



# building today

THE OFFICIAL MAGAZINE OF THE REGISTERED MASTER BUILDERS FEDERATION

## What has to be done to avoid NZ's imminent skills shortage?

**Inside:**

- **LBP liability**
- **Simplified timber framing system**
- **Quarter acre dream over for Aucklanders?**
- **'Plyscrapers' could become popular**



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This month's issue carries several articles focusing on the construction industry's imminent skills shortage — one that RMBF chief executive Warwick Quinn says will be of a magnitude and urgency never seen before in New Zealand.

He points out that the combination of the Christchurch rebuild and the temporary accommodation needed during that time, the huge leaky homes repair situation and the eventual pick-up in general demand will result in major skills shortages for some considerable length of time.

We also continue coverage of Licensed Building Practitioner preparations, and the concerns surrounding increased liability for LBPs.

And RMBF president Blair Cranston offers some very handy tips on minimising stress and conflict in your workplace to help keep matters in perspective and to maintain focus.

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# chief's chat

by ceo warwick quinn

## Do the numbers

**T**he construction sector is facing a huge shortfall in skills in the very near future at a magnitude and urgency we have probably never seen before. In order to put some context around what I mean, think about it this way.

The construction sector has been in the doldrums for the past few years. We have been struggling for work and things are generally getting worse.

As a result, companies have had to restructure their business and lay off skilled staff and apprentices who have either gone out on their own, left the sector altogether or gone overseas — in particular, to Australia.

We have been building around 14,000 to 15,000 new homes per annum for the past couple of years, and many pundits are predicting a slight decrease this year.

So the sector has shrunk to a level equal to these statistics, although there is spare capacity for growth in the short term should the work rebound at a steady pace (and we are all hopeful of that).

Now, factor in this. From what we know to date, Canterbury is going to need about 10,000 new homes and repair to about 100,000, though these figures may change as assessments are completed.

There is a general consensus that there is a pending housing shortage in Auckland which may be as high as 20,000 at present.

Furthermore, the Financial Assistance Package currently being considered by Parliament is designed to



cap the Crown and BCA contribution towards fixing leaky homes at 25% each. Some 20,000 odd houses (potentially more) may qualify for the funding which will hopefully start getting these properties fixed over the next five years.

I think it is still a pretty fair synopsis to say we have a major skills shortage looming of quite large proportions, and for a reasonable length of time.

Canterbury as large amounts of the CBD need rebuilding, and temporary accommodation may also be required.

Add to this the infrastructural demands and you start to get a picture of what NZ Inc is facing from a labour and skills perspective.

I think we also have to consider the effect of the

situation in Japan, and the floods, fires and cyclones in Australia as, undoubtedly, those areas will also be looking for resources and materials in their rebuilding programme.

Even if my very rough calculations are out by quite a bit, and we don't know the timing of some of these things, I think it is still a pretty fair synopsis to say we have a major skills shortage looming of quite large proportions, and for a reasonable length of time.

We also face a redistribution and concentration of human capital that we have not seen before to Canterbury (as a result of the quakes) and to Auckland, due to fact that most leaky buildings are located there and the pressure that is building due to a housing shortage in the region.

All this will affect prices for wages and materials, which will put pressure on inflation and the Reserve Bank will have to respond in the only way it can — with higher interest rates.

So there really is a window now for the public to get that new home built or that renovation done before the pressure starts to mount and they cannot find a builder for love nor money, and prices and finance costs escalate.

So what do we do about this skills shortage? Work is currently underway with all the main training providers — the Government (Department of Building and Housing, Department of Labour (with regard to immigration), and Work and Income NZ), Business NZ, BRANZ and sector groups — to develop a plan and solutions to these issues.

At the end of the day, whatever we come up with has to maintain and build our skill base, provide certainty for employers and home owners regarding the capability of those being engaged, and to avoid being bogged down in red tape.

We must ensure we maintain quality and consumer confidence in the buildings we construct, although we may need to go about it differently given what we face.

We certainly don't want another sector crisis to deal with in 10 to 15 years' time similar to the leaky buildings syndrome we face having to fix now.

But I am sure with the right approach we can develop a regime with the right balance, incentives and outcomes where we all prosper.

# Skilled carpentry apprentices needed now more than ever

The skills and leadership qualities of entrants in the Registered Master Builders 2011 Apprentice of the Year, in association with Carters, will be critical to New Zealand's "built" future.

"The damage caused by the Canterbury earthquakes will generate an incredibly high demand for skilled builders, many of whom will be entrants or employers in this year's Apprentice of the Year competition," RMBF chief executive Warwick Quinn says.

"This also comes at a time when the industry is embarking on repairing 20,000 leaky homes and, as a country, we are facing a real housing shortage, particularly in Auckland.

"So while we are experiencing a low in building activity right now, our young apprentices are poised for a very busy future," Mr Quinn says.

With entries now open for the Registered Master Builders Carters 2011 Apprentice of the Year, the next generation of building leadership has the opportunity to show they are up for the challenge.

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.

"We are going to need these apprentices with the huge amount of work that is around the corner. Employers now play an important role, encouraging these young people to become a vital part of the industry," Mr Quinn says.

Carters chief executive Brent Waldron says the Apprentice of the Year competition reflects the industry's efforts to attract and train talented individuals, and recognises the efforts of the employers who train and develop them.

"It is our generation's responsibility to ensure the industry will be in safe hands. These apprentices are our future leaders, and Carters is proud to support a competition that celebrates our industry's potential," Mr Waldron says.

The Apprentice of the Year competition has more than \$100,000 worth of prizes up for grabs 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.



From left: Mark Burton-Brown (Carters), Warwick Quinn (RMBF), Isaac Alder (2010 Upper South Island Region and National winner) and Maurice Williamson (Minister of Building and Construction).



Gareth Jeune, 2010 Central North Island Region winner.

Now in its eighth year, organisers are hoping for an influx of entrants ready to prove they are New Zealand's top carpentry apprentice.

Last year's national winner, Isaac Alder of Russell Bruce Contract Builders in Nelson, is optimistic for the future.

"I want to use my skills now to help people, like going in after a natural disaster and helping to rebuild, or being a part of Habitat for Humanity," Isaac says.

"People are always going to need things built for them. If you've got determination and a good work ethic, the sky's the limit," he says.



Atama O'Donnell, 2010 Northern Region winner.

Entries for Apprentice of the Year are open until June 30, 2011. For further information, or to download an entry form, go to [www.masterbuilder.org.nz](http://www.masterbuilder.org.nz), [www.carters.co.nz](http://www.carters.co.nz) or [www.bcito.org.nz](http://www.bcito.org.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 by searching RMB Carters Apprentice of the Year at [www.facebook.com](http://www.facebook.com).

# Liability of LBPs

By RMBF in-house counsel  
Leoni Carter

**A**s the deadline for licensing looms, members continue to express concern at the prospect of their increased liability if they choose to become Licensed Building Practitioners.

The concern stems from the potential liability for anyone doing restricted building work, or supervising others doing it.

The Act will require that the owner names the Licensed Building Practitioner (LBP) doing any restricted building work (RBW), and the LBP will be required to sign a memorandum outlining the RBW he did or supervised. The form for the memorandum has not been developed yet.

The Department of Building and Housing (DBH) has stated that the liability exposure is no more and no less under a licensing regime than it is now.

Section 88 of the Act specifically states that the memorandum does not give rise to any additional civil liability by Licensed Building Practitioners to owners of buildings that does not already exist — ie, any contractual or tortious liability that may arise is not affected in any way.

The RMBF believes that generally what the LBP regime has done is not change the civil liability the builder already has, but raised a greater awareness of liability.

But some things are new, and some things will be different, and there's going to be greater responsibility and accountability of all building practitioners under the LBP Scheme.

An example of the "new" is the requirement in s.89 of the Act for LBPs to act as "watchdogs" — to notify the council if building work is carried out that is not in accordance with building consent, even if it is not restricted building work, or it is not work that the LBP is doing.

