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THE OFFICIAL MAGAZINE OF THE REGISTERED MASTER BUILDERS FEDERATION

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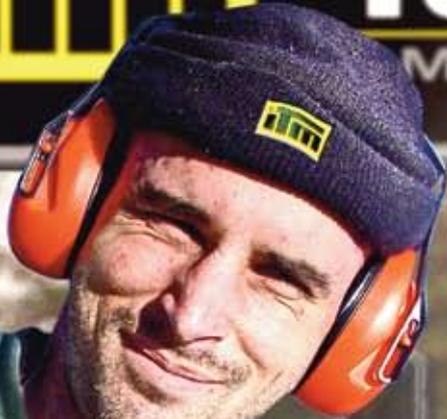
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**20-22 APRIL 2012**



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Win an installed Showerdome worth over \$400. See page 31

# building today

This issue of *Building Today* reveals some positive light at the end of the tunnel as the industry finally shows signs of getting back on its feet again.

Construction activity — and the associated increase in employment — looks to be moving ahead, especially in Christchurch.

We profile the building of the city's temporary stadium, a feel-good story that enables Cantabrians' beloved Crusaders to finally play their Super 15 home games at home.

Another recent initiative has seen the launch of a skills strategy to boost construction sector growth and productivity by 20% by 2020. Read all about it on pages 8 and 9.

And this month's cover story outlines new transport facilities underway in south Auckland to further improve the way Aucklanders are getting from A to B in their city.

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Editor



**cover story 16**

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# chief's chat

by ceo warwick quinn

## Canterbury's Royal Commission of Enquiry — what does this mean for builders?

**A**s you may know, The Royal Commission of Enquiry into the Canterbury earthquakes is well underway, and the Commission published an interim report in October last year. It is expected to release its final report in two stages — those matters relating specifically to Christchurch to be released in late June 2012, and the final report to be released in November 2012.

I am not sure to what extent you are up to date with where things are at but, given the importance of the enquiry and its consequential effects on the construction sector, I thought I would brief you all (very brief) on it so we all understand a bit more.

### What is a Royal Commission?

A Royal Commission is the most serious response to an issue available to the New Zealand Government. It is independent from Government and reports to the Governor-General.

It investigates why a situation came about and then recommends policy or legislative changes. It can enquire into any matters it sees fit in order to get to the bottom of the issues.

It has powers of compulsion with regard to witnesses/documentation, but it is not able to determine legal liabilities.

What is the inquiry about? Well, fundamentally, the



Commission is focusing on the performance of buildings in the Christchurch central business district during the earthquakes (September and December 2010, and February and June 2011), and the adequacy of the building regulatory framework, codes and standards into the future with a focus on central business districts New Zealand-wide.

### So what is the Commission's approach?

The Commission has been multi-faceted and proactive in gathering information and investigating issues.

Since early May 2011, it has obtained evidence and information from technical experts, local and central government agencies, professional bodies and eyewitnesses and survivors of collapsed buildings.

It has also obtained information on a representative sample of buildings from across Christchurch on how

they performed during the earthquakes.

In June 2011, the Commission called for expressions of interest and submissions on seismicity, soil/ground conditions, unreinforced masonry and earthquake-prone buildings and requirements, new building technologies, education, training and the organisation of the engineering profession, post-earthquake building assessments, and a SESOC practice note *Design of Conventional Structural Systems*.

Shortly the Commission will call for submissions on roles and responsibilities/building controls, and any remaining design code matters.

It has also indicated it may seek further submissions on post-earthquake assessments and the engineering profession (as above).

Public hearings have been held, and these are live-streamed, with videos being available on the Commission's web site.

To date, hearings have covered seismicity, soils/ground conditions, unreinforced masonry and earthquake-prone buildings, individual buildings causing death, the Forsyth Barr and Hotel Grand Chancellor buildings and, most recently, new building technologies.

Hearings are about to be held on the CTV building (June 25), post-earthquake building assessment (early August) and the regulatory framework.

When all is said and done, and the Commission has issued its report to the Governor-General, the Government will need to form a view and respond.

It is highly unlikely that nothing will change, and already work is underway so that a speedy Government

response is delivered.

To date, hearings have covered seismicity, soils/ground conditions, unreinforced masonry and earthquake-prone buildings, individual buildings causing death, the Forsyth Barr and Hotel Grand Chancellor buildings and, most recently, new building technologies.

You can expect that changes will not just affect the Canterbury region, but have an impact right across the country, given we live in the "shaky isles" and that an earthquake can strike anywhere at

any time.

• RMBF president Blair Cranston's column returns next month.

# Need for skilled apprentices crucial

The construction industry is showing signs of improvement, and the need for skilled carpentry apprentices is crucial for the future of the sector.

Home building consents rose 8.3% in January compared with December 2011, with 209 consents issued in Christchurch alone, up from 61 in the previous month.

This trend is expected to continue as the Christchurch rebuild, repairs to leaky homes and the housing shortage in Auckland all bring about new projects within the industry.

Registered Master Builders Federation chief executive Warwick Quinn says the industry is really gearing up for an influx of work over the next few years.

"There will be plenty of work which will require an incredibly high demand for skilled builders, many of whom will be entrants or employers in this year's Apprentice of the Year competition," Mr Quinn says.

"Today's apprentices will be right in the thick of the demand, and they are the future business owners that New Zealanders will be trusting to put their homes and buildings back on track," he says.

Entries are now open for the Registered Master Builders Carters 2012 Apprentice of the Year, and organisers are expecting the quality of entrants will prove that New Zealand's building sector is in trusted hands.

"It is important for employers to encourage young people to get involved, so they too can become a vital part of the industry's future," Mr Quinn says.

Former Apprentice of the Year judge and Wellington builder Dave Mudge says judges in the regional competition will be looking for someone who is hands-on and practically minded, as well as being able to deal with the administrative side of building.



Some of the prizes on offer in the Registered Master Builders Carters 2012 Apprentice of the Year.

Mr Mudge says it is important that apprentices enter a good submission, because judges will use it to gain an understanding of who the apprentice is before they meet.

He says the judges are looking for "punctuality, appearance, overall manner and respect towards the judges" during the interview.

While it may seem like a nerve-wracking experience for apprentices, Mr Mudge says he'd never hold their apprehension against them.

"It's daunting — one apprentice by themselves, and three judges. Have respect for the judges, but don't be worried about them," he says.

The interview is finally followed up by a site visit where judges will assess a number of aspects, including health and safety, tools, quality of workmanship, attitude and teammanship.

With more than \$100,000 worth of prizes up for grabs, as well as the coveted title of 2012 Apprentice of the Year, the competition aims to highlight career

opportunities in the construction sector, and provides a chance for carpentry apprentices to be recognised for their incredible talent, skill and drive.

Entries for the Apprentice of the Year are open until June 28, 2012. For further information, or to download an entry form, go to [www.apprenticeoftheyear.co.nz](http://www.apprenticeoftheyear.co.nz). Entry forms can also be collected from Carters stores nationwide.

Apprentices, employers and those young people aspiring to be a part of the construction industry are encouraged to join up to the Facebook page at [www.facebook.com/apprenticeoftheyear](http://www.facebook.com/apprenticeoftheyear).

The Apprentice of the Year competition is made possible thanks to principal sponsor Carters, the Registered Master Builders Federation, the Building and Construction Industry Training Organisation (BCITO), and supporting sponsor the Department of Building and Housing.

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# Renovation features perfect blend with existing structure

Clarke Construction directors Sarah and Ant Clarke believe the credibility gained and the reassurance of a job well done are the biggest business advantages from winning the PlaceMakers Supreme Award for the Registered Master Builders 2011 Renovation of the Year.

The young company is relatively new to the game. Mr Clarke set up the business in Christchurch in 2002, before moving it back to Marlborough in 2007 where he became a Registered Master Builder.

