

BUILDINGTODAY

THE OFFICIAL MAGAZINE OF THE REGISTERED MASTER BUILDERS ASSOCIATION



VOLUME 29 NUMBER 10

NOVEMBER 2019

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SkyCity
fire under
investigation

INSIDE:

HAMILTON'S
MORGAN WILLS
TAKES OUT
APPRENTICE OF
THE YEAR
COMPETITION



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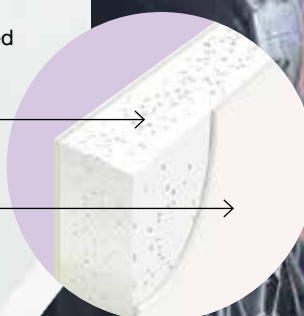
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FROM THE EDITOR

The industry was rocked by news of a blaze that severely damaged the roof on the construction site of the New Zealand International Convention Centre at SkyCity in Auckland in late October.

Investigations are ongoing into the cause of the fire and the extent of the damage to the unfinished building.

Also in this issue, Concrete NZ chief executive Rob Gaimster addresses media reports that hundreds of buildings have been affected by tardy concrete construction practices. He says concrete has been inadvertently portrayed as a defective material.

And we have the full run-down on the latest Registered Master Builders Apprentice of the Year competition, won by Hamilton's Morgan Wills.

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Reflect, learn and grow

By RMBA president
Darrell Trigg

As we head into another Christmas break, I have been doing a bit of reflection on the past year.

This has included the lessons learnt and looking at how I can grow from those experiences, both personally and business-wise going into next year.

Reflect

Like most in the industry, we've had a busy year, and coming to the end of the year things don't get easier.

Recently we had a new team member start with us, and after a few months in our business I asked him for a "fresh eyes" report with three questions.

What should we stop doing? What should we start doing? What should we keep doing?

I asked for, and received, honest, fantastic feedback. So I went to the rest of the team with the same questions, including myself.

From there I put all the answers together in no particular order, and we all met to discuss the outcomes and a plan of action for change.

It was a fantastic exercise, and we got some great intel, including suggested courses of action, which I have already started on.

There have also been some tough times. I talk to builders and people in the construction sector around the country, and they're saying the pace of life and the demands of the industry on us personally are massive.

Our best treatment for this pressure is to talk to someone that you trust and not to bottle it up — even more so if you feel one of your family, friends or colleagues are "out of sorts".

Acknowledge that things are tough at this time of year and enquire as to how they are going.

I guarantee that you will be surprised at how happy and relieved they are that someone cares enough to enquire as to their personal well-being.

People are happy to listen. We as humans are not wired to manage pressure which affects our psychological well-being.

Discussing your situation or listening about others makes a massive impact towards a great outcome.

Learn

Learning from our mistakes, or the "school of hard knocks" (passive learning), is one way we have gained knowledge during our past year in business.

It may not be the best or most productive way to do this, but it



RMBA president Darrell Trigg.

happens! The best outcome is to learn from others' mistakes or to seek advice (active learning).

Seek out business advice such as the Elevate Business Education Series on the Registered Master Builders Association members web site, or even news stories, good and not so good.

These might include things that tragically cost someone their life on site, or learning from a mentor. If you don't have one, approach someone you admire, and I am sure they will be happy to help out.

There are even lessons for all of us from the tragedy of the Sky City Convention Centre fire.

And do you have a business continuity plan that outlines what you would do if you were hit by a bus?

How would you finish that house and pay the bills? What type of person do you need for the short, medium or long term to perform your role within the business?

Grow

It is not called a lesson unless you take something from it and improve your business or personal knowledge to ensure that mistakes are not repeated.

Or, if it's something new you're learning you need to take it forward, implement it and grow your business and personal knowledge.

Part of learning and growing is making sure you give your body and mind sufficient time away from the physical and psychological demands of operating in the construction industry.

Spend time with family and friends during the year, and certainly over the summer break.

This is a great way to reset the clock back to zero for the new year, and to recharge those batteries that get "hammered" during the year.

Whatever it is that allows you to take time out and recharge, I suggest you make every effort to ensure that is what you do — it is the fertiliser that helps you grow.



NEW ZEALAND
COMMERCIAL PROJECT AWARDS

Specialist contractors restore heritage stone church

Rose Chapel

CATEGORY

Heritage/Restoration and Value Award \$2-\$5 million

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DPA Architects

PROJECT PARTNERS

DPA Architects (Architect/Designer)

Higgs Construction (Construction Company)

WSP Opus (Engineer)

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Successes

Restoring the quake-damaged Historic Rose Chapel was a privilege, said Dave Pearson from DPA Architects. An outstanding level of teamwork and craftsmanship helped bring the Gothic Revival structure back to its full glory.

"All the contractors did an amazing job. The circular staircase was too badly damaged to be repaired. We installed an almost identical one from the Regent Theatre building in Christchurch. There is new limestone around the windows, the altar was recovered and reassembled onsite, and the rose window was also completely rebuilt."



Challenges

The complex restoration of the 1911 building faced multiple challenges, Dave Pearson said.

"Over the years, the building had started to tilt to one side. We had to acknowledge the lean and build to that. We had to uplift the tiles to get a new foundation in. The tiles were really well stuck in, so we ended up breaking a lot of them. We didn't have enough tiles to complete the original pattern so we had to compromise. Also, the walls had started taking in moisture because the point between the stonework had deteriorated. We had to dry the whole building out before we could apply plaster to the inside walls."



Judges' comments

Judges said they were impressed with the team's workmanship, attention to detail, and how they restored the Historic Rose Chapel back to its former glory.

"The Rose Chapel is an excellent example of the restoration of old stone churches in Canterbury. The build brings modern structural elements and embeds them into historic fabrics in a way that is respectful and allows the original building to shine."

The New Zealand Commercial Project Awards are made possible through the support of the following sponsors:



Ancient timber creates a powerful design

W.G de Gruchy Construction Ltd

• Resene New Home over \$2 million



Successes

Ancient native logs and stonework were all crafted to perfection, said Willie de Gruchy from W.G de Gruchy Construction.

"The use of raw timber makes for a powerful design, especially when combined with Timaru bluestone exterior cladding and interior walls. We used rimu for the floors and totara for the ceilings. These were milled from native logs that had been underwater for more than 100 years, pulled out of rivers up north. The design was executed to the highest standard. We won bathroom and kitchen awards for our fine detailing which features brushed ash veneer."



Challenges

Willie de Gruchy said that the key challenges were the use of materials and the negative detailing.

"There are always challenges with building a home like this to such a high quality, especially with the materials. Ancient timber has its idiosyncrasies and variances in colour and appearance. The boards and the stone all tell a story, and we had to do a lot of work to make them all fit together. There were also a lot of negative details around the ceiling fixtures and lights, the air conditioning ducts, the doors, and the skirting. Everything had to line up."



Judges' comments

Judges said that this Auckland home takes loft-style living to new heights of luxury and open-plan living.

"An exposed steel structure and large aluminium joinery units frame masses of glass for that industrial feel. Extensive use of timber creates an incredible warming ambience even in these airy open volumes. The kitchen is the piece de resistance of this stunning space. A large arched structure over the central benchtop frames the light-filled open scullery behind. The outdoor area also features a built-in barbecue kitchen which overlooks the swimming pool. There's a bath in the master ensuite for more private soaking."

House of the Year is made possible through the support of the following sponsors:



Open-plan living creates expansive ocean views

Holah Homes

• Resene New Home over \$2 million



Successes

Phil Holah from Holah Homes said the amount of planning that went into the exposed timber and interior linings created a gratifying result. The rooms all flow seamlessly to give access to beautiful ocean views.

"The finishing and interior linings involved many different timber construction techniques, and the laminated posts, floor beams and rafters are all completely exposed. In the ensuite bathroom, we installed a glass panel over the shower. When the light-switch is on, it turns opaque to provide privacy, but when switched off, you have amazing ocean views. The kitchen flows seamlessly to two outdoor living areas – one is on the ocean side, and one is a private courtyard where you can still look through the building and see the ocean."



Challenges

Phil Holah said the main challenge lay in everything being exposed. This meant there was no room for error and a high level of planning was crucial to achieve a successful result.

"The level of detail we needed added a level of complexity. For example, we had to build the insulation in while we were constructing the roof. There were no finishing lines nor skirtings, and the interior is lined with plywood sheets which wrap around into the window reveals. As the plywood edges are exposed, we had to ensure it was perfect to not detract from the final look of the house. Having a small deviation when fitting them together could have left a millimetre gap between the linings."



Judges' comments

Judges said the holiday home is a pitch-perfect fusion of modern Kiwi beach living.

"Open-plan living capitalises on captivating coastal views, with a seamless flow to multiple outdoor areas. With all three wings opening to a boardwalk, this sun-drenched sanctuary really captures the surrounding nature. Exposed structural elements deliver appealing texture, and the high stud and pitched ceilings create breathtaking openness and ambience. An in-ground cellar with a glass ceiling, custom shelving and a skylight in the master bedroom take this getaway to the next level of luxury."

House of the Year is made possible through the support of the following sponsors:



ATTENTION TO DETAIL PAYS OFF FOR HAMILTON'S MORGAN WILLS



Morgan Wills from Hamilton has taken out this year's Registered Master Builders 2019 Apprentice of the Year, in association with CARTERS national competition.

In a face-off against eight of New Zealand's top carpentry apprentices, Morgan Wills has taken out this year's Registered Master Builders 2019 Apprentice of the Year, in association with CARTERS national competition.

Winning the title of New Zealand's 2019 Apprentice of the Year, Morgan Wills, 23, is from Hamilton, and is currently employed by Stewart Hanna Ltd, after completing his training with BCITO.

The three judges and building experts said Morgan led from the front on both days.

"During the interview Morgan provided

excellent commentary and detail, showing a thorough understanding of his project overall," they said.

"During the practical, he demonstrated a high level of attention to detail. With a clean and tidy site throughout, Morgan also received full marks for the safety component of the competition."

The two-day competition involved a 45-minute interview with the judging panel, and a practical challenge held at Auckland's ASB Showgrounds.

Registered Master Builders Association chief executive David Kelly said it was great to see

the apprentices demonstrate such a high level of skill so early in their careers.

"For 15 years, the competition has been showcasing and rewarding the best of our industry's apprentices.

"Each apprentice has demonstrated an extraordinary level of craftsmanship, knowledge and hard work throughout the competition.

"We hope these future industry leaders act as an inspiration to those looking to join the industry."

In a first for the competition, each finalist was

Principal Sponsor



Event Partner



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tasked with building a playground pirate ship as part of the strenuous six-hour practical challenge.

These 10 pirate ships will now be donated to low socio-economic Early Childhood Education Centres (ECE) in Auckland, through New Zealand-owned charity, BestStart.

Children from these local ECEs also gathered to support their nominated apprentice before the delivery of each pirate ship to their assigned playgrounds.

BestStart professional services manager Nicole Butler expressed her gratitude.

"We are delighted to receive these outstanding pirate ship playgrounds made by our country's top apprentices, and we can't wait to see the children's surprised reactions when they are delivered."

Runner-up went to Jason Helsby, 22, from Auckland, with Jay Pope, 29, from Nelson, being awarded third place.

All finalists, along with their employers, family and friends, celebrated their success at a gala awards dinner, hosted by Paralympian Liam Malone.

Entry age raised

In response to the shift in the number of New Zealanders changing careers and joining the trades later in life, this year's entry age was raised from 27 to 30.

This welcomed participation across a broader age range, with four of the nine finalists between the new 27-30 age range.

The competition is also an opportunity to acknowledge the employers who invest in apprentices to meet the growing demand.

"On-the-job training gives apprentices the best chance to kick-start their careers, and it's great to see many companies entering their



Each of the nine finalists was tasked with building a playground pirate ship as part of a strenuous six-hour practical challenge.

apprentices into the competition," Mr Kelly says.

"With the industry currently facing a skills shortage, the value of an apprenticeship has never been higher, and we appreciate the employers who continue to invest in young talent."

Supporting the competition since its establishment is principal sponsor CARTERS.

