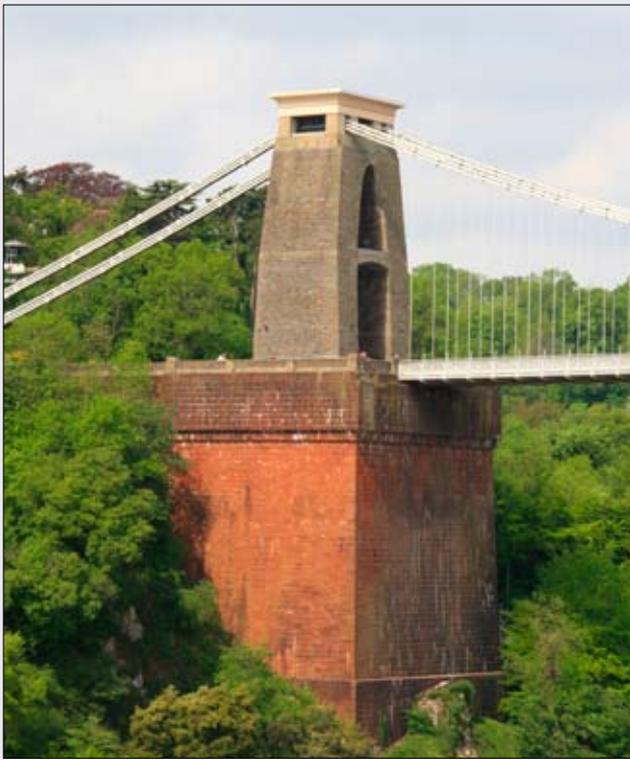
By 1829 there was just £8000 in the account, but the patience of the good folk of Bristol had worn thin. A competition to find an appropriate design yielded no

suitable entries, but a second competition included Brunel. It saw him win his first major commission.

Work started in 1831 but was halted by the Bristol Riots. Construction began again in 1836 but when the money ran out, the ironwork was sold off and used by Brunel to build the Royal Albert Bridge.

And so, when Brunel died in 1859 his first bridge remained uncompleted. His colleagues in the Institution of Civil Engineers felt a memorial needed to be raised to remember his genius. They set about raising funds which they used to complete the Clifton Bridge to provide that most suitable monument.





William Barlow and Sir John Hawkshaw got the task of revising Brunel's design. They added a wider, higher and sturdier deck.

They opted for triple chains instead of double, employing those salvaged from Brunel's Hungerford suspension bridge over the Thames which had been demolished in 1860. Work was finally completed by 1864.

If any readers are passing through Bristol, the bridge is well worth checking out — and the Avon Gorge Hotel lunch is pretty good too.

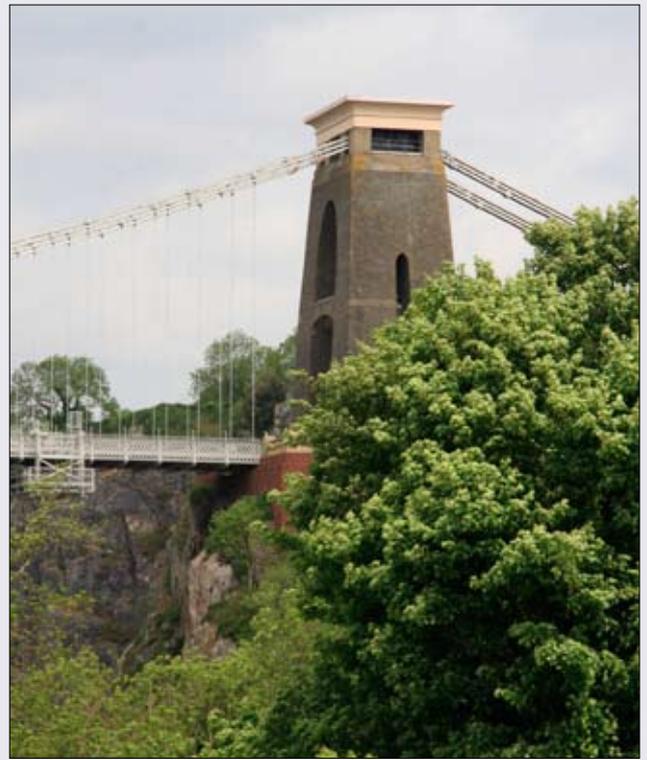
The two towers differ. Brunel wanted them topped with a sphinx apiece, but financial realities got in the way of the final project, as they tend to.

Each of the three independent wrought-iron chains on each side is formed from 81 matching wrought-iron rods that range from 20m at the ends to 0.9m in the centre. These chains are anchored in tunnels 17m below ground level.

At the top of each tower, roller mounted saddles allow the chains to move as loads pass over the bridge.

The total weight of bridge, chains, rods, girders and deck is approximately 1500 tons. The span is 214.05m, the tower height above deck is 26m, overall bridge width is 9.45m, dip of chains is 21.34m, and clearance is 75m above high water.