"We thought RMB would be a good organisation to be affiliated with," Ms Clarke says.

"Since we've been involved we've been getting such great support for the company.

"We've had a lot of background support for the office to help us get our systems in place, especially because we're quite a young company," she says.

"I actually couldn't recommend it more to someone starting up a [construction] business."

The first-year entrants were overwhelmed when their company took out the Supreme Award.

"It's great recognition for our company's hard work. It's reassuring to know that as a team, we made it all come together.

"There's a lot you have to overcome to make it all happen, and at the end it was great to get what the client wanted and make it a well-finished job."

The family home in Blenheim was a careful renovation of a period villa, and saw seamless integration of old and new, modernising the home while retaining its original character.

The home's extension consisted of three separate pavilions which were cleverly connected through modern flat roof sections that blend perfectly with the existing structure.

Competition judges described the renovation as "sympathetic craftsmanship, with exquisite attention to detail and great teamwork between client, builder, and architect".

"The renovation replicates the original home to a 't', with faultless workmanship delivering the best of the original design and home, with



*Above: Before the renovation.*

*Below: After — Clarke Construction of Blenheim won the PlaceMakers Supreme Award for the Registered Master Builders 2011 Renovation of the Year and PlaceMakers Renovations Award over \$500,000.*



contemporary living. A stunning result for a first-time entrant in the competition," they said.

Clarke Construction's 10-strong team is currently working on a number of projects throughout Marlborough, including new home builds, renovations, commercial projects and hardscaping.

"Our latest venture is building swimming pools. It works well because often clients want to continue a relationship with the builder, so it's nice to be able to come back six months to a year later and put in a pool and related hardscaping," Ms Clarke says.

"We always try to keep a great relationship with our clients. More often than not we end up becoming really good friends, because we have had such a close relationship throughout the job.

"Communication and getting what the clients want at the end of the day is important for us," she says.

The company is entering the House of the Year again this year, with a Marlborough property in the New Homes \$600,000 - \$1 million category.

Entries for the Registered Master Builders 2012 House of the Year, in association with PlaceMakers, have now closed.

The Awards are made possible through the support of PlaceMakers, James Hardie, Gib Living Solutions®, Nulook and the Department of Building and Housing.

For more information about the competition, visit the Registered Master Builders web site at [www.masterbuilder.org.nz](http://www.masterbuilder.org.nz).

# Corner site challenge met with aplomb

**B**W Hughes Building Company Ltd managing director Brent Hughes was “rapt” when his small Feilding company won its first national award in the Registered Master Builders PlaceMakers 2011 House of the Year.

The company was awarded the Department of Building and Housing New Homes under \$250,000 award at the National Gala in Auckland last year.

“When our name was announced, we didn’t hear any more of what was said because we were too busy yahooping and carrying on. We were pretty chuffed about it all,” Mr Hughes says.

In the business for 35 years, B W Hughes Building Company Ltd started entering the House of the Year in 1992. The company has picked up a number of awards in the Manawatu region’s competition, also taking out the local Supreme Award in 2006 and 2008.

Mr Hughes stresses that if you’ve got a home that you think is good enough to enter, then do it.

“If you think the property is quite good, put it in, and stand by it,” he says.

“We’ve won Gold Awards and Silvers and don’t always go right to the top, but it gives you a good name, it’s good advertising and it’s good for business.”

The winning three-bedroom Feilding property was built to take advantage of all-day sun, and boasts a modern external finish with kerbside appeal in a quiet rural setting.

“It was a bit of an art because it was on a corner site. The back of the property was facing north, so the front of the house was the colder side,” Mr Hughes says.

“We used the back of the house to pick up the sun, with big decks, windows and doors out the back which draw in the sun all day and keeps the home warm.”

Judges said the “beautifully designed home delivers privacy and a stunning living environment with clever orientation of living areas to the north”.

“The brief has been met with a lovely home designed and built hands-on by the builder,



*B W Hughes Building Company Ltd, Feilding, was the winner of the Department of Building and Housing New Homes under \$250,000, Registered Master Builders PlaceMakers 2011 House of the Year.*



with all of the work executed to a very high standard,” they said.

Workmanship is a big part of the House of the Year competition, and is something the company strives for.

“My guys are awesome. They won’t just say, ‘She’ll be right.’ They make sure it is right, and it’s always been that way for us,” Mr Hughes says.

Mr Hughes’ son, Andrew, is also a pivotal member of the team, having been involved in the company now for more than 12 years.

“He’s running the team out on site now, which is great for me. One day he’ll probably take over and I’ll pull out and sit on a beach somewhere,” he says.

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## Initiative aims to increase productivity by 20%

The value of New Zealand's construction sector came under the spotlight in March with the launch of a skills strategy to boost sector growth.

Speaking at the Building Value Futurescape event in Christchurch, Productivity Partnership chairman Bill Smith said that the sector contributes almost as much as agriculture to the New Zealand economy — more than 4% of New Zealand's GDP.

Increasing skills, especially at a management level, has been identified by the Productivity Partnership as one of four factors critical to lifting the performance of the industry.

Research and changes to procurement and construction processes are also required to improve sector productivity and raise living standards.

The Partnership is a combined industry and government initiative to increase the productivity of the sector by 20% by 2020. This would add an estimated \$3 billion to the economy every year, with flow-on benefits for all New Zealanders.

"The work of the Productivity Partnership should help drive down building costs, create jobs and increase access to more affordable housing for New Zealand families," Mr Smith said. "It supports the Productivity Commission's report on housing affordability."

The Partnership's skills strategy focuses on developing skills and making better use of existing skills, including creating business environments where skills can be used productively.

It is the product of nearly two years' work with the education and training sector, the industry and government agencies.

A research action plan for the construction sector was also released by the Partnership at its Futurescape event.

"Knowledge is key to growing a smarter, more productive industry," Mr Smith said. "Improved productivity is based on a better understanding of the industry's structure, processes and decision making."

The Partnership's Research Action Plan identifies research priorities for the sector, and sets out a long-term research programme involving partners

drawn from industry bodies, universities and research and government agencies.

Mr Smith highlighted the Canterbury rebuild as an opportunity to trial new ways of working.

"We're dove-tailing exciting developments, such as PrefabNZ's prefabricated homes showcase in Christchurch — the Hive Home Innovation Village — to promote a more integrated, value-driven approach to building which is customer focused and looks at the whole life of a building.

"There's a demand for affordable, good quality homes and buildings, and there is room for change right across the industry in how we deliver these.

"The good news is change is happening fast, and the Productivity Partnership is taking the lead in giving the industry access to the right tools to enable smart, efficient building.

"These include procurement forecasts and digital modelling tools that provide a forward view of building projects. The future for building and construction in New Zealand looks very different and very positive," Mr Smith said.

# I've got mine – have you got yours?

Martin reckons a scheme like LBP is long overdue – so he was pretty quick to get in and get his licence.

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# Construction industry skills strategy presents opportunities for Maori and Pacifica

'For every dollar invested in construction, three dollars of activity are generated across the economy'

**F**our key priorities to lifting skills throughout the building industry by 2020 have been identified by the joint Government-Industry Productivity Partnership under its Built Environment Skills Strategy endorsed by the Government.

Construction Industry Council chairman Pieter Burghout says the priorities fitted well with the industry's drive for more recruits to participate in the approaching rise in sector activity to deal with the Canterbury rebuild, leaky building remediation and pent-up housing demand in Auckland.

The four priorities are:

- Getting it right first time — addressing quality issues and avoiding rework,
- Eliminating the downtime — effectively managing labour so it is better deployed and less time is wasted,
- Working towards meaningful careers — developing pathways into and through the industry so people have careers rather than jobs, and
- Multi-disciplinary teamwork — increasing collaboration between firms, different parts of the sector and education providers.