Chief executive Mike Guy says it's been fantastic to be involved in supporting the development of thousands of young talented apprentices over the years, and then seeing them go on to have successful careers in the building industry.

"Our partnership with Apprentice of the Year reflects our commitment to supporting the

growth of New Zealand apprentices, and ensuring we provide them with the tools, mentoring and training they need to succeed.

"Attracting young talent to the industry is essential to the success of New Zealand's booming construction sector," Mr Guy says.

"We congratulate Morgan and all the finalists for their commitment to the industry, and we look forward to seeing them thrive in the industry."

The Master Builders Apprentice of the Year competition is made possible thanks to principal sponsor CARTERS, event partner the Building and Construction Industry Training Organisation (BCITO), and supporting sponsor Building Performance, as part of the Ministry of Business, Innovation and Employment (MBIE).

Concrete NZ: Concrete inadvertently portrayed as defective material

Concrete NZ chief executive Rob Gaimster stresses the importance of enhanced collaboration between all of those involved in the construction supply chain to ensure the design and construction of buildings in New Zealand achieves resilient outcomes.

Responding to media reports questioning construction practices, which Concrete NZ says inadvertently portray concrete as a defective material, Mr Gaimster notes that the appropriate use of concrete is key to achieving durable buildings, as is knowledge sharing between material suppliers, designers and building contractors.

"With regard to possible shortcomings in construction practices, engineers routinely deal with the upgrade of existing buildings, which includes attending to issues identified in terms of the quality of existing construction," Mr Gaimster says.

"The new technology described is useful in this respect, although it is important to recognise that the information provided in the media lacks detail, and the significance of the suspected non-conforming building work is not known.

"It is also disappointing that industry groups, such as the Structural Engineering Society (SESOC) and Concrete NZ, were not made aware of these issues.

"Currently in New Zealand it is not mandatory for construction work to be independently supervised. At Concrete NZ we believe continued emphasis should be placed on education and training through such mechanisms as apprenticeships, and the introduction of a Concrete Placing & Finishing Class into the Licensed Building Practitioner scheme.

"As an industry, we are committed to facilitating and promoting education and training that supports the appropriate use of construction materials and, in turn, quality construction.

"The importance of concrete to New Zealand's built environment is clearly evident in the



Concrete NZ chief executive Rob Gaimster.

record amounts that have been produced over recent years.

"The concrete industry prides itself on supplying a product to exacting requirements."

Ready-mixed concrete producer members of Concrete NZ, which account for the vast majority of producers in New Zealand, operate under a Plant Audit Scheme that audits the conformance of structural concrete supplied by ready mixed concrete plants, in line with relevant construction Standards and the New Zealand Building Code.

"We are fortunate in New Zealand to have a robust built environment that has served us well over many decades.

"The reason the majority of our multi-storey buildings are built using reinforced concrete is that it offers an outstanding range of benefits in use, from durability and fire resistance through to acoustic insulation and thermal mass," Mr Gaimster says.

• Concrete feature, pages 20-30.

Tools working smarter for plumbing trade

Trade tool supplier Toolware Sales Ltd has given a group of plumbing businesses a chance to try and test innovative tools from UK specialist Monument Tools, at an event hosted by the Apprenticeship Training Trust (ATT) in East Tamaki, Auckland, recently.

The event presented new tool technology while also giving Monument the opportunity to hear feedback from plumbers about how tools can help make their work easier and more efficient.

Helen Stephens says it was ATT's independence from any commercial business that gave Toolware the incentive to approach its plumbing trade partners to hear valuable views and opinions.

"Monument is a world leader in professional quality tools, and its development team visited us to present new products and hear feedback," Ms Stephens says.

"New Zealand's plumbing differs from other countries, so it's an ideal place to test the adaptability of new tools.

"We also know our partner businesses appreciate being at the forefront of tool advancement and learning about new techniques that will ultimately make their job easier.

"For Monument and Toolware the event was a good research opportunity. These types of industry events certainly benefit our partner businesses, and we hope to do more in the future," she says.

Monument Tools are sold in New Zealand through Toolware, New Zealand's largest supplier of quality trade tools to construction industries, including plumbing and the DIY market.

Toolware also provides ATT's 367 apprentices in plumbing, drainlaying and gasfitting and electrical with tools for their apprenticeships.

The Monument range of plumbing tools are designed to make plumbing installation quicker and simpler whatever the material being used, from copper piping to brass and polymers.

ATT is a registered charitable trust that recruits, employs and places apprentices into "host" businesses in the plumbing, gasfitting, drainlaying and electrical trades. ATT calls this a "managed-apprentice model".

Established in 1991, ATT operates from five locations — Auckland, Hamilton, Wellington, Christchurch and Dunedin, and has apprentices working throughout New Zealand.



ATT deputy chairman Neil Gillespie (right), with recent graduate apprentice Hamish Jeffries, reviewing new tools from Monument Tools.

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Site access restricted as ongoing investigation takes place

Investigators preparing their report for release in 'due course'



Investigations into the SkyCity New Zealand International Convention Centre fire in Auckland last month are continuing.

Access to the fire-damaged SkyCity site in Auckland has been restricted while ongoing safety and structural assessments were being completed, according to Fletcher Construction chief executive Peter Reidy.

Fire and Emergency New Zealand had handed back the New Zealand International Convention Centre (NZICC) site to Fletcher Construction at the start of November.

"Before we can commence re-entry work, and ultimately the rebuild, we have to ensure the site is safe to work in," Mr Reidy says.

"We have a rigorous process in place to ensure the safety of those people who need to enter at this early stage, to undertake specific assessments.

"It will take us some time to understand the extent of the damage to each area within the seven-level, 32,000sq m site.

"We need to assess every floor, every structure and the 1327 car parks beneath the fire where there is significant water damage.

"It will be some time before our workers are allowed back into the building to begin the process of cleaning up the damage and then beginning the rebuild work."

Mr Reidy said initial priorities had included getting vehicles out of the building, and to retrieve tools and personal belongings where possible.

"This has been a very challenging period for our client SkyCity, for Aucklanders generally, and for our people. They are devastated about what has happened, and face a huge job ahead of them now.

"We want to thank Fire and Emergency New Zealand and St John for the enormous amount of work they have done, and all the Aucklanders who have been so understanding during this disruption.

"SkyCity and Fletcher will work closely together on plans for the rebuild, and remain determined that this iconic building will be finished," Mr Reidy says.

Meanwhile, E tū Union is throwing its support behind the teenager at the centre of investigations into the SkyCity fire.

Nothing is yet proven about the cause of the fire, and E tū Union, like everyone else, is waiting for the findings of the inquiry, E tū special negotiator Joe Gallagher said.

"Anyone can make a mistake, and people in construction work in hazardous environments. The fire is a reminder of that," he said.

"But it's been good to see the main conversation about the young guy so far has been one of concern."

The union is providing support to the apprentice at the centre of the investigations, as well as construction workers, he said.

Sources said the teenager was working for a subcontractor and had left a blowtorch unattended. After realising his mistake, he went back to his work spot only to discover a fire had already started.

At time of going to press safety assessments were continuing, and investigators were preparing their report for release in "due course".

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Wellington's historic Public Trust Hall reopens

After 11 months of renovations, Wellington's Public Trust Hall was officially reopened at a formal reception last month.

Registered Category 1 with the New Zealand Historic Places Trust, the building's original Edwardian Baroque architectural styling makes it an important landmark for the people of Wellington.

Completed in 1908, the building was originally the headquarters of the Public Trust. The main hall features extensive use of impressive plaster mouldings, cornices and corbels, and was the principle banking chamber.

It was one of the first buildings constructed in New Zealand using steel framing and steel reinforcing. Elegant, modern and central, the exterior building facade features the only New Zealand native granite, Tonga stone, from Tonga Bay in Abel Tasman National Park.

In 1982 the building was sold into private ownership and unsympathetically divided into small offices and shops. It was later saved from demolition by a public campaign, and received a Grade One Heritage Listing.

Extensive renovations were carried out by building owners Maurice and Kaye Clark over a period of 11 months, and follow an initial strengthening and restoration programme completed in 2015.

"Preserving the heritage of Wellington's finest buildings is crucial if we want to conserve and celebrate the city's identity," building proprietor Maurice Clark says.

Construction was carried out by McKee Fehl Constructors Ltd, which boasts an award-winning portfolio of heritage restoration projects, including 15 Stout Street for the Ministry of Business, Innovation and Employment, and the Press Hall precinct.

The Public Trust Hall can accommodate 280 guests, and boasts state-of-the-art audio-visual technology, acoustics perfect for chamber music as well as a professional catering kitchen.



Wellington's Public Trust Hall was officially reopened recently.

NAWIC president: More female leaders needed for flourishing industry

Life has turned full circle for new National Association of Women In Construction NZ (NAWIC) president Stacey Mendonca, who was instrumental in establishing NAWIC NZ in 1996.

Ms Mendonca, chief estimator with Pacific Door Systems, says while NAWIC has achieved its original aim of supporting women and encouraging them to pursue careers in the building industry, there's still a long way to go.

"More women are needed in leadership roles, and I'm delighted to be involved with the evolution of the non-profit organisation.

"Back in 1996 there were few women in the industry, and we have seen an increase in the numbers of women in construction.

"However, this is not reflected at senior levels. Now is the time for more women to step up into leadership roles within the industry," Ms Mendonca says.

"I want to assist more women to become role models, mentors and leaders. I also want to see more women putting their hands up to speak at mainstream seminars and conferences, along with increasing the number of women on boards of directors and in

governance groups."

Being based in Wellington will enable her to build on strategic relationships with government agencies and industry partners. She sees this as a vital connection between creating policies which reflect on-the-ground realities for women in the industry.

"It's important to ensure that the voices of our members are heard and reflected in government policies and initiatives so that these really capture what is happening at the coal face."

Sharing stories and "walking the talk" are two methods that she believes will encourage young girls to consider a career in building.

"Our sector isn't traditionally very good at storytelling, and I think we need to focus on this area by telling inspiring stories at schools,



NAWIC president Stacey Mendonca.

conferences, careers evenings and in publications and media releases."

Normalising women in construction is a key focus area for Ms Mendonca, as she believes this will encourage young women to visualise a pathway to a career that they may not have previously considered.

Having more women sitting on boards of construction companies could help alleviate some of the current industry issues related to risk, Ms Mendonca says.

"Women have a different perspective in this type of discussion, and I believe that women have a role around the board table discussing the acceptance of risk."

Thinking ahead to the future, she hopes to see a safer, kinder construction industry with better collaboration and sharing of risk, alongside increased diversity at a leadership level.

"I believe risk has to be more balanced. The current way, where all risk sits with contractors, is not sustainable. I would like to see an industry which reflects the diversity of New Zealand which enables better decisions to be made at board level."



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Christchurch business taking big steps forward with new technology

A leading-edge sheet metal folding machine is enabling a local Christchurch business to take big steps forward in the manufacture of flashings and other metal products for the building industry.

G&A Harris, a sheet metal engineering firm which has been in business for more than 60 years, imported the machine – the first of its kind in New Zealand – from Switzerland in June.

G&A Harris' customers are now benefiting from the ability to fold longer and thicker sheets of metal, as well as previously-impossible folding profiles that can be used to create decorative architectural features.

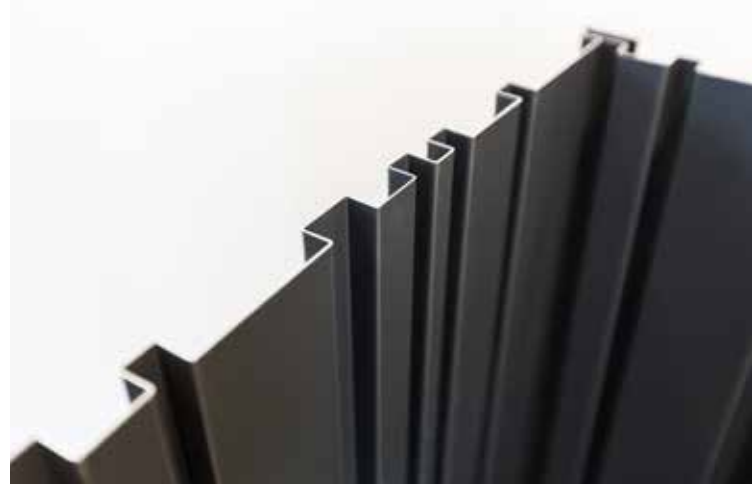
Phil Botting, who has owned and operated G&A Harris with his wife Karen since 2016, says the impressive new machine – a Thalmann TD200 CNC double folder – is already providing better efficiency and output speed.