The LBP must also state how the work doesn't comply, and do it as soon as practicable after he forms that opinion.

This is quite an onerous obligation, with no stated means of enforcement (it doesn't appear to fall within



the grounds for discipline in s.317). However, it could be an additional allegation to be cited in a civil claim for breach of statutory duty.

"Breach of statutory duty" is not a new cause of action in the common law, but no one knows yet how it would be applied in the courts and how high the bar of duty will be set for LBPs.

It could take years for such an action to be pleaded and make its way through the courts and we know for sure.

There are some offence provisions in the Act that apply only to LBPs — eg, if an LBP carries out work, or supervises the carrying out of work, of a kind he is not licensed for. The penalty is up to \$20,000.

The scheme introduces a new disciplinary regime for LBPs, a new process whereby a complaint can be laid with the Building Practitioners Board (BPB), investigated by the Board and a range of penalties imposed.

The strongest penalty the BPB can impose is removing you from the register of LBPs. It cannot make any compensation or damages award to the complainant, but can fine the LBP up to \$10,000.

So a new potential for statutory liability will apply to LBPs. The disciplinary regime brings builders into line with electricians, plumbers, architects and engineers who have been subject to licensing and disciplinary provisions for decades.

The difference is that in a civil liability situation it is generally (but not always) the company that would be the target for litigation (because it has the deepest pockets), whereas in the statutory liability situation it will be the individual licence holder that is targeted.

As we know, of course, "the company" doesn't build houses — its employees (or contractors) do.

Often in leaky building litigation where the contracting company has disappeared, the claimants then claim against former-employee and/or contractor builders, alleging them negligent. To that extent the civil liability exposure for an individual has not changed.

In both cases, the liability exposure of people who do building work is determined by what they actually did. In the case of an LBP, "what he actually did" will be recorded on a memorandum and signed by himself as having done the work, or supervised the work.

In the case of a non-LBP, it will be recorded in a contract and probably other documents. For example, councils have been including information on their building consent files about who did what for the past three or four years.

Who-did-what is now, and will continue to be, a question of fact determined upon a forensic investigation of the building process. This happens now whether or not the builder has signed any piece of paper, and whether or not they are licensed.

## Individual risk

With liability for defective work set at 10 years, there's a long time where an LBP might be vulnerable to a civil claim and/or a BPB complaint. In that time, the company that you worked for might have been sold, or closed down due to insolvency or retirement.

Under the current joint and several liability framework, if the company was gone, you might (if your work was found to have been at fault) find yourself one of the few contributing parties to a settlement. If that was the case, you might well be bankrupted.

That is the situation now and the LBP scheme doesn't change that. If that was the case, a complaint to the BPB and its potential penalties would be the last of your worries. However, they can also be severe.

These are the risks that you face. So how do you manage them?

## Avoiding transferring managing risks

Risk management involves avoiding, transferring or managing your perceived risks. In the building work context, this would mean:

- Avoiding — an astute LBP will ensure that he does not take on work that is outside his knowledge ability and experience to manage.
- Transferring — if a certain task is beyond your skills and knowledge get someone else to do it.
- Managing — can be internally managed, or externally.

Internally managing your risks is about ensuring that you know the job inside out, and if there are design defects you put them in front of the client or the designer and get them sorted before you start — or as you go, if you find them when the job's on foot.

Many builders say they can't be too picky what they do, and will build whatever is on the plan. This approach has always been risky, and cannot be the attitude an LBP will take.

An LBP is expected to know his stuff, and expected to speak up if some aspect of the work is not right.

Externally managing risks involves getting appropriate and adequate statutory liability and professional indemnity insurance to meet potential liabilities.

## Insurance

Most companies have in place a suite of liability insurances, including statutory liability to cover for things such as health and safety breaches.

It is probably wise, if you are a company, to review those policies and ask your broker to confirm that it is not intended to exclude the Building Act 2004 (which would include your employed LBPs) from cover. You may also want to consider increasing the cover.

If you are an individual LBP, you should ask your employer what cover it has and get confirmation it covers you.

Many companies now have professional indemnity insurance to cover civil liability risks. If you are a company you should ensure that your employed LBPs are covered. If you don't have PI insurance yet, then you should investigate it.

If you are an individual LBP you should be asking your employer if it has professional indemnity cover and, if so, does it cover employees, and will it cover you if you leave their employ and for how long.

## You should be aware that:

- If your employer goes out of business, whatever cover they had while you were still employed will probably not exist.
- There is no cover for leaky buildings claims — to anyone.
- If you, as an LBP, do any private work, perhaps for a mate, you will not be covered by your employer's policy.

If you are an independent contractor LBP, then while you should ensure that you carry these insurances, you probably won't be able to get them.

Despite assurances from the DBH that it has been in discussion with the insurance industry over the past few years, no policies have been made available to the industry that enable an LBP to manage his personal risks arising from being an LBP.

## Be aware, think carefully

So for LBPs, while the potential civil exposure is, in practice, unchanged, there are additional liabilities that you may face in respect of complaints to the BPB.

As is the case now, if your employer company has folded, then you are exposed to civil claims without the benefit of an indemnity from your employer.

As an individual LBP, you probably cannot get professional indemnity or statutory liability insurance for yourself. Yet.

It may be that an LBP scheme will provide the security insurers have been looking for to be able to offer such products in the future.

However, restricted building work is around the corner, and that is a market that only LBPs can get a piece of.

Whatever your "take" on the system is, it is coming, and builders who are serious about their place in the industry cannot afford to ignore it.

However, like a trapeze artist without a safety net, you need to know exactly what you are doing, exactly what the risks are, how you intend to manage them, and what your personal appetite is for them, before you grab the LBP swing.



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# Platinum Award proves Mainzeal's consistent high quality

**M**ainzeal Property & Construction Ltd has had an excellent run in the RMB Commercial Project of the Year Awards in association with PlaceMakers, taking out eight awards since 2006.

The company was presented with a Platinum Award at the gala dinner — an honour that was given for the first time in 2010 to companies achieving five or more national titles.

New business and marketing manager at Mainzeal Property & Construction Ltd, Penny Kerr, says the awards give the company an opportunity to benchmark their projects against others in the industry.

"Clients choose us on our prices and on our track record — the fact that we've won awards is also a big part of that mix," Ms Kerr says.

Mainzeal has displayed outstanding skills, and these have been well recognised throughout the competition.

The 2010 gala dinner also saw the company go home with the Industrial and Infrastructure Project award for the striking New Zealand Supreme Court Building in Wellington.

Judges said everyone who visits Wellington should take the time to walk in and enjoy this building.

"It is a building of two halves, with a controversial new exterior and restoration of the existing high court building. The orb, which is the internal courtroom, is one of the most spectacular rooms in New Zealand, its shape influenced by a Kauri cone," judges said.

In 2009, Mainzeal scooped up two awards — the Retail and Business Project for the Vogel Centre Stage 1a in Thorndon, Wellington, and the Education Project for the Victoria University Coastal Ecology Laboratory in Island Bay, Wellington.

Ms Kerr said in 2009 that winning the Education Project was great for the entire team. "It really reinforces our level of quality and ability to deliver a premium product."

Judges said the Victoria University Coastal

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Ecology Laboratory was a particularly challenging project, but the builder overcame the complexities to produce a very high standard of workmanship.

They described the Vogel Centre project as "an exceptional, high-class building characterised by great attention to detail, from the stylish exterior to an aesthetically pleasing interior workspace".

Ms Kerr summed up the sentiment of the 2010 Platinum Award after taking out the two categories in 2009. "It shows everyone we consistently deliver well, time and time again," she says.

The company also won the 2006 QBE Insurance Health Commercial Project for Kenepuru Hospital in Porirua, the 2007 RMB Commercial Project of the Year and the Health Project for the Burwood Hospital Surgical Services Unit in Christchurch, and in 2008 the RMB Commercial Project of the Year and the QBE Insurance Retail and Business Project for Sovereign House in Takapuna, Auckland.