## 4% of GDP

Mr Burghout says the strategy is especially important because of the Government acceptance of the industry



Construction Industry Council chairman Pieter Burghout

as a strong driver of economic growth that contributes more than 4% of GDP.

"When it comes to job provision, this industry can be one of the best generators of fresh employment, and its impact is felt throughout the economy in the creation of new positions within construction service industries," Mr Burghout says.

"For every dollar invested in construction, three dollars of activity are generated across the economy, making it one of the most stimulatory sectors."

Mr Burghout says the industry would need more than 10,000 new entrants with building-related skills to cope with the anticipated lift in construction activity next year.

"The need ranges through trades such as carpentry, plastering and tiling to management positions, all of which require specific skill sets."

He says the drive to lift workforce skills should resonate in Pacific Island and Maori communities.

"A recent industry report from PricewaterhouseCoopers identified the sector as offering the fifth-highest employment rate for Maori and eighth-highest for Pacifica.

## Significant employment opportunities

"The construction sector offers significant employment opportunities for these groups, making the consistent provision of work by the sector an important part of improving economic conditions for Maori and Pacific Island people.

"Endorsement of the strategy by Ministers Joyce and Williamson, as Ministers of Economic Development and Building and Construction respectively, is particularly important in this context." Mr Burghout says.



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# Timber standing tall once again

Europe and North America have been hot on it for a while. And now timber is seeing a revival in Australasia, if a huge uptake in licencing for a locally-developed timber building innovation is anything to go by.

New Zealand-based Australasian research consortium, The Structural Timber Innovation Company (STIC), was overwhelmed with the surge of interest in its EXPAN timber building system at road shows around Australia and New Zealand.

Initially developed at The University of Canterbury, the EXPAN post-tensioned laminated veneer lumber (LVL) (or glulam) building system offers strength, sustainability and superior seismic capabilities.

It's an innovation that's made it possible to construct long-span, multi-storey timber commercial buildings — for an equivalent cost to steel or concrete.

Following the road shows, STIC chief executive Rob Finch has had more than 260 companies across Australasia sign up for the EXPAN design and installation, and fabricators licences. And more are coming on board each week.

"People have always loved timber. Design professionals love that it's a natural product, it's sustainable, with a warmth to it you don't get with other materials," Dr Finch says.

"Thanks to LVL and glulam technology, it can now hold its own against steel and concrete as a viable

alternative for commercial buildings. It's opening up exciting design possibilities as architects realise timber is a real option, and not just a nice idea any more."

Dr Finch says there's a strong correlation between the interest they've seen from licensees, and global building trends. Timber is certainly riding the wave of the global movement to build green.

"Sustainability and a lowered environmental footprint are the main drivers behind the renaissance of timber in Europe.

"And we're getting there in New Zealand now too, as building owners and designers progressively realise that engineered timber provides a technically and commercially viable building with a low carbon footprint."

There are now seven EXPAN buildings in New Zealand, including Nelson Marlborough Institute of Technology's new Arts and Media Building, and BRANZ's Nikau Building.

## Timber in Christchurch rebuild

And timber is set to play a role in the Christchurch rebuild, with two commercial buildings due for construction using the EXPAN system, and avid interest from many more involved in rebuild projects.

The Christchurch timber buildings will be hugely significant examples of cutting-edge seismic design, and damage avoidance technology, Dr Finch says.

"Commercial property owners, and insurers, are now demanding buildings that are not only safe in a major event, but can be rapidly reoccupied afterwards, therefore minimising business interruption.

"Seismic capabilities are certainly top of mind for building owners in New Zealand now."

Jasper van der Lingen, the architect behind one of the EXPAN buildings soon to be constructed in central Christchurch, has enjoyed exploring the design opportunities the technology enables.

## Stylish buildings

"I always knew we could do a very stylish building using this innovation. With exposed timber beams, the building has a very warm feel — very different from your standard office fit-out.

"We're using as much glass as possible so you can look in and see the timber visible. It's been a really exciting project to be involved in. We're really looking forward to seeing it go up."

And he sees a big future in wooden building technology.

"I think this technology is very special to New Zealand — after all, we are a timber country. It's fantastic to be able to use a local, sustainable resource, and locally-developed technology, to design a unique looking, long-span commercial building that's not been possible here before."

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## Manufacturing company making a big green effort

**F**rom last month Auckland's air got a little cleaner.

While industry pollution contributes to around 10% of Auckland's poor air quality, the Council's pledge to clean this up took another step forward.

Tasman Insulation's site in Penrose, which produces Pink Batts insulation, has installed a new wet electrostatic precipitator (known as a WESP) which cleans up manufacturing emissions. The old stack was dismantled before the new system came into use.

"Any reduction of Auckland's dirty air is a good thing," Tasman Insulation general manager Tony Te Au says.

"And as a large manufacturer, we have a responsibility to improve the air quality of our city."

Tasman Insulation project manager Jerry Miller, who has overseen the WESP's construction, says you could sometimes see the smoke haze coming from the old 33m stack in Penrose.

"However, the new stack has no visible smoke whatsoever," he says.

### Auckland's serious PM problem

Auckland has a serious problem with PM<sub>10</sub>, the particle matter discharged from gas stacks such as the one at Tasman Insulation's Penrose site.

The new WESP will remove 90% of PM<sub>10</sub> emissions, leaving no visible plume, except for some water vapour on particularly cold mornings.

Work started in November at the Penrose site to install



The old stack (left) and the new WESP (right) at Tasman Insulation's manufacturing plant in Penrose, Auckland.

the new \$4m stack. Rather than releasing them, it collects the particles, passes the air through a highly charged electric field where they get charged and are then attracted to the surface with the opposite charge — rather like the north and south poles of a magnet.

"It's the principle of opposites attracting," Mr Miller says. "The WESP uses water to wash the particles off these surfaces, and the particulates are then dealt with by the plant's wash-water system."

Auckland City Council asked Tasman Insulation to use the best practicable technology to tackle its emissions, and the company was happy to oblige. WESPs are

increasingly popular throughout the world in this sort of application.

Around 90% of PM<sub>10</sub> emissions in Auckland are from older diesel vehicles and house fires. Manufacturing contributes the other approximately 10% of PM<sub>10</sub> in the city.

PM<sub>10</sub> is of particular interest to environmental protection agencies because it is associated with negative health effects, and Auckland's air regularly exceeds the national air quality standard of 50µg/m<sup>3</sup>.

These standards are based on best practice in Europe and the United States.

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# New Zealand building company po

It's been a long time since PlaceMakers launched a major brand campaign — and the latest one hits the nail on the head.

PlaceMakers is putting a stake in the ground as first and foremost for the building trade, and is signaling it's ready for anticipated industry change.

"The building industry has been through some tough times, and PlaceMakers want the trade to know that we're right behind them," PlaceMakers chief executive John Beveridge says.

The new brand advertisements focus on "the job" and the team that brings the build together. Instead of using actors or scripts, real builders, real subcontractors and a real "job" feature in the ads — and it all took place in Ngaruawahia.

It's a chance for New Zealanders to see real, talented, quality-focused builders and subbies doing and enjoying their work.

"We are committed to building New Zealand, together



*PlaceMakers chief executive John Beveridge.*

with our trade customers, our suppliers and our staff. We want our customers to know who we are and what we stand for — we value people, we've got the knowledge and we're great and reliable on the job," Mr Beveridge says.

"This brand campaign is part of a bigger story for PlaceMakers — it signals the evolution of our brand and our business. We are ready for anticipated industry growth, and we're focused on strengthening our position as the leading and largest building supplies partner to the trade in New Zealand," he says.

The unusual approach of using real builders and a real build illustrates PlaceMakers' commitment to the job. It emphasises "togetherness" and the complexity — and therefore greatness — of the building trade.