Despite being designed in the early 19th Century for horse-drawn traffic, it copes admirably with the



demands of 21st century commuters. Some 11,000 to 12,000 motor vehicles cross it each day — or about four million per year.

It is managed by a trust, with a toll of £0.50 levied per vehicle. Cyclists and pedestrians go for free.

Erection of the bridge featured in the TV series *The Worst Jobs in History*. Workers were plagued by continually swirling winds, with two men killed during construction.

At one point a suspended construction platform was blown some 20m in the air, although all the workers on it at the time survived.

Sadly, it has proved a popular suicide spot.



The Financial Assistance Package — an opportunity?

Tim Bates and Chadleigh Danswan of Auckland law firm Legal Vision consider the leaky building Financial Assistance Package and consider how that scheme may present an opportunity for non-council leaky building respondents to see claims against them settled more economically.



Overview of the Financial Assistance Package ("FAP")

In July 2011 the Weathertight Homes Resolution Services (Financial Assistance Package) Amendment Act 2011 amended the Weathertight Homes Resolution Services Act 2006 and introduced the FAP.

The broad features of the FAP are:

- The FAP will see the Government meet 25% of home owners' "agreed repair costs", while the relevant council will contribute 25%, depending on eligibility. What these agreed repair costs amount to will no doubt be the subject of considerable discussion and debate.
- The remaining 50% of the "agreed repair costs" (or 75% where a home owner is not eligible for a contribution from the council) is to be met by the home owner themselves, with support from a limited government-backed financing scheme, so long as the home owner can meet bank lending criteria. The home owner can, of course, pursue other parties involved in the construction process to recover that remaining

50%.

- Before a home owner can be considered for eligibility under the FAP, he/she must have an eligible leaky building claim as provided for by section 14 of the Act.

A claim is eligible if water has penetrated the dwelling because of some aspect of the design or construction, the dwelling is damaged as a result of water penetrating from the outside in, and the dwelling was built (or altered if applicable) in the 10 years immediately before the claim is lodged.

To qualify for the FAP, a home owner must satisfy a number of specific criteria. For example, they must not have entered into a prior settlement for resolving the leaky building defects, a repair plan must be agreed to between the home owner and the Department of Building and Housing and, to be eligible for the council 25%, the council must owe a duty of care to a person in the position of the home owner in respect of the damage.

These are but a few of the detailed (and, it is suggested, vague) qualifying criteria. Of particular interest (or concern) is that in respect of the 25% contribution from the council, the eligibility criteria has been structured in such a way that the council has an almost unfettered discretion as to whether it will participate in the FAP scheme or not.

Nonetheless, despite the inherent uncertainties with the scheme, the FAP is still the first time leaky building home owners have been offered some form of real financial assistance to get their homes repaired, and it seems it will provide financial relief (at least for some).

As to the uncertainties, these will no doubt be worked out over time, and the scheme should aid in partially resolving New Zealand's leaky building crisis.

While home owners clearly need to fully understand the FAP scheme, non-council respondents also need to understand the scheme as it potentially provides these parties with an opportunity to settle a leaky building claim for less than what they may otherwise be able to achieve in an adjudication or court.

As is often the case in leaky building litigation, those involved in construction are sued in negligence as joint tortfeasors under section 17 of the Law Reform Act 1936.

The net result of this is that each liable joint tortfeasor is responsible for all the loss claimed by a home owner

so long as they can be proved to have caused or contributed to that loss.

This principle is the origin of the phrase "last man standing", which is often used in the same breath as leaky buildings.

In a situation where, say, a home owner opts into the FAP scheme and receives a 50% contribution from the Government and the council, the home owner can still pursue the other remaining parties through adjudication or the court for the remaining 50%.

In this economic climate, there are often only one, or perhaps two, remaining parties, such as the builder and architect, that remain solvent or in existence.

In pursuing these parties, the home owner may well succeed in obtaining judgment against them for the remaining 50%. This is despite the fact that, had the matter proceeded to adjudication or court, the council may have been found liable for a far larger proportion of the loss than the 25% on the joint tortfeasor principle.

The FAP scheme provides an early opportunity for non-council respondents to join with the council and Government, and settle the matter where only a remaining 50% of the claim is at stake.

In certain circumstances, the one bar to a home owner's eligibility for the 50% is the inability for a home owner to meet the additional 50% of the repair costs.

Again, the non-council respondents can step in to ensure that they meet this final eligibility requirement through their settlement contribution and, thus, immediately extinguish 50% of the claim.

While the FAP scheme offers non-council respondents with a potential opportunity to settle leaky building claims more economically, as noted, the FAP scheme presents significant uncertainties. Each case therefore needs to be considered on its own merits because in some instances it may be more beneficial for a non-council respondent to see the matter through to adjudication or court.

Legal advice should be sought before making a final decision on whether to participate in the FAP scheme.

Note: This article is not intended to be legal advice (nor a substitute for legal advice). No responsibility or liability is accepted by Legal Vision to anyone who relies on the information contained in this article.

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