Mainzeal Property & Construction Ltd joined Registered Master Builders "because we like to support the industry and Registered Master Builders", Ms Kerr says.

"We enter the competition because we think clients enjoy seeing their projects on stage. We really do build some fantastic projects," she says.



*The Mainzeal Property and Construction Ltd team outside the Supreme Court Building in Wellington.*

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

For information about the competition, go to [www.masterbuilder.org.nz](http://www.masterbuilder.org.nz).



*Mainzeal was the winner of the 2009 Education Project Award for the Victoria University Coastal Ecology Laboratory in Island Bay, Wellington.*

# Win provides marketing boost

**T**H Barnes & Co Ltd chief executive John Smithies says his company's profile has visibly improved since it won a Gold Reserve and the Health Project category at the 2010 Registered Master Builders House of the Year and RMB Commercial Project Awards, in association with PlaceMakers, for the Springland's Lifestyle Village in Blenheim.

"There is no doubt about it. The award is an excellent marketing tool. Our profile, particularly in our catchment area, has visibly improved," Mr Smithies says.

"We cover a broad market, from commercial, to housing, to alterations, to government projects. I think the award is a drawcard that brings people to us with an expectation of good quality workmanship, no matter what the project."

Competition judges said that walking into the Springland's Lifestyle Village is like walking into a premium quality hotel and villa complex.

"The village is beautifully built, with well-appointed accommodation desired to meet the needs of its community," judges said.

"The standard of fit-out and recreational facilities is exceptional, making it a very well executed project worthy of its title," they said.

TH Barnes & Co Ltd has been involved with Registered Master Builders for many years, and Mr Smithies says being a member, and entering the competition, "really elevates your credibility".

"Our first win in the competition was in 1995. It is so good for the region, and for all Registered Master Builders, to be involved. It gives great public awareness that Registered Master Builders are all about quality," Mr Smithies says.

TH Barnes & Co Ltd is entering two projects in the 2011 RMB Commercial Project Awards — an early learning centre in Blenheim and an architecturally-designed retail building in Picton for the Marlborough District Council.

The early learning school is a purpose-built pre-school. "The design is a little bit different and the client demanded a very high quality. We'd worked with them before, so they knew what



*Springland's Lifestyle Village*



to expect from us," Mr Smithies says.

When asked what advice John would give to those considering entering the competition, he says "go for it!"

"It's a once a year opportunity to get some really good exposure, and it's worthwhile entering even if you don't win. The networking opportunities, even in the local competition, are really valuable."

Mr Smithies and his team have recently finished a project for the Department of Corrections, and over the Christmas period worked on three classrooms for a local school.

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

For more information about the competition, go to [www.masterbuilder.org.nz](http://www.masterbuilder.org.nz).

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# Don't sweat the small stuff

By RMBF president  
Blair Cranston

It is April already and we are all full steam in to another year of challenges. For a variety of reasons, 2011 is presenting greater challenges and greater pressures than we all maybe expected at the start of the year.

I have found it a good time to pull out one of my favourite books written by Richard Carlson, PHD. It is titled *Don't Sweat the Small Stuff at Work*, and offers simple ways to minimise stress and conflict while bringing out the best in yourself and others.

It offers a great number of tips that I will share with you here and in upcoming articles. All of them are gems, and I have always found them a good way of keeping things in perspective and maintaining focus.

Here are a few to start with:

- Dare to be happy — if you dare to be happy, your life will begin to change immediately.
- Become less controlling — as you let go of your need to be too controlling, people will be more inclined to help you; they will want to see you succeed.
- Have some "No Phone" time at work — avoid constant interruptions that break your concentration. This allows greater productivity and means that calls can be returned when the things you've set out to do have been done.
- Stop anticipating tiredness — people often talk themselves into tiredness. They anticipate feeling exhausted which reinforces the tiredness. Avoid the tendency to do this.
- Being dead is bad for business — by remembering this phrase, you will begin taking better care of



yourself, physically and emotionally. You will feel better, be happier, and probably live longer.

- Remember to acknowledge — people love to be praised and acknowledged. They remember it and respond positively to it. Offering genuine acknowledgement can produce loyalty and forgiveness when needed.
- Don't keep people waiting — making someone wait can have a huge impact on your relationship with them. Additionally, when you are late, you are often scrambling and under pressure. Avoid the additional stress.
- Brighten up your work environment — it's really nice to walk in and feel good about where you will spend your day. Make it bright, cheery and friendly, and it'll be hard to walk in and not feel the same way.
- Take your breaks — failure to take regular breaks is an enormous mistake that wears you down and makes

you less productive.

- Make a list of your personal priorities — this is very important to the quality of your life. When you are busy and working hard, tired and overwhelmed, it's easy to postpone or overlook your true priorities.
- Make friends with your receptionist — treat your receptionist as a key partner in your life. A good, efficient and happy receptionist can take a huge load off you and other staff.
- You catch more flies with honey — simply put, it pays to be nice. When you are kind, loving and patient, when you are fair, a good listener, and when you genuinely care about others, your attitude comes across in all you do. People will respond positively to that.
- Stay focused in the now — so often, our attention wanders off into the future. We think (and worry) about many things at once, for example, deadlines and potential problems. The quality of "being in the moment" has far more to do with what's going on in your mind than what's going on in your office. The greatest benefit of being fully present is that your work and family life will become far more enjoyable.
- Absorb the speed bumps of your day — think of typical work problems as speed bumps. Simply thinking and labelling your problems as speed bumps, instead of problems, can make them much more manageable.
- Never, ever backstab — it is mean spirited and unfair. It can make you look bad, and lose the respect of others. People will know that if you are capable of backstabbing others, you are capable of doing the same to them. Don't do it.

There are many more of these little reminders about how we should conduct ourselves. I will keep them coming through when space allows, and hope they are of interest and are helpful.

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# \$25m cement project underway in the Waitomo region

The Perry Group has confirmed its ambition of supplying a competitive cement option to the New Zealand market by announcing the continuation of the construction of a \$25 million cement plant project in the Waitomo region.

A significant advantage will be the plant's ability to produce low-cost cement that is close to market.

"The plant will be small, relative to other New Zealand plants, producing up to 80,000 tonnes per annum, but will be highly efficient," according to Perry Group chairman Simon Perry.

"New Zealand's unique geography means shipping, ports and road transport are expensive parts of the cement supply chain. Our operation is close to major markets and decreases the significant costs associated

with shipping and ports infrastructure," Mr Perry says.

The cement operation will supply concrete customers throughout the Waikato, Bay of Plenty and Auckland regions — an area known as "The Golden Triangle".

Perry Resources has a long-term supply arrangement with Ravensdown Fertiliser Cooperative, and the planned site for the cement plant is at an established limestone quarry at Te Kumi, 5km north of Te Kuiti and owned by Ravensdown, New Zealand's largest ag-lime producer.

The site is already intensively quarried, producing high grade agricultural lime for the farming sector, and burnt lime for the pulp and paper and road stabilisation industries.

"We have an excellent long-standing relationship with Ravensdown, and there are significant synergies in

having the three operations — cement, lime and ag-lime — all being produced from the one site," Mr Perry says.

Work on consent applications is well advanced, with a full consultation process due to be undertaken now that the project has received board approval.

"Due to the site's isolated location, the existing industrial activities already in operation and the excellent roading networks, we believe the site is ideally suited for a small scale cement operation" according to Perry Resources general manager Peter Walsh.

"We expect the plant build process to take 12 to 18 months after consents are granted, with commissioning expected mid-2013. Our aim is to contribute to a revitalised and growing local economy," Mr Walsh says.

Perry Resources has a proven track record in sustainability and environmental values, and is well regarded in these areas within the industry it operates in. This will continue to be a focus and remains a high priority in relation to this project.