"PlaceMakers has 30 years of getting behind Kiwi builders, and we're here for the long term."

To view the first two ads of the campaign, visit the PlaceMakers web site at [www.placemakers.co.nz/footer/pages/placemakers-tv.aspx](http://www.placemakers.co.nz/footer/pages/placemakers-tv.aspx).

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# sitioned for industry change



The two real life builders who appear in PlaceMakers' first two brand advertisements: Huntly builder Andre Creighton (left) and Ngaruawahia builder Bruce Kimpton.

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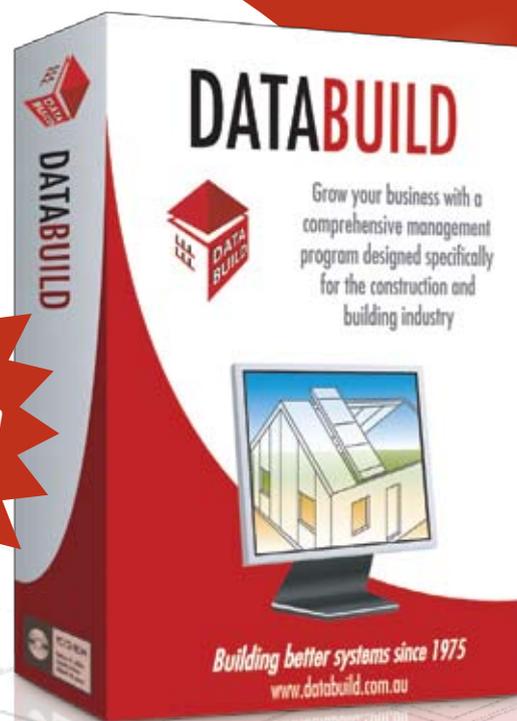
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# First stage of Manukau Station opening soon

The first stage of Auckland's newest train station and the first rail line built since the 1930s will open in Manukau on April 15.

When passengers begin using the first stage of the Manukau Station development they will enter through a temporary station entrance to the completed platform areas in a rail trench below ground level.

Construction will be continuing above ground on the second stage, a \$95 million integrated transport hub and tertiary campus at the Manukau City Centre site next to Hayman Park.

When complete in 2013, the new station entrance will be on the ground floor of the Manukau Tertiary Centre. When this second stage opens it will have high quality facilities, including a ticket office, with easy connections between trains and buses leaving just outside the station entrance.

Auckland Transport and Auckland Council have partnered with Manukau Institute of Technology in the development, and Kiwirail have built the 2km rail line from the Southern Line to the Manukau City Centre.

Auckland Transport, train operator Veolia Transport and Kiwirail are working together on the start of new services to Manukau.

For initial services, Manukau Station will have three trains an hour in peak times and one train an hour at other times.

Buses from Botany, Flat Bush and Redoubt Rd will be extended to Manukau Station, providing a connection between buses and trains.

Further bus services will be extended to the station next year, and it is expected to eventually become the main bus hub for south Auckland.

In the future, about 600,000 passengers a year are expected to use the train station, a similar level to Newmarket. Only Britomart will be busier. And around 1.2 million people are expected to eventually use the bus station each year.

Auckland Transport public transport operations manager Mark Lambert says passengers can expect a similar standard of station to New Lynn and Newmarket when the Manukau transport hub is fully complete next year.



An artist's impressions of the Manukau Tertiary Centre and Manukau Station building due for completion in 2013.

"What is opening soon is just the beginning of the station development and train services in preparation for the arrival of new electric trains," Mr Lambert says.

"Auckland Transport, Veolia and Kiwirail have agreed on a phased introduction of rail services to Manukau. We are continuing to review the timetable with Veolia to see what improvements can be made on other parts of the rail network."

Veolia Transport managing director Graham Siberry says everyone is delighted to be helping add a new branch line service.

"We will work hard to continue to deliver an excellent rail service and grow the network. It's wonderful to see customers choosing rail in increasing numbers."

Auckland mayor Len Brown says it is great news that trains will soon start running to Manukau City Centre.

"People can also look forward to a really high quality station building opening next year as part of the Manukau Tertiary Centre," he says.

"The Manukau Station and rail line is a classic example of the transport infrastructure that would be built from revenue generated from the Council's Alternative Transport Funding Sources programme.

"Existing funding sources fall well short of what is required to provide the facilities and systems to move



people and goods efficiently and in a co-ordinated manner by road, rail and sea in greater Auckland," he says.

"At least \$10 to \$15 billion of alternative funding is required to meet the transport needs of a rapidly growing population, estimated to be 2.5 million in 2030."

# Solar energy focuses people on other eco-friendly devices

**G**one are the days when people would choose a house purely for its aesthetic appeal.

When building a new home, New Zealanders want to live somewhere that ticks all the boxes — something that is kind to the environment, is warm in winter, cool in summer, and has a smart design to cut power bills.

A solar power system can be an integral part of that, and provide benefits a lot of home owners have not even thought of.

Phil Rumble, of Rumble Electrical in Northland, is an expert in alternative power. He has been working with alternative systems for more than five years, and thrives on designing the right system to fit every household perfectly.

Mr Rumble says alternative power, particularly solar energy, is becoming much more mainstream. It is no longer the domain of baches in the middle of nowhere — a normal family home can be partially or completely

off the traditional grid.

And he says for people who are building from new, the addition of a solar energy system often focuses their minds on how else they could make their new home eco-friendly.

The cost and design of a solar energy system can vary widely, depending on the needs of the people who will be using it.

"It has to be designed completely for the household."

"The reasons people choose alternative power are varied. They might be concerned about the future of the country's power supply, they might want to cut down their power bills or they might want to lower their home's carbon footprint," Mr Rumble says.

But it seems clear that no one building a new home can afford not to investigate what alternative power could offer them.

More information is available at [www.rumbleelectrical.co.nz](http://www.rumbleelectrical.co.nz).

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# Signs of life in Christchurch

**F**rom the BCITO's perspective, things are definitely starting to happen in Christchurch.

Training agreements are rolling in, enquiries are up, and Canterbury web site traffic to [www.bcito.org.nz](http://www.bcito.org.nz) has hit a two-year high. Hopefully this is just the start of things to come.

But really, this is to be expected. It is estimated that an additional 36,000 workers will be needed by the time of peak reconstruction in the third quarter of 2013. Of these, 23,900 will be needed in the trades, including carpenters, concreters and plasterers.

Employment in the Canterbury construction industry has grown strongly (up 18%), which suggests that the rebuild is already having an impact on employment demand within the Canterbury construction sector.

The Department of Labour report for the Canterbury Employment and Skills Board (CESB, December 2011) states that the area requires 10,000 new houses, plus

repairs to a further 105,500 homes, followed by a commercial rebuild over 15 years.

Employment in the Canterbury construction industry has grown strongly (up 18%), which suggests that the rebuild is already having an impact on employment demand within the Canterbury construction sector. And the demand for workers is growing.

In Christchurch at the moment, there are about 1800 carpenters and joiners, but a further 4800 will be needed at the peak

September 2013 period.

Likewise, an extra 2700 painters will be needed during the peak, from the current number of 600.

However, it's also interesting to note that the rest of New Zealand also seems to be on a bit of a training splurge, especially Auckland.

The BCITO is getting enquiries from across the country, even in areas which have been quiet for the past couple of years. It will be interesting to see if all this recent activity is a seasonal aberration or, in fact, the start of the next building cycle.

For employers out there who are starting to get busy, think about upskilling your team or putting on extra apprentices.

The BCITO has introduced a new job-matching service whereby it can put employers in contact with motivated prospective builders.

But they're getting snapped up quick! So don't leave it too late. To enquire, call 0800 4 BCITO.