"We're thrilled with the new machine and what it's enabling us to provide our customers," he says. "One of the key benefits so far is speed – we're getting through the work much more quickly."



Above: Phil Botting.

Below: The new Thalmann TD200 CNC double folder is enabling better efficiency and output speed.



A decorative sheet metal folding profile.

"Everything is computerised, so the specifications can be entered into the machine via a touch screen, rather than setting the angle of each fold manually, as is required on the older machines," he says.

Producing longer flashings on the new machine also means fewer flashing pieces and fewer joins, which results in quicker installation time on site.

The machine can also store customers' files on its own server, so parts can be reproduced exactly to the same specifications if required.

Perhaps the most exciting of the machine's many capabilities is the ability to produce decorative fold profiles which no other manufacturers in the industry in New Zealand can achieve.

"The machine allows us to offer an almost infinite range of custom architectural cladding options. We can do some really tight folds which can be used for impressive visual effects, as well as curved radius folds which other machines can't do," he says.

Karen and Phil purchased the business three years ago along with its partner business, Trotter Powder Coating.

In recent years, the company has provided flashings and architectural profiles for a variety of large, high-profile commercial developments in Christchurch, including the hospital, the Town Hall, the Crowne Plaza Hotel and The Crossing retail centre, as well as a number of architectural homes.

Early 2020 will see both the G&A Harris and Trotter Powder Coating businesses moving into a larger, renovated building. This will include a significantly bigger powder coating plant, capable of coating the larger items coming off the new machine.

"We're very proud of our team and the high-quality products we're able to supply. With the new machine now fully bedded in and the new factory coming up, we're looking forward to a really exciting future," Karen says.

For more information, visit gaharris.co.nz.





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NZ safety awards — turning tragedy into positivity

The first-ever three-way win at the Site Safe Construction Health, Safety and Wellbeing Awards got a huge round of applause from more than 400 people at the recent awards event in Auckland recently.

The annual awards, hosted by Hilary Barry with a guest speech by New Zealander of the Year Mike King, salute the work being done by construction organisations in the areas of health, safety and well-being, and honours the graduates of its Health and Safety in Construction programme.

Wellbeing was added to this year's awards for those leading the way in this hugely critical area, and three very different and inspirational entries were joint winners.

Site Safe chief executive Brett Murray says it is a fantastic result that recognises the hard yards put in by the three winners to talk about all kinds of mental health issues among tradespeople and construction personnel.

"These are traditionally male environments, and the traditional Kiwi male is bloody awful when it comes to talking about the pressures in their lives," Mr Murray says.

"Our three winners are all from the sharp end of the construction sector, and have either dealt with depression or lost close relatives to suicide.

"They are out there talking to people, writing books and engaging at worksite level to help people talk through issues before the pressures just get too great."

The three joint winners of the Kalmar Mental Health and Well-being Award were Paul Lynch of Christchurch's FloorRight Installations, Dave Burt of Team Cabling in Auckland, and The Switched On Group.

The three judges were impressed by all the 19 entries in the category, but said the three winners had something special in common.

"They've all experienced tragedy in their lives, they've all turned that experience into something that's made them stronger, and they're using what they've learned to strengthen the wider construction community."

Carpet and vinyl installer Paul Lynch lost his younger brother Brett to suicide in 2013. That rocked Paul tremendously, and it took him a while to shake off the rage and darkness he felt. He decided he needed to work on himself, and published a book called *Suicide; Aftermath & Beyond*.

He and wife Wendy reach out at every level to talk honestly about the things that matter.



Site Safe Construction Health, Safety and Wellbeing Award winner Paul Lynch.

Dave Burt had his own issues with depression, and details it all in his book *Lengthening the Shadow*. He says it's not that blokes don't want help or don't want to be there for their mates, it's often they just don't know how.

The Switched On Group was already talking about mental health when, in 2019, Jonny Hughes, the business partner and brother of chief executive Chris Hughes, took his own life.

The company has used Jonny's memory to create more awareness of mental health and to help in all kinds of community collaborations.

The Site Safe awards acknowledge all the people, companies and organisations who have shown innovation and leadership in improving health and safety.

In the Bettabuilt Safety Innovation Award for large organisations, Auckland's Spiral Drillers Civil followed up their win last year by taking out the award with a range of home-built innovations and inventions to make life easier and safer.

The company specialises in large piling and foundation work, and showed off six tools they have come up with, which range from a concrete pile shaver which reduces the need for workers having to go up scaffolding to remove waste concrete from piles, to a portable, weathertight, welding shelter.

At the other end of the scale, the Dominion Constructors Safety Innovation Award for small-to-medium-sized organisations went to Biggins Interior Solutions, a fibrous plaster manufacturer based in Lower Hutt, that makes plaster sheets, ceiling centres and other architectural mouldings.

Their issue revolved around how to safely lift and

move freshly-cast sheets of fibrous plaster that weigh around 80kg. They solved the problem by inventing their own custom trolley-lifter.

The winner of the Mitre 10 Trade Safety Leadership Award was Acrow Ltd, a national scaffolding firm that wanted to get strong health and safety messages through to all its staff.

One of the initiatives was a series of videos shot at Acrow branches that were so good they won an award at the 2018 US Internal Film and Video Festival.

The Vero Liability Safety Contribution Award went to Daniel Bradley and the Bradley Project Management Team. It's a consultancy of just 11 people that has put wellness right at the heart of its dealings.

So much so that they are working to spread their values throughout the construction industry by incorporating a mandatory wellness policy into their contractor tenders.

With a motto of "we get sh-t done", the firm is keen to share its wellness programme with everyone in the industry and offer any advice on how to implement it.

There were also two judges' special mentions this year. They didn't quite fit in with the award categories, but they were important in showing how looking after people makes a big difference.

One was for the NZ Transport Agency, KiwiRail and NCTIR Alliance, which worked to repair the damage done around Kaikoura by the 2016 earthquake. In total, 8000 workers worked 5 million hours on more than 180 sites, working on 3300 "things to be fixed".

One of the key parts of the job was looking after all those workers who were living away from home, while integrating them into the local community to make sure wellness was front and centre.

The other special mention was for Andrew Breward and Kelly Wood of RMBA company Premium Home Builders in Christchurch.

They were nominated by employee Peter Murphy who struggled when he lost his home in the Kaikoura earthquake and his life started unravelling.

He says Andrew and Kelly never gave up on him, supported him in every way, and made it clear that Peter's recovery was their business.

The judges said the story didn't quite fit the criteria of the awards but they wanted the story told — "and for Andrew and Kelly to be recognised by their peers for their outstanding contribution to Peter and Emma and their whanau".



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Concrete NZ conference warmly received

Despite Dunedin's chilly weather, proceedings at this year's Concrete NZ Conference hummed with warmth during the event held in October.

The conference generated plenty of positive feedback from exhibitors, patrons, sponsors and delegates — a definite thumbs up — with the excellent range of papers presented receiving particular mention.

Many delegates also commented on the elegance of the venue, with the Dunedin Centre's magnificent 100-year-old organ drawing admiration.

Keynote speaker David Rowlands of the NCTIR Alliance presented *Moving Mountains to Reconnect Communities*, which recounted efforts undertaken during the Kaikoura

earthquake response.

In terms of social activities, delegates enjoyed dinner and dancing to live music at Dunedin's impressive Forsyth Barr Stadium, as well as a tour of the Speights Brewery and The Seaside train journey.

The Concrete NZ Learned Society's awards didn't disappoint, with Auckland's spectacular Waterview Connection securing the Infrastructure Award and the Concrete Award. Awards results can be found on page 22.

Other awards included:

- Concrete Industry Apprentice of the Year: Zen Tahana of Bartlett Concrete Placing, Christchurch.
- Concrete NZ Plant Audit Scheme GOLD Status: Allied Concrete's Penrose and Nelson

Plants for 10 consecutive years of Excellence.

- Sandy Cormack Best Paper Award: Tim Shannon, Jamaledin Borzouie and Helen Trappitt of Lewis Bradford Consulting Engineers for Hybrid Rocking Precast Concrete Wall Panels used at Christchurch's Turanga Library.

As always, Concrete NZ extends its deep appreciation to conference patrons and sponsors, including:

- Patrons: Golden Bay Cement, Holcim, Pacific Steel and Sika.
- Sponsors: Ancon Building Products, BASF, Nauhria Precast & Reinforcing and Technical Welding Services.

Next year's conference will be held at Rotorua's Energy Events Centre on October 15-17, 2020.



The Beca team celebrates its Concrete NZ Learned Society Concrete Award and Infrastructure Award for its Waterview Connection entry.



The Allied Concrete team.



The victorious University of Canterbury concrete canoe team and supporters.



Zen Tahana, of Bartlett Concrete Placing, Christchurch, pictured with Wikitoria Brown, won the Concrete Industry Apprentice of the Year Award.



The trade stands area.



The event dinner.

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BUILDING TRUST



Largest-ever road project takes out Concrete Award

The Concrete NZ Learned Society's prestigious 2019 Concrete Award has been won by Beca's Waterview Connection entry.

The \$1.4 billion project was the largest road project ever undertaken in New Zealand.

It involved the construction of 4.8km of new motorway which links SH16 and SH20 together to complete the Auckland Western Ring Route.

It has relieved regional congestion and provided a direct link between the Auckland CBD and Auckland International Airport.

The project work includes two parallel 13.1m diameter tunnels 2.4km long, two cut-and-cover tunnel approach trenches, and four interchange ramp bridges where the motorway emerges at Great North Road.

The project was delivered by the Well-Connected Alliance (WCA) which comprised the New Zealand Transport Agency, Fletcher Construction, McConnell Dowell Constructors, Beca, Parsons Brinckerhoff, Tonkin and Taylor, and Japanese construction company Obayashi Corporation.

The Great North Road Interchange ramps comprise four separate viaducts connecting the SH20 tunnels with SH16.

The lengths of the bridges range from 225m to 500m, with horizontal radii as tight as 240m.

The Learned Society panel commended the WCA and all the teams involved with this large-scale, ambitious transportation project.

"Incorporating many elegant components and complex scale features, and addressing a multitude of technical and logistical challenges, The Waterview Connection is an outstanding achievement with immense benefits to the region," the panel said.

"The WCA is a worthy winner of the 2019 Concrete Award."

Who was involved?

Submitted By: Beca

Owner: NZ Transport Agency

Consulting Engineer: Beca

Contractor: Fletcher Construction

Other Firms: Tonkin & Taylor, WSP, McConnell Dowell Constructors Ltd, Obayashi Corporation



Other category award winners:

Monte Craven Architectural Building Award:

Fulton Hogan — Wynyard Quarter Pump Station, Auckland

Infrastructure Award:

Beca — Waterview Connection, Auckland

Commercial/Industrial Award:

BBR Contech — University of Auckland Old Arts Building Refurbishment, Auckland

Residential Award:

Xsite Architects Ltd — Tracey House, Auckland

Landscaping Award:

Firth Industries Ltd — French Memorial, Wellington

Technology Award:

Firth Industries/Cresco Engineers Ltd — Firth RibRaft X-Pod

Technology Award Commendation:

University of Auckland — QuakeCoRE-ILEE Low-Damage Concrete Building Test

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A steel bar about to be tested in one of five testing machines at our laboratory in Otahuhu.



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Reduces cement content

Reduces carbon footprint

Improves durability

Accelerates setting time

To learn how D5 Green can lower the carbon footprint of your next project, visit: neocrete.co.nz

Reducing concrete's carbon footprint

Concrete and sustainability are two words many think shouldn't be used in the same sentence. However, the recent Concrete NZ conference in Dunedin focused on sustainability in the industry, and solutions to make concrete more environmentally-friendly.