Due to the integrated nature of the cement industry, Perry Resources hasn't ruled out involving strategic partners, but only at an appropriate time.

"We've received expressions of interest from a number of parties," Mr Perry says. "We are excited about the prospect of bringing more jobs to the Waitomo region, and to growing the Waikato region's increasingly important role in supplying aggregates and minerals to the upper North Island, especially Auckland."

Perry Resources is owned by Hamilton-based Perry Group, which was formed by Brian Perry in 1953, and has diverse operations across the aggregate, metal protection, property, distribution and rural sectors.

Perry Group has a history of involvement in innovative projects, including its role as promoter and developer of the successful Hamilton casino and entertainment complex.

There has always been a company focus on giving back to the local community, and to achieve this, the Brian Perry Charitable Trust has been established to support a range of community-driven projects.

Subsidiary Perry Resources has been involved in the aggregate industry since 1976, currently operating five quarry sites throughout the Waikato and Auckland regions.

## Pre-1992 buildings are not 'modern', earthquake engineers say

Buildings constructed before the New Zealand Building Act 1991 and consequential Building Regulations 1992, including the Loadings Code of Practice NZS 4203: 1992, should not be regarded as "modern", according to the New Zealand Society for Earthquake Engineering.

"The Pyne Gould and the CTV buildings which collapsed in the February 22, 2011 earthquake have been routinely referred to as 'modern buildings'," NZSEE executive officer Win Clark says.

"However, if commentators or the media are referring to 'modern buildings' in terms of earthquake-resistant performance, it is important to understand the many changes that have been made to the way buildings are designed and constructed since building standards were first introduced in New Zealand following the 1931 Hawkes Bay earthquake.

"For instance, the Pyne Gould building is understood to have been built in about 1963, and the CTV building designed around 1975 and built in 1979.

"There have been a number of significant changes to

New Zealand building standards since these buildings were originally designed and built."

Updates to the codes in the past 50 years include amendments in 1965, 1976, 1984, 1992 and 2004, adding requirements to accommodate changes in building design loads and detailing.

"The changes in 1976 introduced modern seismic codes in New Zealand, and the 1992 amendments updated standards for loadings and use of materials, outlining how a building must perform to withstand the forces expected during an earthquake," Mr Clark says.

"The 2004 Building Act included a requirement for territorial authorities to put earthquake-prone building policies in place.

"In that same year the Loadings Code was updated, with Standards New Zealand publishing *Structural Design Actions Part 5: Earthquake Actions – New Zealand, NZS 1170.5: 2004*.

"This standard incorporated the latest research and understanding on how to improve the life safety performance of buildings during a severe earthquake."



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# Tenants taking up residence in new Britomart buildings

The three newest buildings in the Britomart precinct are now complete and their occupants, including commercial anchor tenants and ground-floor retail tenants, have begun moving in.

The three buildings include the Ernst & Young Building, the new home of Ernst & Young's New Zealand head office, and the second element of Westpac on Takutai Square, Westpac New Zealand's new head office complex.

## 2100 staff in residence

All three organisations will have completed the transition into the new buildings by mid-April, with a total of 2100 staff in residence in the upper floors.

The two 10-level buildings are sometimes informally known as the East Complex, and front Takutai Square, the main public space of the precinct. Running between them at ground level is covered shopping and food gallery Atrium on Takutai, where retail tenants have also begun moving in.

## Environmentally-friendly buildings

Designed by Sydney-based architects Johnson Pilton Walker, both East Complex buildings carry New Zealand Green Building Council five-star ratings, placing them among the most environmentally-friendly buildings in New Zealand.

Four food and beverage retailers opened for business recently at the eastern end of Atrium on Takutai. These include cafes Espresso Workshop and L'Assiette, sushi bar Smart Sushi and a new outlet of the Pita Pit franchise.

Soon a number of fashion and beauty retailers will also begin opening progressively in the Atrium. These include fragrance and cosmetic stores Jo Malone and M.A.C, which have both relocated to Britomart from Chancery, along with a new branch of L'Occitane.

Three high-end sportswear stores, Nike Britomart, Nike Action Sports and Lululemon Athletica, will also open in May and June, and the first New Zealand store for London designer clothing label Ted Baker is scheduled to open in July.

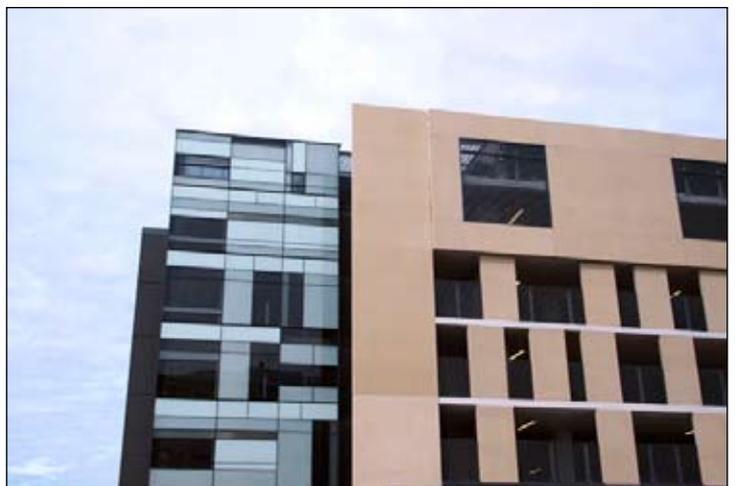
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*The Atrium on Takutai Square.*



*The Ernst & Young and Westpac buildings on Takutai Square.*



*The Britomart car park.*

# Steel & Tube launches two **innovative** residential mesh solutions



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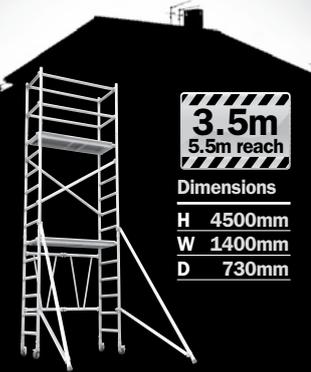
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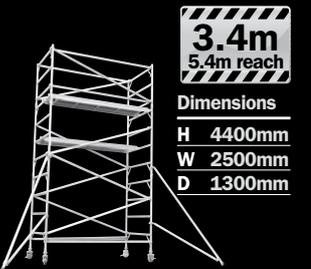
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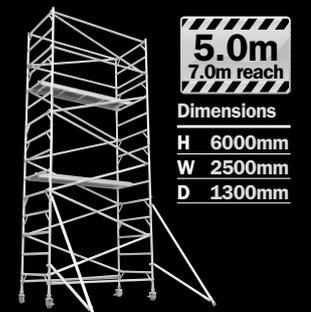
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## news

# Simplified system now in place for structural timber framing

**A** simpler system for structural timber framing which protects timber against decay and is time and cost effective has come into effect this month.

This replaces the previous system, which can still be used until June 30, 2011, allowing a transition period for the industry.

The key change is that there will be a single class of timber treatment, H1.2, for enclosed radiata pine and Douglas fir framing. Currently there are as many as four different classes of timber, including untreated timber, which can be used to frame a building.

The changes are contained in Acceptable Solution B2/AS1, which sets out one way of complying with the durability clause of the Building Code.

They follow years of work with the sector and a consultation process which resulted in almost 240 submissions, with strong support for the proposed changes.

Acceptable Solution B2/AS1 was introduced in 2004, but building practices and timber treatment have changed and improved since then.

The Department of Building and Housing (DBH) worked with the timber industry for several years to develop a system that was simpler and clearer, and that maintained the current level of protection against fungal decay and insect attack.

"The use of four different classes of timber treatment for framing inside the building envelope was complex, and could lead to mistakes on site," DBH chief engineer Mike Stannard says.

"The new system offers potential cost savings by simplifying inventories and reducing the likelihood of mistakes that can lead to rework. It is expected to make the consent and inspection process more straightforward."