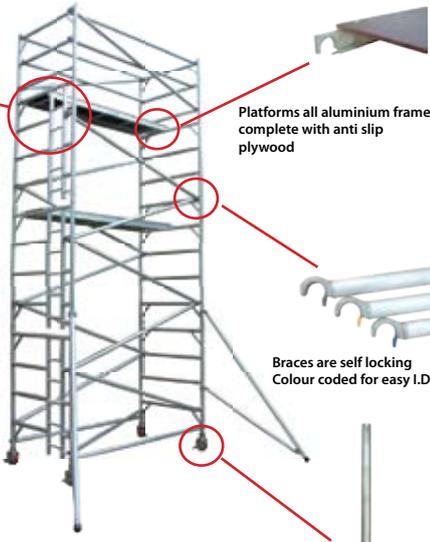
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# So, when's this building boom? happening ●

Everyone's calling a boom, but it hasn't happened yet. BCITO **researchers** forecast mid-2012, but no-one can be certain. *But it will come.* No doubt about it.

When it comes you will need **people** and **skills** to grow your business. BCITO apprentice numbers are down by 50%, so where will this skill come from?

It is up to you to prepare now. We know it's tough to take on extra people, but you're going to need them, especially in Auckland and Christchurch.

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## back in time

# BT's Back in Time

Welcome to Back in Time, where we delve into our magazine archives and discover what was making news way back when . . .

### 20 years ago:

- The adoption of joint New Zealand and Australian Standards for building design and materials was envisaged in the next five to seven years.

It was thought joint codes would provide a significant contribution towards eliminating technical barriers to trans-tasman trade.

The main challenge was the integration of New Zealand's earthquake design provisions without affecting Australian users.

- Seven appointments were made to the Building Industry Authority in April 1992, including NZMBF president Frank Allen, Jo La Grouw who was representing volume house builders, Building Owners and Managers Association president Malcolm McLennan and Invercargill mayor Eva Poole.

### 15 years ago:

- The Sky City casino, hotel and entertainment complex won overall top honours in the Building Owners and Managers Association (BOMA) Awards for Industry Excellence.
- The NZMBF signed a 12-year lease on one floor of a seven-storey office block at 234 Wakefield Street in Wellington. The Federation had sold its Construction House offices the previous year for development into apartments.

### 10 years ago:

- The Building Industry Authority engaged an independent team of three people to conduct an inquiry into "widespread claims that new buildings are failing to stay weathertight".

Establishing the group was the authority's response to concerns expressed by a number of industry organisations plus media accounts of a high incidence of leaking and rotting houses.

- Jamie O'Leary from the Wanganui MBA was appointed the new RMBF president at the Federation's annual conference at Rotorua.

### 5 years ago:

- RMBF president Ashley Hartley announced that steady progress was being made towards turning on the "go live" switch for the Licensed Building Practitioner scheme in November 2007.

"The closer we get to the finish line there is bound to be quite a bit of noise from those parts of the industry that might be concerned they won't be able to get a licence," Mr Hartley said.

"This is the future of the construction industry we are dealing with here."

# Are we building safe homes for NZers?

By Lifetime Design Ltd  
ambassador Graeme Sinclair

**E**very year, tens of thousands of New Zealanders are injured in their own homes. Last year, 12 people per week died from injuries received at home — a place which is supposed to be the safest place on earth!

Slips, trips and falls are among the most common hazards. More than 261,000 people were injured as a result of everyday slips, trips and falls in their home last year. The cost to the country of these falls was \$272 million.

Most falls occur when people are doing everyday things like walking up or down steps, carrying the washing or getting in or out of the shower.

The bathroom was one of the most dangerous rooms inside the home, with 11,000 people hurt after slipping there.

Some hazards can be dealt with simply by being careful — for example, by ensuring ladders are secure before you use them.

But safety and security are also influenced by design and construction. More and more people are starting to think about how they can protect themselves and their families in their homes. As a builder, it is important you are ahead of the game, offering them a trustworthy solution to their home design.

When you start the design process of a new home or renovation, there are some simple common sense design features which must be considered right from the start.

These features can be represented by the Lifemark — an independent seal of approval, awarded to a home which ensures it is safe and easy to live in.

The Lifemark is the building industry's equivalent to the Heart Foundation tick — a trusted brand to which consumers know they are getting a quality result.

A lot of work and development has gone into Lifemark design standards to ensure they are cost effective, relevant and easy to incorporate into any design.

Having them included in a home could be the deciding

factor as to whether or not an occupant of that home may become one of the statistics outlined earlier.

When building or designing your next project for a client, think about designing with Lifemark design standards so we can start to take control of these statistics.

Your clients will be safer, their homes will be easier to live in and, as a builder, you will be adding to the value proposition you can offer your clients, giving you a point of difference over the next guy.

## Lifemark design tips

### Getting around

- Entrance door is a minimum 860mm with a threshold of 20mm. Landing area is slip resistant with lighting.
- All doorways have a clear opening of 810mm, and all corridors are at least 1050mm wide.
- Light switches are installed at the top and bottom of the staircase.

### Living room

- Light switches are horizontally aligned, with door handles at 900-1200mm above floor level.
- Powerpoints are installed not lower than 300mm above the floor, and all door and window controls have lever handles.

### Kitchen

- The kitchen is not a main thoroughfare.
- Appliances are located at least 300mm away

from bench corners.

### Bathroom

- Toilet and shower walls are reinforced for future installation of grab rails and a shower seat.
- Slip-resistant flooring throughout.

### Bedroom

- There is space on the primary living level for a single bed with easy access to a bathroom.

### Multi-storey

- There is space on the primary living level for a single bed with easy access to a bathroom.
- Staircases should be straight in design — no corners or spirals.

To download the full set of Lifemark design standards, visit [www.lifemark.co.nz](http://www.lifemark.co.nz).

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# Christchurch builds temporary stadium super-fast

By Roy Kane

As the Super Rugby season approached, Cantabrians and especially Christchurch folk needed the equivalent of a fast break to counter the quake damage done to AMI Stadium.

In July 2011, the CRFU commissioned a feasibility study on a generic site. In the following two months concept designs were drawn up for various site options.

On November 8, the project was officially launched — excavation began at 95 Jack Hinton Drive, Addington, on December 20. Target date for completion? March 20. First match? March 24.

How does this rate as a fast break? Populous Architects associate principal Daryl Maguire says in about 130 days a temporary stadium with a capacity of 18,000, including 11,000 covered seats and 555 in corporate boxes, was constructed.

"The master plan expands the capacity to 25,000 seats for big events such as test matches, and for music concerts the stadium will hold 35,000 people," Mr Maguire says.

"What's even more important is that safety is paramount. After all the quakes and aftershocks, and the anxiety that springs from deep sadness, people need a level of comfort when occupying large public structures.

"That acknowledged, the design for safety has not compromised the functional and architectural elements of the stadium. The lightweight fabric roof dispels all spectator perception that a heavy weight is hanging over them."

Even before erection could start, the ground conditions proved to be worse than anticipated. Extensive earthworks improvements and stabilisation measures were undertaken to satisfy the engineering seismic design criteria determined by CPG New Zealand Ltd.

Above ground, Andrew Rowe of Australian firm



*The seats are in and the lightweight membrane roof is installed.*

Wade's Engineering, was responsible for the steel structure design. On the North Stand, with the corporate boxes at a height of 12m, designing for earthquake loads was essential, and some 170 tonnes of steel were used.

On the South Stand, which has no boxes, it was necessary to design only for variable wind loads, and 120 tonnes of steel were used.

The membrane roof was supplied by Serge Ferrari, the world's leading manufacturer of PVC membranes. Project manager Adrian Bosch of Fabric Structure Systems says it's the same kind of material the company used for The Cloud on Queens Wharf in Auckland.

"It weighs only 900 grams per square metre, is translucent, non-flammable and much stronger than glass," Mr Bosch says.