Neocrete is a New Zealand-based company focused on reducing the carbon footprint of concrete and improving its performance through technology and innovation. Director Zarina Bazoieva spoke to *Building Today* about the company and its new D5 Green product.

How does Neocrete reduce the carbon footprint of concrete?

We have just introduced a new admixture for concretes to the New Zealand market called D5 Green. This product is made of natural pozzolan and other minerals which significantly increase the strength of concrete.

This means that cement content and, hence, the carbon footprint, can be substantially reduced for the same grade of concrete without impairing its performance or durability.

Based on the test results we obtained in Australia earlier this year, with D5 Green the CO₂ emissions per 1 cubic metre of concrete can be reduced by 16% to 33% depending on the mix.

Where did D5 Green come from?

D5 Green has been developed in Russia over the past 20 years by my father Dr Oleg Bazoiev. He became obsessed with improving the performance of concrete back when he was studying for his PHD in Civil Engineering in Moscow.

He scoured the Russian countryside searching for different natural minerals, testing combinations of them for years until he came up with D5.

Some of these minerals come from the Caucasus mountains by my home town Vladikavkaz, where he eventually set up a D5 production plant.

Since then, D5 has been used in a large number of projects, including constructions with stringent strength and durability requirements such as hydro power plants, high rise apartment blocks, tunnels and bridges. So eventually he decided to expand the business overseas.

Why New Zealand?

It was by chance really. I fell in love with New Zealand eight years ago when I came here on secondment with KPMG.

In early 2018, I was in a chance conversation with Matt Kennedy-Good about Dad and D5,

and how great it would be here given the earthquake issues.

Matt is really into innovation and sustainability, and was very excited by the opportunity for D5 to make a positive difference. Neocrete was born shortly after.

Has D5 Green been tested in New Zealand?

Yes, a lot, in part again because of good luck. Early last year we presented D5 to LT McGuinness Ltd to understand if there was a market appetite for it in New Zealand.

Immediately they saw the potential for how D5 could reduce the carbon footprint of concrete — something that hadn't been a focus in Russia — and organised yard trials at one of their sites.

They introduced us to Gordon Jack at Higgins Concrete Ltd, who was just about to start writing his Master's thesis on concrete, and was looking for the right subject.

Like all of us, Gordon is really into sustainability and innovation, so he was really keen to run all these tests on D5 Green. We are hugely grateful to LT McGuinness, and Gordon and his team at Higgins Concrete.

This is another thing I love about New Zealand — everyone is so open to working together towards a common purpose.

Every day I am blown away by the support and interest in what we are doing. D5 Green is generating a lot of excitement here because of how it reduces carbon.

Since then we have also run a lot of tests with WSP NZ Ltd (formerly WSP Opus) and other independent labs in Australia, and undertaken the Life Cycle Assessment of mixes with D5 Green.



Neocrete director Zarina Bazoieva at her company's display at the recent Concrete NZ conference held in Dunedin.

What's next for Neocrete?

We just launched at the Concrete NZ conference. It was amazing as there was a huge focus on sustainability, which meant a lot of interest in Neocrete and a great chance to meet a heap of really interesting people in the industry.

I was surprised to learn how much research has already been done on the sustainability front by pretty much every large company in the industry.

We are now talking with a few people about how D5 Green can work for their businesses.

We've also got a really ambitious plan to continue innovating D5 Green, working with my Dad of course, and local experts here in New Zealand.

We are also talking to Callaghan Innovation experts and the New Zealand concrete industry on how we can collaborate and synergise with other research already done in New Zealand to push carbon reduction even further.

Ultimately, we want Neocrete to help make building sustainable worldwide. We want New Zealand to be famous for low carbon concrete — as well as the All Blacks and hobbits.

For more info, visit www.neocrete.co.nz.

Concrete's journey towards (net) zero carbon

Concrete NZ launched in 2017, with one element of its Strategic Charter being to develop a sustainability position to help industry drive decarbonisation. A Sustainability Committee was established, and the following contains excerpts from its first paper.

Concrete NZ supports the Climate Change Response (Zero Carbon) Amendment Bill, and its objective to ensure New Zealand plays its part in reducing greenhouse gas emissions under the Paris Agreement.

The proposed legislation, which has just become law before the end of 2019, establishes a defined, long-term emissions target, with a pathway steered by medium-term emissions budgets and guided by an independent Climate Change Commission.

Concrete NZ's support was offered despite the fact that cement clinker manufacture is an inherently carbon-intensive process, and cement companies are currently unable to reach zero carbon emissions with existing technology.

This is because the manufacturing process is driven by the base chemical reaction resulting from the decarbonisation of limestone.

The reason Concrete NZ is buoyed by the future is that significant steps have already been taken, domestically and globally, on the journey towards (net) zero carbon, and that progress will continue as the New Zealand concrete industry strives to decarbonise further.

Background

The concrete industry plays a key part in the New Zealand economy, employing more than 7000 people across 190 concrete plants and 22 cement manufacturing and distribution facilities across New Zealand.

The industry is currently producing record levels of concrete (4 million cubic metres per annum) using locally-sourced aggregates, recycled water and either locally manufactured or imported cement.

Over the past several decades the industry has been particularly conscious of its environmental impact, and has been implementing initiatives to reduce CO₂ emissions.

These initiatives include the increased use of mineral addition and supplementary cementitious materials (SCMs) in cement, the use of alternative kiln fuels in cement manufacture, and a general shift to more

efficient cement manufacturing processes.

Overall, these new practices have reduced the embodied CO₂ in concrete by 10% between 2005 and 2018, despite an increase of 13% in concrete manufacture, and an 18% increase in population.

In addition to focusing on CO₂ generating processes, the industry has also worked to enhance its environmental practices by diverting/recycling waste streams, including returned concrete, away from landfill and into usable construction products.

Despite these recent positive developments, across central and local government, media and public mindsets, concrete is seen by some as a "polluter".

Concrete NZ says the emergence of these perceptions are headwinds, an understanding of which will enable the concrete industry to develop strategies that set meaningful objectives, determine appropriate tactics and mobilise sufficient resources.

The New Zealand position

The key challenge for the New Zealand concrete industry to do the same is addressing the fact that it accounts for a notable percentage of the country's CO₂ ledger — although this is skewed somewhat by New Zealand's renewable energy generation capacity compared to other countries.

The industry is also discrete and isolated, and therefore relatively easy to control in terms of setting emissions reduction targets.

The government's agenda has been set as New Zealand is a signatory of the Paris Agreement.

This carries obligations to reduce 2005 emissions levels by 30% by 2030, with the goal to limit the temperature rise to 1.5°.

Preliminary investigations show that in 2005, concrete in New Zealand was responsible for approximately 1.6 million tonnes of CO₂, but by 2018, despite increases in production and population, this total had dropped by 10%, to just over 1.4 million tonnes.

This was achieved through supply chain modifications, kiln fuel optimisation, and the uptake of limestone filler in cement to reduce the clinker factor. This is an admirable

achievement, and something the industry should be very proud of.

New technologies

In addition to alternative fuels to fire cement kilns, traditional SCMs and Class N pozzolans, there are several technologies being developed internationally that have the potential to be applied in New Zealand.

These include Carbon Capture and Storage (CCS), the process of capturing CO₂ at source, (e.g. cement plant), transporting it to a storage site, and depositing it underground where it will not enter the atmosphere.

Another new technology is Carbon Capture and Utilisation (CCU), which uses captured CO₂ in the production of other materials, including concrete and concrete products.

An example is CarbonCure from Canada, which injects captured CO₂ into fresh concrete at the plant. Once injected, the CO₂ will find calcium and oxide particles and connect to form CaCO₃ (limestone). This process replaces cement to around the level of 7%.

Conclusions

The concrete industry supports the climate change response (zero carbon) amendment bill in its aims to achieve a (net) zero carbon New Zealand by 2050.

Such commitment is based on a recent track record of significant emission reductions, and an understanding of the work required to nurture New Zealand's Natural Capital under the Treasury's Living Standards Framework.

However, in terms of clinker manufacture, there is only so much that can be done to reduce emissions with current technologies.

Fortunately, New Zealand has a number of decarbonisation options to explore, amongst which industrial SCMs and Natural (Class N) pozzolans will form a key component of the short-to-medium term solution.

Sustainability is not just about CO₂ reduction. A holistic Life Cycle Assessment approach, which uses robust science and independent data, must be adopted in order to accurately assess a building's impact across its entire life cycle.

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trowel is like having a
knife at a gun fight**



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Dust health risk guidelines updated to address modern day

Construction site dust and associated health risks to workers have been debated for some time, with previous guidelines no longer adequate enough to address dust levels and complexities on many modern construction sites.

Worksafe has now updated these guidelines, clarifying the level of dust extraction specification expected for workers working with Respirable Crystalline Silica (RCS) dust.

Silica is a substance found in concrete, bricks, rocks, stone, artificial or engineered composite stone benchtops, sand and clay.

RCS dust is created when materials containing silica are cut, ground, drilled, sanded, polished or disturbed.

Silicosis is a progressive and deadly disease that causes fibrosis of the lungs from the inhalation of RCS dust.

The Guidelines, Controlling Construction Dust with on-tool extraction, published in October 2019, provide very clear topics that need to be addressed by PCBU's in construction



environments where dust is created by tools from drilling, grinding, cutting and sanding.

It also reinforces terms that many tradespeople may still not be familiar with, including:

- Local Exhaust Ventilation (LEV):

Using tools that provide Local Exhaust Ventilation (LEV) is recommended.

Often commonly thought of as a "dust port", LEV is an attachment designed to channel the dust produced by each tool.

- Dust Extraction Unit:

When working with hazardous dust, tradespeople are encouraged to use a certified dust extractor that's been tested, approved and designed to perform to a certified level.

Entry level vacuums, where the level of dust collection, filtration and leakage can't be verified, is discouraged.

This is often the misconception about installing a High-Efficiency Particulate Air (HEPA) filter into non-certified vacuums — which is not an adequate safety solution.

HEPA is an inaccurate term in the field of dust extractors, and could mean as much as 15% of fine dust particles passing through the filter going straight back into the atmosphere, as well as dust leaking through inadequate seals and containment areas in these non-certified machines.

The required level depends on the hazardous nature of the dust being created, as identified by the building material's manufacturer.

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Advanced vacuum and filtration technology designed to achieve full compliance with New Zealand's workplace Health & Safety guidelines for extracting hazardous dust.



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site complexities

The International identification system of Low (L), Medium (M), or Hazardous/High (H) is used to identify the risk presented by the dust, and the solution provided by the dust extractor (see identification system at right).

This is defined by Australian/New Zealand Safety Standards.

Worksafe guidelines stipulate the use of a Certified H Class Dust Extractor solution when working with RCS dust.

• Interconnecting Hose Systems

Best practice dictates that tools that produce the dust, and the dust extractors that collect the dust, should interconnect with the correct hoses and fittings, even when the brands of tool/extractor differ.

These new guidelines encourage this best practice to become more prevalent on New Zealand construction sites.

• Maintenance and Training

Correct maintenance and operator training form important aspects of the PCBU's responsibility to eliminate or reduce the level of construction site dust.

Operator training, regular maintenance and testing, as well as safe storage and transportation, are all elements that PCBUs need to have in place to ensure the chosen dust extraction equipment is being used correctly and effectively.

For more info, visit www.nilfisk.co.nz.

The dust risk identification system

L-Class Safety vacuums

MINIMUM 99% FILTRATION EFFICIENCY

Dust from dust class L may be picked up using these vacuum cleaners.

Application: Industry sectors such as woodworking, construction and manufacturing. If you are working with L Class hazardous dust select from this range.



M-Class Safety vacuums

MINIMUM 99.9% FILTRATION EFFICIENCY

Dusts from dust classes L and M may be picked up using these vacuum cleaners. These include all health-endangering, non-carcinogenic dusts with OEL-values > 0.1 mg/m³ and wood dusts.

Application: Industry sectors such as chemicals, wood, plastics, metal, pharmaceuticals, paper and textiles, for trades including carpenters, joiners and painters. If you are working with M Class hazardous dust select from this range.