The exception to the new single treatment class is the use of H3.2 for cantilevered deck joists and framing, the same level of treatment as timber that is exposed to weather.

"Cantilevered decks depend on a single point of support, and there is less chance that leaks will be discovered and repaired. This indicates a need for a higher level of treatment," Mr Stannard says.

The new system also allows untreated Douglas fir to be used for framing in simple houses of low-risk design. The DBH has defined the low-risk conditions in which Douglas fir can be used.

"Timber must be adequately protected against damage from moisture and insect attack so that buildings are durable and comply with the Building Code," Mr Stannard says.

"At the same time, there are consumers who want the option of chemical-free framing in their home. Research shows that

untreated Douglas fir is more resistant to decay than untreated radiata pine, and science and expert opinion support the use of Douglas fir in low-risk buildings."

Other species such as Macrocarpa, Eucalyptus, Larch and heart Rimu, Matai and Beech can also be used untreated in certain situations, as described in New Zealand Standard 3602.

Mr Stannard says about 75% of submissions supported the proposals for a single hazard class for enclosed timber framing, and more than 90% agreed that H1.2 provided adequate protection from decay in enclosed situations.

"Some submissions raised the question of whether designers and builders should be allowed to use higher hazard classes for enclosed timber framing. We encourage the use of H1.2, but acknowledge that designers may have particular reasons to use higher hazard classes in some situations — and we have retained that option.

"However, there are general and specific costs in using higher levels of treatment than those warranted, and it is not expected that this provision will be widely used.

"Another question raised in submissions was whether roof trusses need to be treated, or whether untreated Douglas fir could be used.

"We decided that in the interest of clarity, simplicity and inventory rationalisation that roof trusses should be treated to the same level as other enclosed framing."

Mr Stannard says about 75% of submissions supported the use of untreated Douglas fir for houses of low-risk design.

Some suggested allowing the use of untreated Douglas fir created unnecessary complexity, while others supported wider use of Douglas fir.

"We considered both matters carefully. Given the industry support for simplification, the risk to internal framing from internal wet areas and the risk of transferred moisture from external walls, we would not support the use of untreated Douglas fir in anything other than houses of low-risk design.

"However, some consumers want a chemical-free option, and we think allowing the use of untreated Douglas fir in houses of low-risk design does not compromise the new system nor make it unnecessarily complex."

The transition period for industry where the previous Acceptable Solution can still be used will allow designers time to finish designs already underway when the new Acceptable Solution is published.

From the July 1, 2011, only the new Acceptable Solution will apply for consenting purposes.

The new Acceptable Solution is now available in the B2 Durability Compliance Document on the DBH web site at [www.dbh.govt.nz](http://www.dbh.govt.nz).

# New Zealand wood processors could miss out on Japan rebuild opportunity

**N**ew Zealand wood processors run the risk of missing out on the massive amounts of processed wood likely to be required for Japan's rebuilding, according to Wood Council of New Zealand chairman Doug Ducker.

He says not only will the Japanese need to import large quantities of wood and wood by-products for reconstruction of northern Japan, but the quake and tsunami have also destroyed parts of Japan's own wood processing industry and caused other plants to stop manufacturing.

Mr Ducker says New Zealand wood supply was "under-utilised". There would be opportunities for New Zealand companies to supply Japan with plywood and MDF for use in flooring.

But the New Zealand industry also had to face the risk that the logs it had been supplying to China could be turned into wood by Chinese mills for the Japan rebuild, he says.

## Mill destroyed

The disaster in Japan had the potential to revive the fortunes of New Zealand's wood processing industry that had been affected by the domestic downturn, according to Mr Ducker, who is also managing director of Japanese-owned Pan Pac Forest Products.

Mr Ducker says a mill in Japan that supplied 25% of that country's total plywood needs had been destroyed.

Pan Pac's owner, Tokyo-based Oji Paper, has reported no major damage at its 17 mills in Japan, but has shut down five plants in north-east Japan.

International forestry analysts are noting that Japan has substantially increased the use of wood in housing construction because it has proven to be more earthquake-resistant than concrete.

United States-based analysts are expecting a big boost in demand for North American timber suppliers. Canadian and United States timber producers are well regarded in Japan as exporters of high-quality, earthquake-resistant wood for building.

Reported in the *Timber & Forestry* newsletter, Paul Newman of British Columbia's Council of Forest Industries said producers had been working with the Japanese to develop innovative products such as cross-laminated timber ever since the Kobe quake in 1995.

"There has been a lot of attention in Japan on earthquakes, and wood construction is seen as a positive element in an earthquake-ready society," he said.

Mr Ducker says together with the likely demand for processed wood to rebuild Christchurch, the New Zealand wood processing industry now has a "double dip" revival opportunity.

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# Quarter acre dream all but over for Aucklanders

**A**uckland will face a large scale housing crisis within the next 15 years, according to a leading property analyst.

Lisa Phillips, a director of Auckland-based company Erskine+Owen, says under the region's current growth strategy, Auckland will be at capacity by 2026. For some pockets of Auckland, that capacity could be reached even sooner — in just seven years.

Ms Phillips says over the next 20 years Auckland will grow by the entire population of Wellington, but to accommodate everyone Auckland will need more than 200,000 households — 30,000 more than its current capacity.

She says the ability to create new stand-alone houses on more than 400 square metres of land will become virtually impossible by as early as 2023.

After that, many Aucklanders will be forced to live in terraced houses and apartments with shared common outdoor spaces.

Ms Phillips says this is where the flow-on effects will be realised. "Prices will surge as more and more people compete for an ever dwindling supply of dwellings," she says.

While a bird's-eye view of Auckland will tell you there's plenty of room to grow, the fact is that red tape and restrictive rules on land use means that growing in as-yet developed areas isn't as simple as it sounds, she says.

"There is a ring fence around Auckland called the Metropolitan Urban Limit that separates the urban from the rural.

"To bust into the other side of the limit could take up to five years of applications and consents. Then there are issues around who owns the land, and then they might not want to sell it."

Ms Phillips says Christchurch's earthquake and required rebuild could also compound the problems for Auckland home owners.

"Construction activity is already at historic lows along with a downsized building industry. There simply may not be enough capacity to go around, and this may further hinder the speed at which Auckland can respond to its burgeoning demand for housing."

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# New director for Jennian Homes

**F**ormer Carters chief executive Stuart Munro is buying into Registered Master Builders Federation company Jennian Homes.

This is a progressive buy-in, with Mr Munro expected to become a joint shareholder with Richard and Rebecca Carver over the next three to five years.

"This is great timing for Stuart to be buying in as we are most certainly at the bottom of the market," Mr Carver says.

"Jennian Homes has big plans and a solid long-term strategy taking us way past 2020. We are well on our way to cementing our place as the leading brand in the New Zealand new home market.

"Having someone with Stuart's ability joining us permanently as a long-term stakeholder and director will greatly assist Jennian Homes to achieve its 2020 vision.

"Stuart will focus on operational excellence and the delivery of industry-leading systems through the



Stuart Munro

company's Tauranga-based support centre, Jennian Services Ltd, which provides accounting, draughting and estimating services for our franchises throughout New Zealand," Mr Carver says.

Mr Munro is currently general manager of Jennian Services Ltd and Jennian Homes Auckland Ltd, and on April 1 also became a director of Jennian Holdings Ltd and Jennian Services Ltd.

Mr Carver will focus on franchisee and supply partner

relationships, and the ongoing growth of the Jennian Homes brand as it heads towards its fourth decade in business.

"After 30 years we are now really getting cracking," Mr Carver says. "Watch this space."

Mr Munro has held a number of leadership roles in the construction industry over the past 15 years, including chief executive of Carters and directorships with the New Zealand Building Industry Federation and Construction Marketing Services (the home of Future-Proof Building).

He says Jennian Homes is an established and respected industry leader in the new home market in New Zealand.