"It's also quick to erect. Each roof panel has dimensions of 12.4m wide by 21.7m long, and we attach the 'skin' on the ground by bolting an aluminium extrusion edge to the steelwork.

"We finish with gutters and accessories before hoisting to its roof height. We designed the roofing panels to cover the seating stands, all

surplus seating having been removed from Eden Park following the Rugby World Cup."

Whatever was needed to accelerate the construction programme was readily adopted. The lighting towers were salvaged from Carisbrook Stadium, connecting Dunedin's House of Pain history with Christchurch's new Addington venue.

And for Crusader fans, who will relish the notion that their team will still be playing on its own turf, as it were, the grass of the AMI Stadium pitch was carefully rolled up and transplanted to Jack Hinton Drive.

Project manager Matt Allen says his company, RCP, was commissioned by the Stadium Trust to provide high level planning and professional project management.

"With such a tight deadline, the project needed to get underway straightaway," Mr Allen says, "and that meant design overlapped procurement and construction.

"Scoping the project at this stage was a challenge when all we had to work from was a preliminary pricing budget. Yet in just one and



A historic game with the Crusaders "at home" at last, where they beat the Cheetahs from South Africa 28-21.

a half weeks we had launched procurement and made a start, thanks to the immediate buy-in from all the parties involved.

"A few Christmas holidays were put on hold because we needed it to be a miraculous programme. The infectious mood was all about the good of the cause. Suppliers gave us sharp prices — some even gifted resources and time to help.

"And, of course, we had to keep Health & Safety uppermost in everyone's mind. It was a time to hasten carefully, because just one incident could jeopardise the target date.

"RCP, through Hawkins Construction as the main contractor, actively managed on site the critical elements that brought the stadium together."

Hawkins site manager Shawn Cunningham says Hawkins hit the road running with this project, starting their countdown to the deadline right from day one.

"No amount of rain was allowed to slow us down — only strong wind did that — and we made up for that during the calm periods," Mr Cunningham says.

"Our approach was to keep ourselves open to what was good for the project, agree readily and act quickly. It helped

to have worked before with the lead steel constructor, Pegasus Engineering Ltd, on the Forsyth Barr Stadium in Dunedin.

"Realising that speed and timing were of the essence, Pegasus went to the local steel fabrication market and subcontracted Chapman Engineering, John Jones Steel, and other South Island companies such as Southern Cross and Taymac.

"From the North Island, Pegasus also

subcontracted Grayson Engineering and Stevensons Structural Engineering to assist. All the erection of the structure was done by Pegasus Engineering's team of riggers. When they were scheduled to work at height, there'd be a safety briefing at the start of each day."

Pegasus Engineering construction manager Jim Hands says they had the initial kick-off meeting at the Hawkins Construction offices

*Continued page 24*

**FABRIC STRUCTURE SYSTEMS**

**"Proudly associated with the re-building of Christchurch"**

[www.fabricstructure.co.nz](http://www.fabricstructure.co.nz)

From page 23

in Christchurch on January 13, when all subcontractors and trades were briefed as to the scope of their work.

"The original plan was to tackle the North Stand first," Mr Hands says.

"However, working closely with Fabric Structure Systems, we identified possible design points that risked delaying the production of drawings.

"Pegasus advocated that our earliest start on site should be made instead at the South Stand. When all parties agreed, Pegasus allocated four detailers to make an immediate impact on producing our workshop drawings.

"The two stands look the same, each having a gantry structure comprised mainly of Circular Hollow Sections ranging in diameter from 323mm down to 168mm, with a 9.5mm wall thickness.

"However, the steelwork in the North Stand is approximately 90 tonnes heavier, thanks to the additional structure supporting the VIP boxes and the ablution blocks.

"Cellular beams, originally installed at Eden Park



The first VIP box is installed.



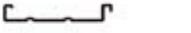
Work on the North Stand continues at night.

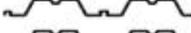
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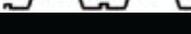
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for Rugby World Cup events, were removed, together with the temporary seating. Pegasus lengthened and stiffened the beams with full penetration butt-welds.

"Each stand has a structure supporting 10 individually-framed roof panels made from 250 x 250 x 9mm Square Hollow Sections, welded together with three Circular Hollow Section curved steel pipes. Each assembled panel consisted of 52 pieces.

"While the fully fitted VIP boxes were being installed, the roof panels were fitted on the ground with their PVC skin. Next door, Addington Raceway generously provided space for this work to be done.

"At 7.5 tonnes, the weight of each panel was not a problem when it came to the lift. However, wind made it hard to find four-hour windows for each panel to be hoisted and bolted into place. There were lots of 3am starts to beat the afternoon gusts that threatened to turn the panels into kites!"

Pegasus Engineering managing director Gavin Lawry says the good working relationships that Hawkins Construction and Pegasus had developed in the Forsyth Barr Stadium project



*Stadium works as at January 16, 2012.*



*Pitch grass harvested from AMI Stadium is about to be rolled out.*

were a key factor in meeting the construction deadline.

"A second key factor was our early collaboration on the design phase," Mr Lawry says.

"This enabled us to assist with decisions on the types of connections, member sizes and loads, and weld details.

"I'd also like to pay tribute to the prevailing can-do spirit of co-operation that all the players brought to the party, from Populous as the architects and RCP as the project managers, to Fabric Structure Systems and all my fellow subcontractors and members of Steel Construction New Zealand.

"Together we were winners even before the first match was played!" Mr Lawry says.



*South Stand gantry framework.*

## ***Facts:***

- *Total steel tonnage: 325 tonnes*
- *There were 1224 individual fabricated assemblies in the contract, including two stairs.*
- *To cope with the transport logistics, Pegasus hired additional vehicles, trailers and drivers*
- *Mavericks Blasting & Coatings — a Pegasus subsidiary — blasted and painted more than 4000 sq m of steel.*
- *The cost for constructing the temporary stadium is being funded by financial contributions from the Government and the Christchurch City Council, and will be supported by hire fees from sporting codes keen to use the venue, such as the Canterbury Rugby Union and the New Zealand Rugby Union.*
- *The stadium is also being built on land offered to the city by the Christchurch City Council.*
- *The Ministry of Economic Development issued a media release on February 10, 2012, stating that a West Stand is to be added so that the stadium will accommodate up to 25,000 fans for the rugby test against Ireland in June.*
- *For the longer term legacy, the roof is designed to remain in place, along with the sports lights and the professional grade pitch.*
- *The stands can be replaced with more permanent infrastructure.*

## Inventors say their product's time has come

**H**eatbox has solved the problem of ventilation systems that the product's inventors say do not heat homes properly.

In 2011, Otago University published a study to back up anecdotal evidence that looked at the actual heating performance of these systems.

The study concluded that "for the majority of the time, it was calculated that pumping air from the roof space into the house would provide little heating or cooling benefit. In fact, this would often actually act to push the internal temperature in the house further away from the desired level, rather than closer to it".

The University of Otago research looked at the heating and cooling potential of moving roof space air into a home's living areas, as the most common type of home ventilation system does.

The report recommended that "this type of ventilation system – known as a "positive pressure" or "roof cavity" system – should not be promoted or installed based on potential heating or cooling benefits".

Enter the HeatBox Mini, a compact heater that can work with ventilation systems to provide heating for two rooms.

It has the twin benefits of increasing the ventilation performance of the system and providing energy efficient heating using the same ducts.

Placed in the roof cavity, the HeatBox Mini uses existing ventilation outlets to blow warm air into the room where the vent is located.

It also comes complete with a separate inlet vent to create natural air movement within the room, and a 24/7 fully programmable Siemens thermostat so that occupants can control the temperature in the room.

Invented by Kiwi Italian Massimo Biscuola and former builder Daryn McDonald (right), the HeatBox system uses revolutionary patented carbon panels for heating.