H-Class Safety vacuums

MINIMUM 99.995% to 99.999% FILTRATION EFFICIENCY

Dusts from dust classes L, M and H, including asbestos, may be picked up using these vacuum cleaners. These include all health-endangering dusts with OEL-values, all carcinogenic dusts, and dusts contaminated with germs and bacteria.

Application: Industry and trade sectors as chemicals, plastics, pharmaceuticals, mining, paper and textiles, for trades such as roofers and painters. If you are working with H Class hazardous dust select from this range.

Ensure that operators of this equipment are suitably approved to undertake H Class-type work.



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New rebar tier faster and more powerful

The new MAX TwinTier RB441T Rebar tier — a sixth generation tool from MAX Japan — can tie rebar faster and with more power than ever before.

It works at double the speed and produces double the number of ties from a single roll of wire than the previous model, and exceeds that of its competitors.

The product's dual wire feeding mechanism increases tying speed by reducing the time needed to twist and feed the wire, reducing the cost of each tie and the time required for construction.

Its dual-wire wrap ensures each tie is reinforced for maximum hold. The MAX TwinTier's wire tensioning mechanism firmly pulls the tie wire in to adjust the tie to the rebar's size to maximise the strength of the tie.

When forming a tie, the tool makes a loop with the wire and then pulls the wire to tightly secure and lock the rebar in place.

Its wire bending mechanism feeds a precise amount of wire to match the thickness of the rebar being tied, cutting down on the use of unnecessary wire. This bending mechanism consistently feeds, pulls back, twists and releases the perfect-sized tie for each application.

This generation of MAX Re-Bar-Tier produces ties that are approximately 50% shorter in height, allowing for thinner concrete pours. The ends of each tie are positioned downward to increase safety. Additionally, wire spools now produce up to 240 ties (when tying D12 x D12).

Added features also include a jaw constructed to tie D10 x D10 up to D22 x D22 rebar. This wide jaw accommodates larger gauge rebar, while its slim arm allows work in tight spaces.



For more info, visit www.sifco.co.nz.

Karcher extractors designed with builders in mind

Many forms of construction dust can be a health hazard. Whilst hazardous construction dusts such as silica are incredibly harmful and potentially life threatening, exposure is preventable.

The common goal is to avoid the formation of dust before it becomes airborne. Karcher's powerful safety dust extractor vacuums connected directly to dust generating power tools, or used in conjunction with suitable accessories, offer the ideal solution.

Karcher's Dust Extractor TE models are designed with the builder in mind. Features include:

- Fully automatic sensor control filter for high suction power at all times,
- Complete anti-static 4m hose system when dealing with fine dusts,
- Power tool socket, for auto start/stop of power tool and dust extractor,
- Audible low airflow alarm to protect the operator should air flow reduce,
- A suction hose adaptor that fits the majority of major power tool brands, and
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Roofing companies taking a more proactive and innovative approach to moisture management

Building Today asked Roofing Association of New Zealand (RANZ) chief executive Graham Moor about the main trends and issues surrounding roof installation in New Zealand.



BT: What are the main issues currently surrounding roofing installation in New Zealand? For instance, what types of products and installation techniques can minimise water ingress and improve the health of occupants in both residential and commercial buildings?

GM: Warm roofs are very topical at present. As people are looking to improve thermal efficiencies and create green spaces, we are seeing this type of roofing show up more often.

Typically, these roofs have a membrane system providing the weatherproofing layer. We are also seeing built up systems, which are steel roofs which are used either side of an insulation core.

There are also systems where the metal roofing is laminated to an insulation product.

There are also companies laminating roofing underlays to the underside of the roofing sheet. The focus here is that with all of this innovation we are seeing a more proactive approach to moisture management and building science. And not before time.

Managing internal moisture is key for the comfort of the users and energy efficiency of that building. Ventilation of roof spaces is being considered and included in designs. This is smart.

It is not uncommon to receive complaints about roof leaks. However, it is not the roof leaking — it is the roof collecting internal moisture in plenty of cases.

Adding ventilation enables the warm moist air to be expelled to avoid the problems this moisture causes.

As our homes have become more airtight, we need smarter solutions to prevent excessive moisture build-up in roof cavities. This moisture can also shorten the life of components in the roof system.

Likewise, with the typical time-constrained building methods we use, there is pressure to install the roofing before the timber framing is at the right moisture content.

I think I know the response when the roofer tells the builder that the moisture content of the purlins is too high.

Our industry has seen flashings fail and roof noise issues caused by high moisture content. Purlins should have less than 18% moisture content.

Internal moisture control is very important whatever the roofing product. The roof is the collection point — not the moisture source.

BT: The use of alternative and cleaner energy sources is becoming more prevalent in the residential and commercial building sectors. How much of an increase has there been over the past 20 years in the use of solar panels being fitted to roofs in both the residential and commercial sectors? Are there any particular issues arising with the installation of panels on different types of roofs in New Zealand?

GM: As we continue towards a more sustainable future, solar energy collection is gaining significant traction to harness a free energy source.

There are plenty of options along with plenty of considerations when choosing solar collectors.

We are all familiar with solar panels. There are roofing products that incorporate photovoltaic collectors directly onto the roofing profiles and not just metal roofing products.

When installing solar collection systems, it pays to make considered decisions. Orientation to the sun, ease of access (for maintenance), wind loads, point loads, how trafficable the roofing profile is, creating unwashed areas under collectors (warranty implications) and aesthetics need to be thought through.

Life cycle costs are another consideration. Whoever comes up with the ultimate battery solution which enables the home owner to use the collected energy when they come home at night will really grow this market.

BT: Roofing is a vital part of the housing envelope. How does an industry organisation such as RANZ provide resources and help maintain standards in such an important sector of the New Zealand building industry?

GM: One of the constants for trade associations is making sure you are there for your members and the public. Rightfully, the public expect a level of professionalism and, if needed, accountability from those that belong to trade associations.

Continual education is key to helping our members. We have developed How to Guides which have become best sellers as we lift knowledge in our industry.

We also have great relationships with our sponsor partners, other industry bodies and industry experts.

It is arrogance to think we can know everything ourselves. It is our experience that the previously mentioned groups just want correct methods and products used to improve our building stock. As such, they are very willing to help us help our members when needed.

Like the Registered Master Builders Association (RMBA), RANZ spends plenty of worthy time lobbying for its members. Most of our members are SMEs and have not got the time to spend getting common sense changes for industry.

This is a key reason for our existence — to be the industry voice. Regulatory submissions with MBIE and WorkSafe of late and, of course, the changes coming in industry training, are two great examples of the work trade associations do for their members.

Most of the time we are on the same page. We should also support those that belong to and support trade associations. Collectively we achieve more.

The leadership shown by the RMBA by facilitating Construct is welcomed by our industry.

Roofing companies taking a more proactive and innovative approach

From page 31

Out of this, the Construction Industry Accord has evolved as we look collectively to solve the well-known issues which have been around our industry for some time.

Collaboration rather than our current combative approach has to be the way forward. So thanks go to the RMBA and chief executive David Kelly.

BT: What's your take on the recent fire at the Sky City Convention Centre, particularly regarding the materials used in the roof, and why these materials seemingly hindered firefighters' efforts to extinguish the flames?

GM: Primarily, we hope that the mental health of those involved is being supported. There will be a rigorous approach to finding out what happened, and poignant learnings to come out of that in due course.

BT: Please add any other information you think is worthy of coverage, especially any new innovations or initiatives RANZ has underway or is planning in the near future.

GM: Our biennial RANZ Roofing Excellence Award winner was named at our 25th annual RANZ conference in Queenstown this year. Check out the article on winning specialist

tradesperson Richie Powell from Project Unite on page 38 of this issue.

Gender diversity in industry is an integral part of our industry. Our vice-president Jenny Maxwell initiated NZ Women in Roofing (NZWiR), launched at our 2019 conference, which recognises the many and various roles that women hold in the roofing industry.

Their membership encompasses installers, salespeople, administrators, company owners and any women who participate, whether they are from installation companies or our industry sponsor partners.

One of our members, and a very keen supporter of NZWiR, was announced as the Tradeswoman of the Year at the recent National Association of Women in Construction (NAWIC) Awards. Liz Watson is a very worthy recipient of this award.

It is with some pride that RANZ has watched the development of this Wahine toa and the business she has with her partner Dan at Stone Roofing in the Waikato.

Liz has continued her development from trainee of the year in 2016 to her latest achievement. She loves her trade, and her obvious pride in what she does shines through all the time. She is a great example of what attitude achieves.

Retentions are an accepted part of a construction contract for many. Retentions are held to ensure that we (the specialist trade) complete our contractual obligations.

Yet the contracts are very clear what those obligations are. To that end, we do not want to damage our reputations or our relationships with our clients by not carrying out these obligations.

Our members tell us that they have not had their retentions used because they haven't met their obligations.

We are also not aware of builders who have had their retentions used by their clients because you have not fulfilled your building obligations.

Now that the law has changed regarding retentions, administering the management of someone else's money must come at a cost.

RANZ's view is that retentions are not making a difference — and certainly not being used as intended.

If a financial lever is all you have to ensure performance from your specialist trade then that does not sound as if there is much collaboration occurring. Or, was that specialist trade chosen based on price rather than performance?

The RANZ Executive is considering an accreditation scheme for members with criteria which will help main contractors when selecting roofing companies. We applaud that the RMBA is also looking into this opportunity.

Simply, you will be better off using a RANZ member who has the accreditation.

For more info, visit www.ranz.co.nz.

Successful launch a springboard for women in roofing industry

New Zealand Women in Roofing (NZWiR) was officially launched at the RANZ conference in Queenstown in June.

As part of the launch, guest speaker New Zealand Steel chief executive Gretta Stephens gave an inspirational insight into being a woman in a traditionally male-dominated industry, and the importance of being authentic.

RANZ president Mark Bishop spoke about how he believed that NZWiR and RANZ could look forward to a long-lasting partnership for the long-term betterment of the roofing industry.

Following the initial speeches, breakout groups formed to discuss the challenges that women face in the industry, and came up with collaborative ideas of how to overcome the challenges and help make the industry

stronger.

NZWiR branches have now been established in Canterbury, Hamilton and Auckland, and are in the process of being set up in Central Otago, Tauranga and Nelson.

The newly formed organisation now has more than 80 members.

Since the launch there has been a lot of work going on in the background, including the establishment of a Facebook page, www.facebook.com/newzealandwomeninroofing.

Here, visitors can keep up to date with what is going on around the country with the formation



New Zealand Steel chief executive Gretta Stephens (left) and RANZ vice-president and New Zealand Women in Roofing chair Jenny Maxwell.

of the new branches, and also with the activities the women are getting involved in.

NZWiR is also grateful for the generous offer from Skills New Zealand to set up the NZWiR web site.



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Raglan sheds win top roofing awards

Wainui Construction's Two Sheds in Raglan has won the Building of the Year category award in the inaugural COLORSTEEL Awards, taking home a \$25,000 media package prize.

Hosted by New Zealand Steel, the Awards are designed to celebrate roofing and construction excellence across the country.

The Awards consist of three categories — Building of the Year, Roofer of the Year, and Young Roofer of the Year.

Judges included media personality and builder Peter Wolfkamp, architect Ken Crosson, roofing expert Rod Newbold, Roofing Association New Zealand chief executive officer Graham Moor, and New Zealand Steel chief executive Gretta Stephens.

Mr Wolfkamp says the project in Raglan stood out to the panel because of its innovative design.

"It has been built with versatility in mind, so the spaces can be matched to the needs of future tenants," he says.

"The simple details provide a functional and artistic element that transform a 'shed' into an upmarket commercial destination."

Wainui Construction spokeswoman Hayley Vink says they are delighted to be named in recognition of their work on Two Sheds.

"This was a great project that really pushed the boundaries of the architecture expected in an industrial area," Ms Vink says.

"For us, it was exciting to see what we could produce thanks to clever detailing and interesting material."