"I'm delighted to be joining the company at this time and helping to steer it into the future.

"These are exciting times for Jennian Homes and for the building industry as a whole. The past two years have been tough for the industry and we have our sights set firmly on the opportunities ahead."

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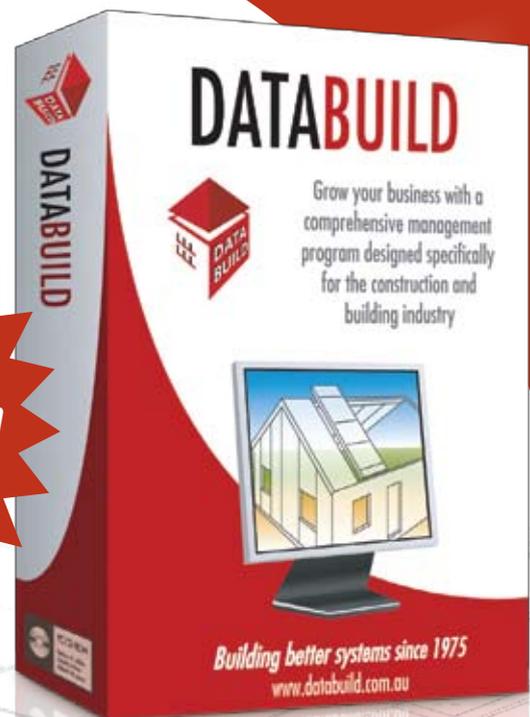
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# Opportunity of a lifetime

By Lifetime Design Ltd general manager **Andrew Olsen**

**H**undreds of Christchurch residents urgently need new homes following the city's devastating earthquake in February.

As planning gets underway for one of the most ambitious re-development projects this country has ever seen, it's clear this also represents a great opportunity to rebuild a city with housing stock designed to cater for the future and our changing needs.

It's no secret that our population is aging, with the first wave of baby boomers set to hit retirement this year and by 2030, nearly a third of people aged over 65. It's also a fact that our ageing population demands we place a greater focus on building homes accessible for all.

Yet, right now fewer than 2% of New Zealand's houses

are built to be adaptable and accessible to accommodate the needs of all Kiwis. What's more, we are currently spending millions of dollars each year retrofitting homes so people can stay in them.

Obviously for Christchurch, timing is of the essence with new housing needed as quickly as possible for the many thousands of people who've lost their home. So we should seize the opportunity to build homes aligned with lifetime design principles.

Lifetime Design administers the Lifemark, a Government-supported certified trademark for homes that have been adapted or created to suit people of all ages and abilities.

A home awarded the Lifemark meets five key design principles — adaptability, accessibility, inclusivity and lifetime value.

These translate into 33 design features that cater for all needs, whether it's a mother with a buggy, or someone in a wheelchair or using a walker.

A home accredited with the Lifemark represents good

design. That means level entranceways, wider doors and hallways, accessible power points and lights, bathrooms with strengthened walls that can accommodate future handrails and a shower seat, and kitchens with enough space to move around easily.

We're working with the Department of Building and Housing to incorporate these principles into housing construction in New Zealand.

Our goal is to have 30% of all building consents bearing the Lifemark in five years' time.

Certainly, the task at hand for Christchurch is massive, and when you're faced with power, water, sewerage and roading, long-term accessibility is probably not high on your list.

However, long-term planning will be crucial if we're to avoid the pitfalls of previous generations when homes were built for their needs of the day, not the future.

That's why the likes of adaptability and accessibility must be included on the shopping list for new homes in Christchurch.



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# 'Plyscrapers' could become popular

**P**lyscrapers — high-rise wooden office towers — could become more popular after the Christchurch earthquake.

Property Council chief executive Connal Townsend has returned from the Green Cities conference in Melbourne where he said an address was given on the prospect of wooden structures becoming more prevalent, partly in a drive to offset carbon dioxide emissions from concrete.

Wooden structures have also been cited as standing up better during an earthquake.

Most new houses are built on concrete floor pads. High-rise towers have extensive pre-cast concrete panels as floor and wall components.

Mr Townsend heard the keynote address by Michael Green, a partner in the Vancouver firm McFarlane Green Biggar Architectures + Design, who told of his vision of the world's first timber skyscraper.

Mr Green says a study funded by the British Columbia government to help promote the forestry sector found buildings as tall as 30 levels could be made almost entirely from wood.

"The exciting thing is, from an engineering point of view, we think we have something that is on track to be able to design — comfortably — 20-storey buildings," Mr Green was quoted as saying by the *Vancouver Sun*.

"We believe, quite reasonably, we'll be able to stretch that to 30 storeys."

The newspaper said that a nine-storey building in Britain is currently the world's tallest wooden structure. Mr Green said a 10-storey project in Australia, a 17-storey building in Norway and a 30-storey structure in Austria have been proposed.

Mr Townsend said the concept of a wooden high-rise was entirely plausible, and there was an international movement towards tall wooden buildings.

"The buildings are made of steel and wood but the spinal column is still steel. The objective is to minimise the use of concrete and emissions. Certainly, there's a drive on in British Columbia to do that," he says.

"But I'd also make the point that in the Christchurch earthquake, modern steel, concrete and glass buildings

escaped relatively unscathed, so modern and contemporary construction techniques are good in an earthquake."

Registered Master Builders Federation chief executive Warwick Quinn, is sceptical.

"New building technologies and techniques are developed all the time and techniques developed overseas may not be completely transferable without modification — or possible — given our environment, particularly for earthquake and wind," he says.

"Nevertheless, as these technologies are developed it

is entirely feasible that something like a timber office tower may be an option for New Zealand, but it would need to be considered in the wider property context taking into account maintenance, services, rents [and] returns."

Hawkins Construction chief executive Chris Hunter says plyscrapers are feasible but maybe not to the height Mr Green cited.

"You can certainly build high-rise timber buildings of 10 to 14 levels, but I haven't heard of anyone building 30 levels," Mr Hunter says.

## Green Property Summit heralds next frontier for commercial property

**A**round 200 construction industry specialists gathered at the third Green Property Summit in Auckland last month to hear about market-leading green property initiatives from New Zealand, Australia and beyond.

Anthony Malkin of Malkin Holdings, owner of New York's iconic Empire State Building, set the tone for the day when he detailed the economic returns that prompted the company to undertake one of the world's most ambitious energy-saving retrofits of a commercial building.

New Zealand developers and tenants reiterated the value of investing in green building, with a strong case made for systematic measurement of building performance.

New Zealand Green Building Council chief executive Alex Cutler urged delegates to collect data about, and report on, building performance where possible.

"Just as businesses measure return on investment across their operations, it is simply good housekeeping to measure the performance of the buildings we own or occupy," Ms Cutler says.

"Only then can we make intelligent connections between sustainable value and capital value, and drive the green property market in New Zealand.

"NZGBC is working hard with the Energy Efficiency and Conservation Authority to bring a performance tool to New Zealand."

The Summit also showcased timely examples of liveable and sustainable urban planning in Australia, from carbon-neutral office buildings to "green precincts" in Sydney as part of the city's Sustainable Sydney 2030 strategy.

Property Council chief executive Connal Townsend says the opportunities available to the commercial property industry are huge.

"Green Property Summit 2011 demonstrates the level of skill, technology and world leading examples that are available to the New Zealand market.

"It also shows how the built environment can be shaped to foster social and economic benefits that spread beyond one building."

Mr Townsend says the Property Council continues to maintain a close working relationship with NZGBC. "Green building has become the way the property industry does business."

# Sandstone slopes present engineers with bridge design opportunity

By Roy Kane

Between Napier and Wairoa, State Highway 2 used to wind and twist its way through the Matahorua Gorge.

On average, about 4000 vehicles a day ran the narrow gauntlet of sharp bends, among them logging and farming trucks on their way to and from the port of Napier.