Unlike more conventional electric heaters which generate radiant heat using a heated metal coil or heat pumps that use coils to transfer heat, the Heatbox uses thin film carbon resistive panels. These panels act as resistors and warm up to around 120°C.

The most remarkable thing about the HeatBox panels



is how efficiently they heat. A typical 2.4 kW unit can comfortably heat four medium-sized rooms. That's the electricity consumption of a standard bathroom heater, or a hairdryer.

The heating technology used in the HeatBox has been used for many years in saunas. But Massimo and Daryn saw the opportunity to create a whole new category of home heating system, especially when they saw how enthusiastically kiwis had embraced home ventilation systems to try and dry out and ventilate their houses.

Mr Biscuola grew up in Switzerland and Northern Italy where he says every home has a central heating system.

"It's the first thing you design when you are building a house. In most New Zealand homes, it's one of the last things people think of adding," he says.

"A warm dry house is not a luxury — it is essential to healthy living. The beauty of the HeatBox system is that it can be retrofitted to existing houses or included in the design of a new home," Mr Biscuola says.

"Installations are unobtrusive, being either hidden in the ceiling or under-floor cavity — and can be completed in a couple of hours.

"There's no question that heat pumps have been the electric heater of choice for the past 10 years. However, we'd like to see a New Zealand-designed HeatBox product manufactured by kiwis in every home one day. We are committed to affordable, warm healthy homes."

Available through selected PlaceMakers stores nationwide, the Heatbox Mini retails for \$1495, and is compatible with any existing ventilation system.

## Insulated garage door delivers superior performance

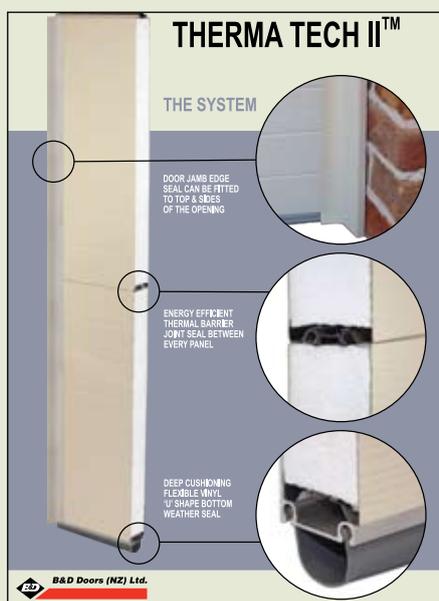
**I**nsulated garage door technology has leapt forward with the release of the Therma Tech II, an insulated steel sectional door from New Zealand garage door manufacturer B&D Doors.

The Therma Tech II is an insulated door with a true thermal break, delivering superior performance that keeps the garage warm in winter and cool in summer.

The product's panels have a steel skin front and back, separated by the thermal break, eliminating the transfer of cold and heat from the exterior to the interior skin.

The thermal break design also acts as a draft stop between each panel, restricting air movement and further weatherproofing.

To complete the seal around the exterior of the door, a jamb seal kit is installed to keep out dust, rain and drafts.



For further details, visit B&D's dealer network web sites at [www.dominator.co.nz](http://www.dominator.co.nz) or [www.garador.co.nz](http://www.garador.co.nz).

# Bog standard

Architect **Don Bunting** rattles off some more random observations about the construction industry at large. This month: Toilets under scrutiny!

**T**hey no longer make toilets in New Zealand. In fact, we don't seem to manufacture very much at all anymore.

We'd rather bring in cheap stuff from Asia, because it only lasts for a year or so and then we can go out and buy nice new stuff again. Makes sense — not.

And whoever invented plastic plumbing fittings that look like chromed metal has a lot to answer for. I suspect the car industry is responsible for this bit of our throwaway culture.

I can remember specifying toilets back when the only cisterns available were those cheap plastic jobs that screwed to the plasterboard. They had a little chrome lever control and a very inelegant flush pipe down to your choice of pan. Although P traps or S traps were about the only options available. White or nothing, of course.

Recently I renovated our bathroom, and decided that we should put in one of those fancy European models. The one we chose looks a bit like an egg with the top and bottom cut off. Soft closing lid, concealed cistern and dual flush controls.

I must say, whoever decided that toilet seats should be square rather than oval has a lot to answer for. Looks great, but feels decidedly uncomfortable.

Having travelled a bit recently, I noticed that countries are often defined by the toilet pans they put in their hotels. We import all ours so we can choose whatever we want, but we still tend to put bog standard jobs in our hotels and motels.

In Australia, where they still manufacture toilets, their toilet pans also haven't changed much from the original British models devised by Sir Thomas Crapper. White pan, white oval seat, wall-mounted white cistern, and that's about it.

The North American toilets tend to be a bit ornate and, like their meals, very big and bulky. They also have a most unusual way of flushing. After you press the button or the lever control the water level in the pan rises disconcertingly until close to overflowing, before retreating and then disappearing with a rush.

While standard European toilets are finally taking over from the old "two footprint and a hole" jobs through most of the Far East, Japan is another matter entirely.

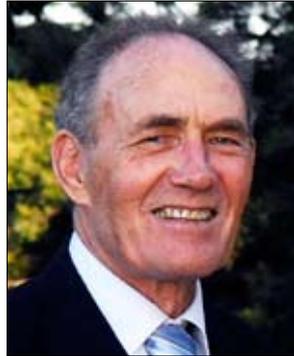
The French may have invented the bidet, but their approach of having two separate pans leaves a lot to be desired. How do you elegantly get from the loo to the bidet for that final clean and polish?

Can't be done. In Japan, it's all in one. The lid closes automatically after use, so no more complaints about men leaving the seat up. And that's just for starters. The range of options is mind-boggling:

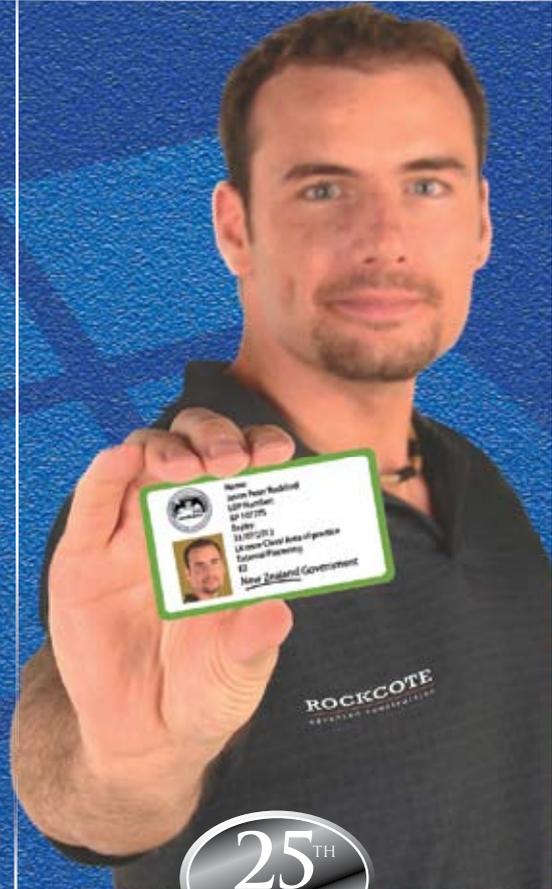
- A heated seat, with full temperature control.
- Warm water sprays, front and rear.
- And no more toilet paper — you just press a button to experience a warm (and dry) glow from down below.

So while you may struggle to turn around, or avoid bumping your head in most Japanese hotel bathrooms, the toilets are what can only be described as magnificent.

Must be something to do with all that tofu they eat.



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## 99 Quay Street, Auckland, turns 100



Dr Kerry Rodgers ruminates upon one of the Queen City's architectural delights

In the hurly burly that has cluttered our year to date, including the teething pains of a Super City, sundry occupations of assorted CBDs, Christchurch's never-ending torment, and the consistently inconsistent performance of the New Zealand cricket team, an important building centenary almost slipped under the radar.