The COLORSTEEL Young Roofer of the Year went to Vaughan Cook of Cowperthwaite Roofing Ltd, Auckland, who took home \$10,000 cash.

Matthew McDougall, of The Roofing Company Canterbury, was announced as the COLORSTEEL Roofer of the Year for his work on the Dagg residence, and won a \$25,000 travel voucher.

"I really enjoyed the technicality of this project — it certainly got my brain working. It was a great month and a half of work.

"I'm stoked to be recognised for the hard work required as a roofer in the industry," Mr McDougall says.

Ms Stephens is thrilled to have gathered industry experts and enthusiastic up-and-comers to celebrate success and excellence.

"Congratulations to our winners and all of our finalists. It was fantastic to bring everyone together and facilitate conversation between industries and individuals in different stages of their careers.

"We hope these Awards can grow and offer roofers the opportunity to really celebrate their work. We want to see the roofing industry recognised for the innovative designs we see from across the country," Ms Stephens says.

Following COLORSTEEL's brand identity relaunch last year, NZ Steel created the awards to elevate pride and professionalism in



Above: Wainui Construction's Two Sheds in Raglan won the Building of the Year category award in the inaugural COLORSTEEL Awards that celebrate roofing and construction excellence nationwide.

Below: The Wainui Construction team.



the roofing and construction industry.

All entries were required to showcase exceptional use of COLORSTEEL products with innovative designs and/or outstanding technical work.

For more info, visit www.colorsteel.co.nz/awards.



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2019 COLORSTEEL® Roofer of the Year
Matthew McDougall



2019 COLORSTEEL® Young Roofer of the Year
Vaughan Cook



Matthew McDougall
The Roofing Company
Canterbury



Vaughan Cook
Cowperthwaite Roofing
Limited

Congratulations to Matthew McDougall, COLORSTEEL® Roofer of the Year, and COLORSTEEL® Young Roofer of the Year, Vaughan Cook. By putting industry standards first, both have taken first place in their respective categories that focused on craft, customer care and health and safety excellence. Both will take away an amazing prize, with \$25,000 in travel for Matthew and \$10,000 cash for Vaughan. The bar has been set, and we're excited to see how the industry responds to the challenge in 2020.



Sustainable roofing shelters hive of activity

Natural health food company Comvita's new warehouse in Paengaroa features the Bay of Plenty's largest solar panel installation, enabling the building to generate enough energy to power 53 New Zealand households.

For Comvita, sustainability was a key part of its new premises, as a reflection of the company's products — natural health products made from sustainably sourced raw materials — and its philosophy of helping people to be well and connected with nature.

The purpose-built 3500sq m East Wing warehouse on the company's seven-hectare site was sustainably designed by Jigsaw Architects in Tauranga, and sits alongside its existing head office and tourism venture, Experience Comvita.

Within this \$11.7 million building is storage space for the company's natural health products, a new honey sampling room, and covered outdoor work areas for loading and unloading trucks.

Chief executive Scott Coulter says the company now has a purpose-built and sustainably-designed warehouse to store its world-renowned honeys, and to support global logistics.

Sustainable features include the Bay of Plenty's largest solar panel installation, enabling the building to generate enough energy to power 53 New Zealand households.

The temperature control system in the building uses cool, night-time air during the summer months to maintain a desirable temperature. Fitted through the premises are LED lights that should reduce onsite energy consumption by 25,000kW annually.

Additionally, more than 65% of construction waste from the project has been recycled. Waste water is treated onsite using environmentally-friendly practices, and is used to irrigate a community garden that is open to local residents, and supports 40,000 native and bee-friendly plants.

Local construction company Marra built the warehouse, and civil and drainage work was carried out by Higgins.

Central to the design of the new warehouse is the roof and wall cladding, which uses Kingspan panel systems. The construction schedule required that the roof and external walls were erected first.

The enclosed environment meant that the concrete could be poured and finished to achieve a very flat floor surface. This enabled the high-reach turret trucks to work in the narrow aisle racking configuration.

Brad Harkin of Harkin Roofing, whose company supplied and installed the 3600sq m roof, as well as external and internal wall cladding, says the roof design was straightforward, apart from the fact that Kingspan insulated panels (KS 1000 RW) were specified rather than a more traditional material like long-run steel.

However, there was a valid reason for this decision. Using insulated panels for the walls and roof of the warehouse ensures the temperature inside the building can be maintained at a constant, warm level, important when the product being stored is honey.

Each Kingspan panel measures 11m long by 1m wide with a 100mm core thickness, and weighs 120kg.

"These large insulated panels are installed in quite a different way



to a traditional iron roof, and the impact on the interior of the building is obviously very different too. With these panels, it is possible to maintain a constant temperature inside the building, whereas corrugated iron cools down at night and heats up during the day.

"Kingspan has a high R value so it stays at a constant temperature," Mr Harkin says.

Installing such large and heavy panels added complexity to the project. Harkin Roofing used a new system to them to get the panels from the ground to the roof without damaging them.

"All the panels were installed with an 80-tonne crane and a cladboy — a suction-lifting device that is charged up overnight and is attached to the crane.

"Each panel can be lifted into place so there was no manual handling of the panels. Then a couple of guys on the roof screw each one into place.

"At 120kg, there is a real risk of damage to the panels if they are being moved around, so using the crane and cladboy substantially reduced this risk," he says.

"This technique added some cost and a bit more logistics to managing the project. We needed to keep a close track of how many panels were installed each day to ensure we were keeping on schedule and didn't need the crane on site for any longer than necessary."

But, on the other hand, this technique reduces the number of roofers required to work on the roof.

Mr Harkin says the Comvita warehouse was the first job where they have used the cladboy, and it was so successful the company has bought a second one.

Even though installing insulated panels such as these required fewer roofers to be on the job than with a standard roof, temporary safety nets were slung around under the eaves and edge protection was installed to ensure a safe working environment.

• Story adapted from article printed in *Rooflink*, the official magazine of RANZ.



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Excellence award won by Hamilton-based roofer

Richie Powell from Hamilton, who has clocked up 39 years in the roofing industry, and 25 of them with Project Unite Ltd, was deservedly named the winner of this year's RANZ Roofing Excellence Award earlier this year.

Mr Powell was the first roofing LBP to be registered when licensing was introduced.

His roofing service began with Delta Manufacturing and Plumbing in Hamilton, where he learned sheet metal fabrication, welding, soldering and lead beating.

After a brief stint on the Gold Coast, he returned to Hamilton and joined Project Unite Ltd (PUL) where he is now operations manager, acting as the link between the administration and site teams, and managing all projects — up to eight at a time — and the staffing of those over the past 10 years.

Among the award-winning projects the 53-year-old has managed are the Te Uru Waitakere Contemporary Gallery in Titirangi, Auckland, the bus/train interchange at



Richie Powell from Hamilton, who has clocked up 39 years in the roofing industry, was deservedly named the winner of this year's RANZ Roofing Excellence Award earlier this year.

Manukau, and the Deleat winery in Hastings.

Much of the company and project-specific safety in the workplace is in Mr Powell's domain.

He is constantly training to further his knowledge to ensure those in the team are safe on the job.

Nearly all staff training is undertaken by Mr Powell, who has built a large module at PUL headquarters where regular teaching sessions are held. He is also a workplace verifier for the New Zealand Qualifications Authority.

Mr Powell says the prerequisites for becoming a good roofer are the ability to work in a team, stickability, working willingly outside in all weathers, and enjoying hard work.

His award included \$1000 cash, a gift pack, and travel and accommodation to this year's RANZ conference in Queenstown.

Award runners-up were Adam Baxter from Roofing Hub Ltd, and Michael Lochhead from TH Commercial Roofing Ltd, Tauranga.

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Improved perception of the trades increases apprentice numbers

The number of Kiwis taking up construction apprenticeships has reached record high numbers.

The Building and Construction Industry Training Organisation (BCITO) recently reached 13,000 apprentices in active training.

The BCITO's 13,000th apprentice is 30-year-old Tioirangi Smith, who previously worked in hospitality and is now a carpentry apprentice for SLC Builders Ltd in the Wellington area.

"We are delighted to have such high numbers of apprentices joining," BCITO chief executive Warwick Quinn says.

"This demonstrates that many Kiwis are seeing the fantastic opportunities provided by a career in the trades. However, we still need more to join.

"While our latest research shows that more parents, students and school leavers are becoming open to the trades, we've got a long way to go to reach the numbers required to meet skills demand.

"Our apprentices are setting themselves up for a bright future. Their jobs can be just as

financially rewarding as getting a university degree, you can earn while you learn, and they offer a good work-life balance.

"The number of people open to a career in the trades has increased since last year's research, particularly among women, Maori and Pasifika.

"As we celebrate reaching 13,000 active apprentices in training, it is clear we need to continue to excite students, school leavers and parents about opportunities in trade careers," he says.

"Employment forecasts estimate 80,000 new and replacement construction jobs opening in the next five years. To fill this demand, we need more people to start formal training now."

Apprentice Tioirangi Smith says he always wanted to be a builder.



Tioirangi Smith (second right) and SLC Builders Ltd were congratulated by Building and Construction Minister Jenny Salesa (centre) and BCITO chief executive Warwick Quinn (second left) with a presentation at SLC Builders' current building site in Days Bay, Eastbourne, recently.

"It was after I bought my first house that I decided to take the plunge and make the move. I aspire to renovate my own home, and I am now learning the necessary skills to achieve this," he says.

"It's an extremely rewarding career. The trades give you practical skills you can use every day, and you get to learn on the job rather than in the classroom."

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BT's Back in Time

20 years ago — November 1999:

- Developers of the canned Britomart transport terminal in downtown Auckland were considering suing the Auckland City Council. After months of negotiations with development partners, the council terminated the contract for the \$164 million underground terminal.

It was to instead consider a smaller, more user-friendly terminal in an effort to bring buses and trains into the city to ease growing transport congestion.

The project had already cost more than \$30 million — \$21 million spent by the council and around \$10 million by developers.

The council terminated the contract because financier, Salomon Smith Barney, and developer Britomart Investments had missed three deadlines to agree to the terms of the resource consents.

Developers were considering what some observers were saying could amount to \$300 million in compensation.

15 years ago — November 2004:

- The Department of Building and Housing was established on November 30, 2004, after the dissolution of the Building Industry Authority (BIA).

The Department was to absorb the functions of the BIA, and was to have primary responsibility for the regulation of building practitioners. It was envisaged that the new department would provide a one-stop shop for building and housing policy and regulation.

10 years ago — November 2009:

- A report into the future of New Zealand's built environment was released by building research company BRANZ.

The report, *Building the Future*, outlined a number of scenarios which illustrated the type of business environment the construction industry might operate within in 2025.

It was to help inform the research agenda of BRANZ in the coming years so that it best met the industry's requirements. It also aimed to stimulate a discussion in the industry about how it could ensure New Zealand's built environment served the needs of the wider community.

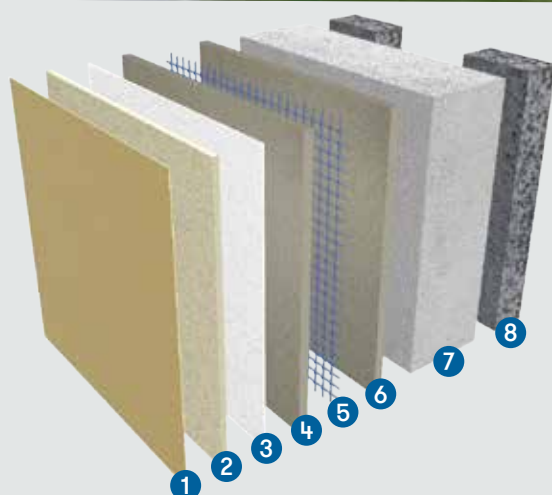
BRANZ chief executive Pieter Burghout said the report's authors consulted widely across the industry, with architects and urban planners to property developers and government departments, to create scenarios which took account of key drivers of potential change in the industry.

5 years ago — November 2014:

- A tool to help increase the use of Building Information Modelling (BIM) by New Zealand's construction industry was released.

The New Zealand BIM Handbook was launched by the Building and Construction Productivity Partnership at the Auckland Infrastructure and Procurement Forum attended by construction industry leaders.