During winter, slips caused closures, and accidents and delays were frequent. So the NZ Transport Agency tackled the problem with one of the largest and most important projects ever seen in the Hawke's Bay region.

It involved re-aligning SH2 to go over the gorge instead of through it, and that required two

new bridges — a 37.4m-long road-over-rail bridge, constructed mostly in pre-cast concrete, and a 137m-long ladder deck plate girder bridge.

For the latter, three consortia submitted competing designs and prices, with Downer, Concrete Structures Ltd and the Holmes Consulting Group emerging as the winners.

Napier-based Eastbridge, which has an impressive track record with bridges all over New Zealand, was appointed as the fabricator, while SteelPencil of Palmerston North did the detailing.

Although located in an area of high seismic activity, the gorge's steep sandstone slopes presented the consulting engineer with a design opportunity. Ian Hills of Holmes Consulting Group (Wellington) immediately explored the possibility of using inclined piers.

"The advantage of sandstone was that it could be prepared for piling using hand-held compressed air tools. This obviated the need for heavy plant, which would have necessitated installing temporary concrete benches," Mr Hills says.

"Instead, Concrete Structures was able to install 10.5m-long reinforced concrete piles at 45° angles, in preparation for the raked piers."

Concrete Structures had 250-tonne cranes, but as this design-build project progressed it became apparent that to optimise construction efficiency a bigger crane was essential.

Concrete Structures boss Mike Romanes purchased a 450-tonne crane from the USA at a cost of \$7 million.

*Continued page 24*



*The centre span is assembled with precision.*



Once in place, the centre span effectively props the raked piers on either side.

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*From page 23*

After commissioning and testing at Rotorua, the crane — boasting a boom length of 180m — was delivered to the gorge in 24 truck loads.

Concrete foundation beams were laid down on the Gisborne side of the gorge, from which the giant crawler crane set the 27m raked and braced steel piers onto the piles, holding the 65 tonnes of steel in place until the piers could be tied to the abutments with high-strength steel tendons.

“The frame bridge had three spans — 42m, 53m and 42m respectively. From the Gisborne side, the first short span was to cantilever out over the gorge.

“The plate girders forming the two sides of the ladder deck superstructure were 2.8m deep. At an extension of 30m, this weighed more than 60 tonnes, justifying the use of the crane for economic and safety reasons.

“Once this structure was bolted, the crane was disassembled and taken to the Napier side of the gorge for the exercise to be repeated. Finally, the centre span at 53m was hoisted into position and bolted.

“Once in place, the centre span effectively props the raked piers on each side. At 58m above the Matahorua Stream, this is as high as



Above: From the Gisborne side, the raked pier supports the first short span as it cantilevers out over the gorge.  
 Below: Decked in pre-fabricated concrete, the two-lane bridge is a vital economic gateway for Wairoa.



Above: The underside of the deck affords safe access. With a protective coating of zinc, it will be at least 25 years to first maintenance.  
 Below: A steel girder with a web of 2.8m is loaded at Eastbridge in Napier for the 50km journey to Matahuria Gorge.



the top of Auckland Harbour Bridge."

### Relatively light

The design of the bridge drove not only the method of erection but also the steel fabrication. Eastbridge general manager Andre Van Heerden says the use of long-span steel kept the structure relatively light in weight, a total of 420 tonnes.

"One of the main advantages from this is that less concrete is needed to anchor the bridge piers. By eliminating a central pier, we made little impact on the environment," Mr Van Heerden says.

"The steel took only 12,700 hours to fabricate and 4800 bolts to erect. It was given a protective coating of zinc, and this allows at least 25 years to first maintenance.

"We are confident the bridge will have no trouble fulfilling its 100-year design life."

As Mr Hills puts it: "Simplicity of form usually gives the best value for money. We've commissioned him to design

our next two steel bridges, for the Eastern Highlands of Papua New Guinea."

Minister Steven Joyce officially opened the new bridge on March 11, 2011. It will shorten the route from Napier to Wairoa and cut 12 minutes from the journey.

NZTA regional manager Mark Kinvig says it will

save time and petrol but, more importantly, it will reduce the accident risk.

"Wairoa is the gateway to Te Urewera National Park. For the town's 8500 residents, this project will inject millions into the local economy over and above the value of its 60,000 hectares of pine forests."



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# Squaring-up our workforce

Will you be ready for the skills shortage?

**M**any within the construction industry will have heard about the skills shortage threatening the future growth of New Zealand.

Pent-up demand as we move out of recession, leaky homes remedial work and the Christchurch rebuild are set to suck up every construction professional we have in the next couple of years.

**“In short, we don’t have enough qualified people to keep building New Zealand. We need about 177,000 building and construction workers per year over the next five years to meet demand. Currently, we only have 87,000.”**

This is Part 1 of a three-part series which will investigate this looming skills shortage, what is driving it, and what key stakeholders (including the BCITO) are doing to ensure we have enough workers for tomorrow.

At this stage, we need to look at some of the consequences of running out of workers. For established builders, it could mean missing out on profit and growth.

**“The BCITO believes quality apprentices will become harder to find soon, so don’t count on being able to take on someone new when it suits.”**

Not having someone in place could seriously hinder your chance to grow your business.

Understandably, many businesses are still struggling to keep afloat. After all, building consents are still at very low levels.

But we are looking to the future, and this requires investment. In order to flourish when times get better, you may have to feel the pinch now.

Of course, there are other real benefits to training the next generation. You will be recognised for doing your part for the industry. You can also build your business with people you trust and who produce work you are proud to back.

The BCITO can also provide payment plans to help pay fees, and BCITO Training Advisors take care of all the assessment and paperwork.

**“If you employ within the construction industry, it is up to you to start training the next generation now. The industry’s future depends on it.”**

If you own a construction business, the future of the industry really is in your hands. If we don’t get more people into training now, we will all miss out in the future.

**To enquire about putting on an apprentice now, contact the BCITO on 0800 4 BCITO.**



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Building demand is set to rise substantially.

If you want to be in a position to profit and grow over the next few years, then you’ll need to have enough qualified people.

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We can even help with payment plans, and our BCITO Training Advisors take care of all the assessment and paperwork.

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## Auckland's aging coathanger

Dr Kerry Rodgers contemplates John Allum's bridge in the aftermath of the Christchurch quakes

**W**hen I first came to Auckland some 50 years back, the only way to take a vehicle to the North Shore was to trundle the 50km around the top of the harbour via Great North Road, Riverhead and the Albany turnoff — or queue for a vehicular ferry.

Devonport was a sleepy backwater. Even if folk had wanted to settle en-masse on the North Shore there

were no substantial supplies for the construction industry. Development was slow.

But then came the bridge.

Bridging the Waitemata was not a new idea. It had been first mooted in 1860. The notion waxed hot and cold through the Great Depression and a couple of world wars.

The reason it never flew was the same that bedevils all



major infrastructural concerns in New Zealand — cost.

A succession of Wellington-based governments just did not want to know. The election of John, later Sir John Allum, as Auckland City's mayor in the 1940s provided a circuit breaker.

A post-WWII Royal Commission recommended linking Northcote Point with St Mary's Bay via a bridge. The proposal was to have four main traffic lanes, plus two additional ones on which the traffic flow could be reversed, and a couple of footpaths.

In 1949, British consulting engineers Freeman, Fox and Partners were engaged and a formal design drafted.

Inevitably, central government in Wellington clipped Auckland's wings. A variety of bureaucratic road blocks were thrown in the way. Sid Holland's first National Government proclaimed the cost too high and ranked any Auckland bridge well down the list of national priorities.