This year marks 100 years since completion of the Auckland Ferry Terminal. New Zealand's Historic Places Trust rightly describes the ferry terminal as one of the most imposing port buildings in New Zealand. It is an architectural gem.

It was erected by the Auckland Harbour Board between 1909 and 1912, intended to provide the focus for the extensive ferry network then servicing the growing city.

But the Harbour Board of the day attached a greater importance to it than a simple

terminal. They wished to make a clear statement that Auckland was an important Southern Hemisphere port.

To this end they chose to build an imposing four-storey structure with a striking Imperial Baroque facade. Oddly, for a local body, cost was never a factor. The Board was prepared to outlay a significant sum for the day — £67,944, for just the building itself — while also undertaking an expensive reorganisation of the docks that would give their new ferry terminal pride of place at the bottom of Queen Street.

The terminal was constructed on the land reclaimed in 1879-1885 from what had been Commercial Bay. The building was designed by Alex Wiseman and built by Philcox and Sons.

Coromandel granite provided the base course and plinth. The magnificent facade



*The historic Auckland Ferry Terminal.*

*Image: QFSE Media, Wikimedia Commons.*

employed Hawkesbury Sandstone, one of the few buildings in Auckland to use this honey brown building stone that so dominates the historic structures of Sydney.

On the ground storey, sandstone blocks form the main structure. The upper floors and towers are constructed of brick with a sandstone veneer. Each floor is of reinforced concrete, and the roof was originally covered with Marseilles tiles.

On completion, the stature of the building ensured it quickly became the focus of the harbour that then enjoyed a central role in the commercial and social life of Auckland city.

Importantly, the Board had cunningly designated the entire building for lease to provide them with a regular income. In this respect it was one of the earliest dedicated office blocks in the city.

Initially it housed the Devonport Steam and Takapuna Tramways ferry companies. Subsequently, trade unions and consulates took offices. In 1927 the ground floor was fully converted to retail shops.

For many years the central tower carried a time ball that regulated activity on the wharves. It was later replaced by a clock and siren.

In the building's centenary year it would have been appropriate if the time ball had been reinstated to provide a tourist attraction, as does that restored on Sydney's downtown observatory.

And then came the Harbour Bridge in 1959. This had a severe impact on all local maritime activity, particularly the waterfront. The ferry terminal quickly fell into disuse and, from there, into a sad state of disrepair.



*A poem in Coromandel Granite and Hawkesbury Sandstone, with judicious use of brick. Above rises the standard in want of a time ball.*

*Image: Arjan Hoogendoorn, Wikimedia Commons.*

It was saved from demolition by being given a Category 1 listing by the New Zealand Historic Places Trust in 1982.

However, it was not until the late 1980s that it received a total makeover at a cost of about \$8 million. This saw it converted back to its original use for office and retail — and a ferry terminal. It also included the addition of a fifth storey.

In his Historic Places record, Martin Jones observes the terminal's significance lies in it "having been a familiar landmark for nearly 100 years, instilling a sense of place and identity in the everyday lives of Aucklanders travelling in and out of the city over

several generations.

"The Ferry Building's valuable visual contribution to the city's waterfront is enhanced by its proximity to other historic structures, including those in the surrounding Harbour Historic Area and nearby Quay Street Historic Area."

And today, of course, several generations of Aucklanders have grown up never having viewed this spectacular piece of architecture as originally built, a focus at the end of Queen Street, unhindered by glass towers. Perhaps their children may do so one day.



*Imposing from the sea. The added fifth floor is obvious.*

*Image: Alexander Klink, Wikimedia Commons.*

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# Causation — the difference between an award of cost for full re-clad and targeted repair

Tim Bates and Katrin Saran Lee of Auckland law firm Legal Vision examine a recent High Court decision concerning the principle of causation in terms of an award of costs.



**T**his case — *Chee v Stareast Investment Ltd (2012) NZHC 133* — involved an interim determination concerning an appeal by the Chees against the determination of the Weathertight Homes Tribunal regarding the watertightness of their home.

The Chees claimed \$99,704 for the cost of full re-clad. Instead, the adjudicator awarded cost of targeted repairs and \$25,000 general damages.

## Overview

The Chees bought the house in November 2001 from the developer, Stareast Investment Ltd (Stareast). Stareast had entered into contracts for the construction of the house. The council issued the building consent, inspected the building work during construction, and issued a Code Compliance Certificate on June 26, 2001.

In August 2003, there were leaks into a downstairs living room from a deck above it. Despite attempts to remedy the leaks, they continued to occur from time to time.

In November 2007, the Chees applied for an assessor's report pursuant to s32 of the Weathertight Homes Resolution Services Act 2006.

After the initial assessor's report, further leaks

occurred in the bedrooms and the garage, and cracks became apparent in the cladding.

The initial adjudication concluded that targeted repairs were appropriate, conditional upon the council issuing the appropriate building consent. The Chees appealed successfully to the High Court, and the case was remitted back to the Weathertight Homes Tribunal for a rehearing.

On rehearing, the adjudicator concluded that the deficiencies in deck construction, installation of a curved window, insufficient ground clearance, splits in lead flashing, squashed valley trays and some vertical and horizontal joints caused damage and, so, the property required repairs.

While the adjudicator considered that the Chees' desire for a re-clad was reasonable given the cracking to the cladding, she did not consider that that need was caused by the respondents' negligence.

That is because the Chees could not prove in fact, on the balance of probabilities, that the increased cracking was due to the negligence of any of the respondents.

## The claim and decision

If the claim against a respondent is in tort (which is usually the case in leaky home cases), there are three requirements needed to be established before the finding of liability:

- the party must be found to owe the claimants a duty of care,
- the party needs to have breached that duty of care, and
- the claimants need to establish that they have suffered loss as a consequence of the breach.

This article will focus on the third requirement.

In deciding whether or not any of the respondents are liable for the costs of a re-clad, it will be necessary to look at the reasons why the dwelling needs to be re-clad, and ask whether there is a causative link from the negligence of the respondents.

What this means is that the issue is not so much whether the property needs to be re-clad, but whether the necessity for the re-clad has been caused by the negligence of any or all of the respondents.

In the High Court case, the matters which pointed to it being necessary for there to be a full re-clad were the poor quality of the product on the walls, the untreated framing and the cracking and combination of defects as identified by the assessor, Mr Browne.

Further, according to another building expert, Mr Smith, he would not accept that the cladding system was going to perform for the life that it was required to, pursuant to the building code.

However, the adjudicator did not accept Mr Browne's conclusion that the re-clad was reasonable because of the "combination of defects". The adjudicator found that the appellants had not established that the need for a full re-clad was caused by negligence on the part of the respondents.

The adjudicator also recorded that the experts (there were three other experts in addition to the two already mentioned) had agreed that the defects could be remedied through targeted repair work.

As a result, the High Court judge could not be persuaded that the adjudicator was wrong to conclude that the respondents should not be required to meet the costs of a full re-clad.

The current position for the Chees is they do not know whether a building consent will be issued for the targeted repairs. Therefore, the High Court directed the Chees to apply for such a consent with the costs associated with the application (estimated to be \$10,000) to be incorporated with the claim as consequential damage.

Once the council's decision as to building consent is known, the matter is to go to the Tribunal for final determination.

## Concluding comments

This decision brings to the forefront the principle of causation, namely that claimants cannot just assume that they can claim total re-clad costs after establishing liability. Consideration needs to be given as to whether the need for re-clad is ultimately caused by the respondents' negligence.

The practical position, at least within the leaky building proceedings that this firm has been concerned with, is that a re-clad is normally required rather than targeted repairs, where there is system failure allowing water ingress.

**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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