BIM is the digital representation of the complete physical and functional characteristics of a built asset. It involves creating a model with real life attributes within a computer, and sharing that information to optimise the design, construction and operation of that asset.



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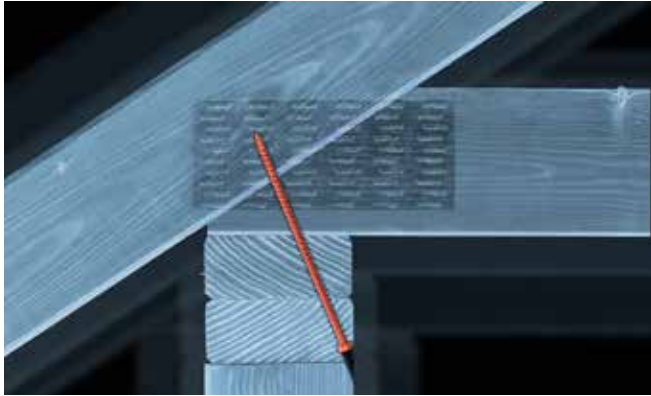
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Coast's Twist Focus system makes it easy for the HL8 to move between spot and flood beams by rotating the head of the flashlight.

Providing an impressive 615 Lumens and nearly 200 metres beam distance, the HL8 has a run time of 1 hour 45 minutes.

With Coast's commitment to quality, the HL8 Headlamp is impact-resistant, weather-resistant and its LED is virtually unbreakable.

The headlamps are backed by Coast's lifetime warranty against defects in materials and workmanship.

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Textured architectural film cuts costs

New Zealand national architectural and signage supplies group PSP is continuing its concerted push into the flexible signage media sector by launching a new textured architectural film, ReStyl by PSP.



It is a highly versatile, cost-effective and self-adhesive film that can cover almost any surface in no time. It is used in refreshing and upcycling spaces such as office interiors, hotel rooms, retail, restaurants and cafes, merchandising and more — without the cost of removing or demolishing and replacing architectural elements.

PSP's partnership with distributor CoverStyl allows significantly reduced lead times. One of the other main advantages of the range is clients can create a new look for their space without

spending huge budgets.

Offering high quality with up to 10 years of warranty, ReStyl by PSP is extremely versatile across many internal environments, offering a low maintenance covering that is quick and easy to apply.

It is UV-resistant, NZ standard flame-retardant, and stain-resistant to products such as coffee and soy sauce. The product is also anti-microbial, which makes it a perfect product to use in hotels, offices and retail.

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Containers for a wide range of uses

Sea Containers NZ specialises in shipping container hire, sales, relocations and modifications throughout New Zealand and the Pacific Islands.



It offers an extensive range of new and used shipping containers, ranging from 8ft and 10ft containers up to 20ft and 40ft in size.

The range is strategically positioned nationwide so they can quickly and efficiently offer the best hire or purchase solution for any on-site container storage requirements.

The range includes lockable storage shipping containers, DG and Hazardous Goods shipping containers, and shipping container site offices.

Sea Containers has built a strong reputation amongst its building clients to supply the right container for the right price in the right area.

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Sage piece fit for rejection pile

Terry Sage's recent opinion piece *Moderation and timing needed to save the planet* in *Building Today* August 2019 might entertain some with its emotive claims and divisive language, but it is seriously counterproductive in helping our industry get up to speed on the most compelling issue of our time.

Regardless of whether he personally ends up on the Greenpeace hit list, Mr Sage's manuscript should have ended up on the editor's rejection pile.

We now live in a world racing towards climate conditions never before experienced by humankind, with the real potential to kneecap life as we know it.

This is due in no small part to fossil-fuelled vehicles that most of us have driven, and that Mr Sage still seems determined to espouse.

Around the globe, we desperately need strategies to speedily decarbonise industries, to the extent a recent report for the Australian securities services postulated that martial law might be needed to do so fast enough (www.breakthroughonline.org.au/papers).

In this quest, Mr Sage's opinionated but unsubstantiated piece does a serious disservice to readers, the construction industry, and a government effort to tackle a truly wicked problem.

He adds next to nothing of value or accuracy to our understanding, while clearly trying to discredit innovative policy aimed at helping avert a monumental catastrophe, and at meeting our international obligations.

In such a climate-related field, the banner "moderation and timing" is strange indeed, seemingly oblivious to resounding cries around the world for greater urgency (eg, from almost every scientist on the planet to the UN Secretary General to that remarkable young woman Greta Thunberg), and to the staggering scale of the challenge ahead of us.

Mr Sage can be excused for not accounting for the alarming risks just reported by NIWA, but there are plenty of other sources of comparable information.

It's a lost opportunity that Mr Sage didn't use his energy to help explore how we might better engage with these seminal issues, instead of using bluff and bluster to say why he won't take them seriously.

I've just returned from an extensive climate change study tour in Europe, and attended the *Housing Fit for Our Future: Eco Design Advisor Conference 2019* held in Auckland recently. But readers can check some statistics for themselves on the following sites:

- [https://climate.nasa.gov/vital-signs/carbon-](https://climate.nasa.gov/vital-signs/carbon-dioxide/)

dioxide/ shows current atmospheric CO₂ levels above 411 parts per million, some 40% higher than anything since well before humans first walked this planet.

- https://en.wikipedia.org/wiki/Carbon_dioxide_in_Earth's_atmosphere/ is one of many sources showing very long-term records being always below 300 ppm.

- <https://climate.nasa.gov/vital-signs/global-temperature/> gives a sense of how rapidly temperature is rising, and even the seemingly small 1° rise is massive for just 50 years or so, and is pushing us rapidly out of the top of a narrow temperature range (+/- 0.5°C) that has given humanity wonderful living conditions for the past 10,000 years.

Perhaps because we are not an export sector, our industry is well behind the 8-ball in engaging with the nitty gritty of climate change — for example, are we seriously considering how to factor carbon pricing into our work? The agricultural, energy and forestry sectors are.

The RMBA and *Building Today* could, and should, play a key role in propelling us along such an important path. Please do so. Soon.

Lyndsay Wood

Director, Resilienz Ltd, Nelson

Call to climate inaction appalling

I receive *Building Today* magazine regularly and generally find some nuggets of good information in it, but was appalled to read the Sage Advice column in the August issue urging inaction on the climate crisis.

Climate change is coming at us much faster and harder than we feared, such that it can justifiably be called the climate crisis.

Many RMBs will be working in regions that have already declared we are in a climate emergency, and yet Mr Sage is suggesting polluters should not pay.

He decries the scheme where highly polluting imported cars are subjected to a levy which is then paid to people importing low emission vehicles.

And that is the point I would like to make here — there are a number of zero emission electric vans and light trucks eminently suitable for many, if not most, tradespeople.

These, of course, while more expensive initially, would attract the maximum rebate in the Clean Car Scheme, and would end up net savers of money over the long term with the low running costs of electric vehicles (EVs).

Mr Sage's story of a \$1200 servicing cost for an EV is an absolute outlier if, indeed, it is a real instance. Consumer NZ has an electric car as one of the most reliable vehicles you can buy, with a 98% owner satisfaction rating.

Servicing for most EVs amounts to wiper blades

and tyres. Most of the time charging is done at home or a business base on cheap overnight rates when the country has surplus power.

When you need to travel out of town, fast chargers are springing up all over the place and, besides, you can top up anywhere with a 3-pin plug — you don't need to find a service station.

Many builders currently run 4WD utes not because they need the off-road capability, but for reasons completely unrelated to their business — for example, towing a boat to a distance back at the weekend.

There are 2WD utes that would attract zero fees already available, such as the Nissan Navara. And a Mitsubishi Outlander (plug-in hybrid) is proposed to get a \$6800 rebate.

I would have thought both of these would be suitable for towing a trailer of gear and building materials.

While Mr Sage may offer useful advice on things he knows about, his advice on the carbon footprint of EVs compared to planet polluters has been thoroughly debunked multiple times.

With New Zealand's 80% renewable grid, moving towards 98% renewable, the environmental footprint of EVs compared to fossil fuel vehicles is even more marked.

Peter Olorenshaw

Architect, Nelson

Oil stats questioned

I had to seriously question the validity of Don Bunting's opinion piece *A numbers game* (*Building Today* October 2019) in which he states that the US produces only 2% of its own oil. This is seriously flawed when recent reports indicate US oil production is 89% (2018) and increasing.

I would suggest that when you make a case and cherry-pick data for your cause that is out of date, you bring your whole argument into question.

Grant Mackay

Clarks Beach

Don Bunting replies: Grant, thank you for pointing out an error in my column. I got the stat from a book titled *Kick the fossil fuel habit*. It was written by Tom Rand, described as a clean energy venture capitalist. I should have been more searching.

However 89% is too high. Statista.com estimates US production at 12.6%, while other estimates are as high as 16% of world production.

I trust you got something from the rest of the article; the point of it being that meeting the challenge of climate change would require significant changes to our current way of life.

Such large reductions in greenhouse gas production would be close to political suicide for any political party.

Clarifying the case on climate change . . .

Terry Sage of Trades Coaching New Zealand responds to his responders at left, clarifying his stance on climate change.

Whoever said good things come to those who wait? I wonder if that person is still waiting.

Me? Well, I've been left hanging for 88 articles — and that's like eight years of one-finger typing — living in hope that there is at least one person out there who actually reads my words of wisdom — or, it seems in this case, my drivel.

Lo and behold, it seems like more than one person reads my words, as the editor received not one but two letters in response to the recent column I wrote regarding electric vehicles (*Building Today* August 2019).

Now, many journalists write with the intent to stir emotions and provoke a challenge. I'm not one of those, not by a million miles, simply because I'm no journalist, not even close.

What I am is a humble geezer who enjoys the odd writing exercise and the freedom to have an opinion. As indeed is anybody out there, whether they like my ramblings or not.

So let's just settle a couple of points. Whatever I write is purely my words and thoughts. It has nothing to do with the views of the Registered Master Builders Association or *Building Today*.

So any public flogging should come my way, and my way only. That's the power of free

speech and latitude of opinion.

I would like to assure the two gentlemen who put pen to paper and vented their own thoughts on the opposite page regarding my words that I am not the antichrist of electric vehicles, or the devil against global warming — quite the opposite in fact.

However, after reading the strength of your words, I certainly wouldn't put myself in your planet savers league.

Yes, our family recycles cans and bottles, we don't use plastic bags any more, we use alternatives to glad wrap, and now I have to use a bar of shampoo — a damn slippery bugger at that — so there's no plastic bottles in the shower.

And what's more, I ripped out the smoke-belching wood fire, saving the trees and the atmosphere, and installed a very expensive pellet fire. And I don't smoke or drink beer, so there are no alloy cans in my rubbish bin.

So give me a wee bit of leeway please?

In my defence, I am not against the electric car. In fact, the other half is making noises about buying one, so if you want to donate one of those Tesla S cars to my garage you will be my new best friend, I promise.

My words — and, indeed, they were a bit



strong in places and rambled in others — were aimed at the powers that be down in the windy city, and against the fact that, yet again, I am being bullied, coerced, threatened, blackmailed and being told to buy electric or "we will slap an \$8000 tax on you".

Being told what I can or can't do never has sat that well with me, and then having it cost me a holiday in the islands just tore a hole in the underwear.

I did state that some of my points were garnered from what I have read or listened to, but one point I will stand behind is that the technology is not quite there yet to satisfy many commercial users.

I travel more than 50,000km a year. Some working days I drive only a 100km round trip, while many are more than 500km.

Is there an electric car that has the comfort and speed to travel more than 500km without a charge, and won't cost me hundreds of thousands of dollars to purchase?

If I could find a suitable substitute for my current gas-guzzling, environment-destroying mode of transport then I'm with you, really I am.

But I believe there's nothing out there that comes close to my \$13,000, 2011 E350 AMG that does 1000km on \$95 worth of diesel without having to stop, in supreme comfort and endless power.

Hence my words aimed at the politicians — leave me alone until there is an affordable alternative, and don't penalise me or force me into a hairdryer that has to be plugged in for a charge-up at every second set of traffic lights.