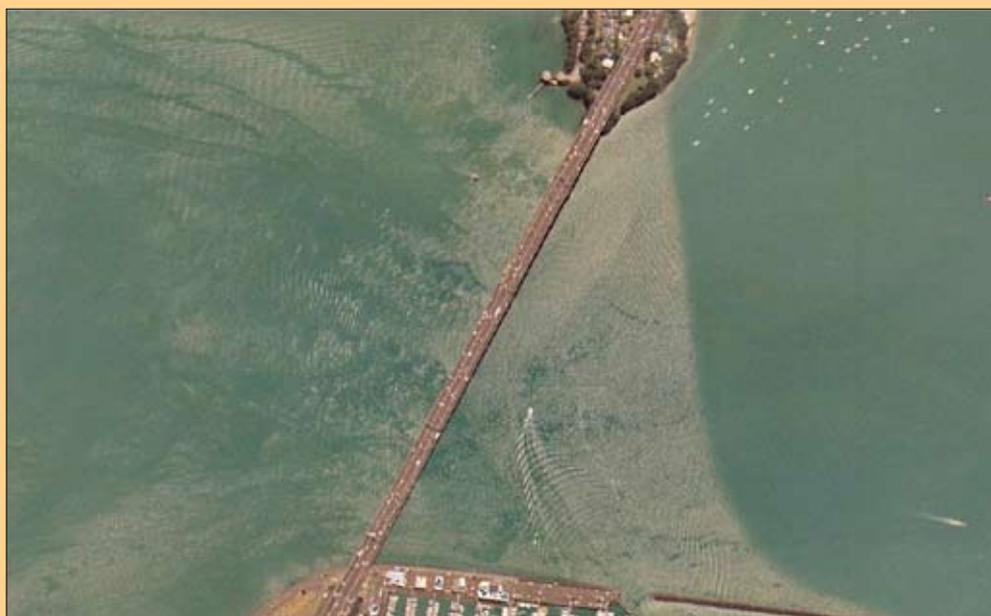
Allum fought back. He persuaded central government to allow him to try for a loan on the London market, only to be squashed by the British Government.

He battled on and finally achieved a loan for an austerity bridge with just four traffic lanes and certainly no footpaths, cycleways or rail links. Work got underway in 1955 with Dorman Long/Cleveland Bridge as contractors.

The piers were built in caissons with the harbour's mud excavated until each pier settled on bedrock. By 1956 these were complete.

The steel superstructure was prefabricated on land in six sections. Each was floated into place on barges when weather and tide were optimal. One main span almost came to grief. It took a 36 hour battle by tugboat captain William Daldy before it could be secured.

The bridge was finally completed three weeks ahead of schedule in April 1959, but with at least three workers killed during its construction. It was officially opened on May 30 by Lord Cobham. On the previous day 106,000 members of the public had walked across it.



Above: *The essential link.*

Below: *The box truss structure.*





*The Nippon clip-ons.*

In case you have forgotten, it opened as a toll bridge. The money collected paid back the loans that had financed construction. Removal of the tolls became a hot potato come each election. Bribery finally won out in March 1984 when the tolls were removed in toto.

Completion of the bridge saw North Shore's pre-bridge population of 50,000 explode. With rapid expansion came vastly increased traffic levels. By 1965 more than 10 million vehicles were crossing the bridge each year — or three times the Royal Commission forecast.

Despite the bridge being built with just four lanes, those devious Aucklanders had ensured the piers were capable of bearing up to eight lanes of traffic. They are far more massive below the tide than they look above.

In 1969, Ishikawajima-Harima Heavy Industries of Japan added the infamous "Nippon clip-ons" — two-lane box girder sections on each side of the bridge to double the number of traffic lanes.

As all current bridge users are aware, the clip-ons are less than satisfactory. Not only were they twice as expensive as the cost of an original eight lane bridge,

but they have been plagued by problems.

In 2006 they required major repairs. By 2007 their condition saw the first ban on trucks using the outside lane of each clip-on implemented. Subsequently, Beca Group investigated the possibility of their catastrophic failure.

Once the novelty and euphoria of the bridge had worn off and traffic volumes had started to grow, most Aucklanders saw the need for a future main second crossing.

However, most politicians were appalled by the likely costs, and hoped the notion would go away, if only during their watch. Any firm proposal was successfully deferred by interminable investigations.

In the light of the events of February 22 in Christchurch, any prompt action on a future, sub-harbour multi-tunnel link east of the existing bridge would seem to be now further deferred. It is not only Transmission Gully and Len Brown's train set that might end up on the back burner as the resources and costs are found to rebuild Christchurch.

However, Canterbury's quake has highlighted the need for multiple means of access to and from a city during any major disaster, or in an emergency.

At the moment, Auckland's transport corridor eggs sit in one aging basket. As any commuter will tell you, when a simple traffic incident closes the bridge in rush hour, blood pressure rises, as do road rage and business costs.

It is by no means just about Auckland City. The Harbour Bridge has become an essential link in the State Highway network. All points north and south of the Greater Auckland area are reliant on it to some degree, and by no means least are the members of the nation's construction industry.

It would seem we badly need a John Allum today. He demonstrated that the one answer to the procrastinations of central government is an overseas loan to be repaid by toll.

Perhaps local government needs to again take the lead from the front.



*Fully Alluminated.*

# Project manager plays Russian roulette with council and wins

Tim Bates of Auckland law firm Legal Vision presents a case where a smaller party in a leaky building claim tested the willingness of a council to proceed against it after settlement was reached with other parties.



Leaky building claims often head down a well trodden track. Proceedings are issued in the courts or the Tribunal, interlocutory steps are disposed of, and a mediation is ordered prior to the matter proceeding to trial or adjudication.

One of the vexed questions smaller parties are left with is "do we contribute to a settlement offer just to be rid of this proceeding" or "do we stick to our position that there is no liability, pay nothing, allow the other parties to settle without us, and test the willingness of the others to proceed against us".

ACC v Grigicevich started as a leaky building claim in the High Court, with a significant claim brought by the owners of some leaky buildings.

The council was named as the only defendant but soon

joined in as third parties Mr Grigicevich (Mr G) and an architect.

The claim was settled by the council with the plaintiffs for \$4.1 million, and with the architect for \$15,000.

It is not clear from the High Court decision whether this settlement was via a mediation process or by some other method.

### Third party claim

The plaintiffs walked away from the proceedings, but the council proceeded with its third party claim against Mr G for the sum of \$3 million.

By way of background, Mr G became involved in the construction project as a project manager when the construction company that had started the job became insolvent, and the incumbent project manager fell sick.

Mr G contracted through his company but, in effect, he was to take over the project management of the development so that the project obtained its Code Compliance Certificate.

Mr G took over the project management role when the development was 70% to 75% complete.

The council argued that six of the defects had been partly Mr G's responsibility. It was held that all six defects were patent (ie, they could have been identified by Mr G) at the time he began his project management work.

It was also held that he owed a duty of care to the owners to exercise his responsibilities as project manager to the development, to the standards to be expected of a reasonable, prudent and careful person in his position, so as to prevent damage to subsequent owners of the units.

The court held that he was not liable for patent defects that had been created before he came along to the

site. There was neither duty nor causation present for liability to be found.

Mr G's only duty arose in respect of those defects that he had responsibility for and supervised construction of.

In the alternative, the court held that even if he did owe a duty in respect of the patent defects, this was discharged by bringing them to the attention of the developer.

The court was then asked to rule upon whether, in fact, Mr G had a duty to identify the patent defects to the ACC inspector at the time a Code Compliance Certificate was applied for.

The court was uncomfortable with the duty of care being construed so narrowly so, instead, addressed the question as the following: Does a person who applies for a Code Compliance Certificate owe a duty of care (to end users) to take reasonable steps to discover patent construction defects and prevent them having effect?

The court ruled that Mr G had no such duty at the time

he applied to the council for a Code Compliance Certificate.

This case is interesting as it shows a party who chose to defend the claim despite others settling, and succeeding entirely in defending its claim.

No doubt significant costs were incurred by

this litigant in defending the claim, but costs were also awarded in its favour so a considerable amount of these would have been paid back.

However for a party to justify such a course, the defence would need to be very strong.

**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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