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THE BUSINESS SIDE OF CONSTRUCTION

Non-compliant payment claim foils statutory demand process

Timothy Bates of Auckland law firm Legal Vision evaluates a case that addresses the interplay between the Construction Contracts Act 2002 and the statutory demand process pursuant to section 289 of the Companies Act 1993.

In this month's article I wish to review a recent High Court decision of *Cromi Investments Ltd v CMP Construction Ltd*.

It addresses the interplay between the Construction Contracts Act 2002 and the statutory demand process pursuant to section 289 of the Companies Act 1993.

Background

- Cromi was the developer of Nexus Apartments at Vinegar Lane, Ponsonby, Auckland.

It had been in a prolonged debate with its contractor CMP over remedial works, and the release of the second and final tranche of retention monies of \$155,274.61 plus GST held by Cromi under the contract.

On the one hand, CMP sought the release of these retentions, and on the other hand Cromi argued that the remedial costs of outstanding defects were valued at more than the amount of the retention monies.

- The contract commenced on May 15, 2015, and it was in the form of NZS 3915:2005 General Conditions of Contract for Building and Civil Engineers Construction as amended by Special Conditions of Contract.
- Clause 12.3 provided that CMP was entitled to recover the second tranche of retention monies upon completion of the remedial works and the issue of a Defects Liability Certificate.
- On February 1, 2018, before CMP issued a Defects Liability Certificate, Cromi issued written notice under clause 11.2.3 of its intention to engage another contractor to complete the remedial work (within and after the expiry of the Period of Defects Liability). A



Defects Liability Certificate was never issued.

- On July 3, 2018, CMP served a document called a Final Payment Claim for the retention money of \$155,274.61 plus GST (Payment Claim 33). CMP contended this was a valid payment claim.
- In response on July 9, 2018, Cromi re-presented a document titled "Proposed Final Account Certificate", first presented at a meeting of the parties. Cromi contends this was its final Payment Schedule.
- Against this backdrop, CMP served Cromi with a statutory demand under section 289 of the Companies Act 1993 for \$184,631.60.

Payment claim validity

The first of the two key issues for the High Court to determine was whether, in fact, the document CMP served on July 3, 2018 (purporting to be a payment claim) was, in fact, a payment claim.

On this issue, her Honour ruled that it was not. Key in her finding was that this document did not stipulate a due date for payment, which is a requirement pursuant to section 20 of the Construction Contracts Act 2002.

It was argued by CMP applying previous case law, that strict adherence to section 20 was not required, and so long as there was a mechanism for ascertaining when the payment was due, that was sufficient.

However, the court ruled that section 20 had not been complied with in this regard, and nor was there a method for ascertaining the due date for payment.

Accordingly, it was deemed not to be a payment claim, and the "pay now argue later" doctrine was therefore not invoked.

The court was then left to determine whether, in fact, the statutory demand ought to be set aside pursuant to section 290 of the Companies Act 1993 — ie, was there a substantial dispute as to whether or not the debt was owing or due?

The assessment of this came down to whether there was a genuinely arguable case for the cost of incomplete remedial works that exceeded the amount claimed in the demand.

Whilst the High Court was obviously troubled as to the overall genuineness of Cromi's remedial works claim, it held that it was not possible within the context of a statutory demand proceeding and on the limited material before the court, to determine what remedial work was legitimately in dispute, and what (if any of that work) was not.

The dispute over the remedial work related to more than 20 items, most of which required a technical and potentially expert assessment as to whether or not they were adequately completed.

Ultimately, the court was satisfied that the value of the genuinely disputed items exceeded the amount claimed in the demand. It was set aside by the High Court.

To note

Whilst the court will entertain some slippage from precise adherence to the requirements imposed by section 20 of the Construction Contracts Act 2002 as regards the validity of payment claims, the payer cannot be left with any doubt as to how to comply with the payment claims — in this instance the due date of payment was left in issue.

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 or *Building Today* to anyone who relies on the information contained in this article.



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Cracking up

Architect Don Bunting discovers that building defects are an international issue.

I recently visited Sydney, specifically to see how the central city was coping with the new light rail system up George Street and beyond.

My visit was a little too early as the system was still under trial.

Nevertheless, the bleak, blank faces of some shop fronts on once busy George Street were testament to the disruption being caused to inner-city life and retail sales. Auckland and other New Zealand centres beware.

The Australian papers were full of stories of significant structural problems being uncovered in relatively new apartment blocks.

On coming home, I heard that a facade panel had fallen off a central city block of apartments in Auckland, causing major traffic disruption.

I also understand that the relatively new Wellington Central Library building is under threat of demolition due to lack of compliance with earthquake standards for public buildings.

You couldn't help but think — what is up with Australasian standards of construction?

Australian standards

I was peripherally involved with an Australian building project and surprised at the time by the lack of direct oversight by the local authority.

I have no idea whether this was a factor behind recent apartment building issues, but the chief executive of The Australian Institute of Building Surveyors said in the *Sydney Morning Herald*: It is symptomatic of a much greater problem — a building regulatory system that is failing across Australia.

The newspaper report on the Mascot Tower Block, which sits above the Mascot railway station just short of Sydney airport, noted that all occupants of the apartments had been evacuated.

Cracks in the primary support structure and facade masonry of the 122-apartment complex led to temporary supports being installed.

When the initial cracks started to widen, it was decided that the building was no longer safe to occupy.

In December a similar incident occurred in a tower complex at Sydney Olympic Park, when the building was evacuated due to cracking and

reports of movement.

Engineers Australia noted that this earlier incident was “a major wake-up call for New South Wales to get serious about reform”.

The NSW Premier was quick to announce that legislation to overhaul the construction industry would be introduced to parliament immediately.

He then made the extraordinary statement that “we expect the highest level of compliance in addition to people sticking to the rules”.

Don't you just love politicians stating the bleeding obvious?

The blame game

I have no knowledge of the root cause of the problems with the two Sydney apartment building failures.

What concerns me is that when building failures occur, industry organisations and consenting authorities inevitably blame the system; often falling back on that convenient phrase — a systemic failure.

In this case, the building surveyors, Engineers Australia and the NSW State Premier, were all quick to deflect any direct wrongdoing. It had to be the system that was at fault right?

No doubt, further investigations will attempt to uncover exactly what happened. But why building faults occur is becoming increasingly difficult to pin down when the construction sector's first reaction is to look away from those involved and deflect blame towards “the system”.

It may be that both Australia and New Zealand need to review current legislation and building standards. It may also be that consenting and overview requirements need to be tightened.

I can only hope that key industry players take a hard look at how they currently operate, and whether there is a tendency to look more at the bottom line — minimum cost, maximum profit — than ensuring our built environment is as good as it can possibly be.

Back to the future

Thinking about the numerous recent cases of contractors getting into financial strife — and in many instances going broke — I recalled how once all major projects had a detailed interim



cost plan prepared, followed by a full, independent schedule of quantities as the basis for tenders from all interested contractors.

My uncle Bob Stewart was the son of New Zealand's first professional quantity surveyor. He instilled in me the critical importance of “getting your sums right”.

If contractors got under financial pressure on a project, the result was that corners might be cut. Not necessarily leading to non-compliance, but when operating under financial pressure you may not always produce the best result.

So imagine for a moment if all projects were based on an independent schedule of quantities prepared by an independent quantity surveyor.

You know it makes sense — as it once did.

Quite Wright

The book *Frank Lloyd Wright in New York* chronicles Wright's time leading up to the near completion of New York's Guggenheim museum.

I say near completion because Wright died some months prior to the building's opening in October 1959.

The book reveals Wright's approach to both life and architecture; always operate at maximum pace and with maximum expenditure for your clients.

He established his office and home in New York's Plaza Hotel while persuading the Guggenheim Foundation to accept his design and then overspending the budget in the “Wrightian manner.”

A quote from one of Wright's many public appearances during that time helps define his personality: “Early in life I had to choose between honest arrogance and hypocritical humility. I chose arrogance and have seen no occasion to change.”

Humility was not one of his strongest suits, and thank goodness for that.

Recruiters add value to businesses

Building Recruitment managing director Kevin Everett explains why recruiters are every bit as important to your business as lawyers and accountants.

Every company uses various service providers such as lawyers, accountants or business mentors to help them through difficult times or to ensure they are compliant.

Recruitment is rarely on the list of an essential service provider to businesses. Here are a few reasons I hear regularly as to why this is the case:

- Recruitment is a non-regulated industry.
- Too many recruitment firms are not ethical or have poor systems and processes.
- All they do is fire out resumes that are not remotely suitable.
- They cost too much and we cannot afford the fees.

I am sure there are similar issues with many service industries, but they are still seen as a value-add to business owners.

Lawyers and accountants are never cheap, and nor are good business mentors. Yet despite the costs for their services, many business owners will use these services for their businesses because of their expertise.

It is widely accepted that the greatest asset to any business is their people. We have one of the greatest skills shortages ever experienced in the construction industry, and companies are struggling to find quality.

Yet professional recruitment services are still not seen as a value-add proposition.

Partnering with a good recruiter will have as much of a positive impact on your business, if not more, than any of the above-mentioned services — and could possibly reduce the need for those other service providers.

By choosing the wrong employee, you may need the services of HR, legal and the accountancy companies, not to mention the



damage caused to other staff or client relationships and your business productivity.

Having the right employees and team culture can reduce risk in your business, and develop growth and profitability.

It would also free up your time to work on the business instead of working in the business, while your recruiter:

- writes a job advert,
- places adverts on job boards,
- searches their database and networks for ideal candidates,
- screens candidates,
- creates shortlists,
- interviews candidates,
- modifies resumes and formatting to send to you,
- writes a debrief from interview notes,
- carries out pre-employment checks, and
- negotiates on your behalf.

You can focus your energy on ensuring your current employees are not over-worked, and managing your day-to-day business with no disruption.

Then, when the right candidates are available as presented by your recruiter, all you need to do is read between three to five resumes, and prepare your interviews and employ with more confidence — plus you have a guarantee to fall back on.

Like most services, the more your recruiter works with you and establishes a relationship, the more they learn about you as a manager, your business and your team culture. Sharing your business desires and business plans also helps them understand your long and short-term needs.

The better the relationship and trust, the higher the success rate.

How to find the right recruiter for you?

When looking to engage an accountant or lawyer, what questions do you ask yourself and of them? What are you looking for from them?

For example, if you have a business legal issue you wouldn't engage a family lawyer to represent you. The same goes for choosing a recruiter.

Select someone within your industry, someone who has walked in your shoes if possible or, at the very least, successfully recruits to your industry.

If they do not understand your business, your industry or your needs, how are they going to find someone suitable? They can't, and the workload soon transfers back to you.

More resumes equals more frustration/delays

Some feel bringing two or three recruiters helps widen the searching net but, in fact, all you are doing is creating desperation between the recruiters, and no dedication.

You have created a race to get the resume to you, so quality and process now become secondary.

If a recruiter has an exclusive client, then all their attention is on them. A 100% chance of filling the role is better than 50% or less. Simple math.

At the same time, as a client to the recruiter, it is important to give clear and constructive feedback on resumes received or candidates interviewed. Again, this will strengthen their knowledge and improve delivery.

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Building Consents Information

For All Authorisations, September 2019

Dwellings	\$1,344,375,000
Domestic Outbuildings	\$16,271,000
Total Residential	\$1,360,646,000
Non-residential	\$617,615,000
Total All Buildings	\$1,978,261,000
Non-building Construction	\$31,541,000
Total Authorisations	\$2,019,802,000

Number of new dwellings consented

	Sep 2019	Aug 2019	Sep 2018		Sep 2019	Aug 2019	Sep 2018
Far North District	23	30	20	Horowhenua District	21	24	13
Whangarei District	33	64	45	Kapiti Coast District	24	27	26
Kaipara District	10	18	12	Porirua City	23	29	17
Rodney District	51	79	67	Upper Hutt City	22	4	21
North Shore/Albany Wards	244	321	245	Lower Hutt City	40	48	41
Waitakere Ward	154	84	41	Wellington City	211	89	55
Auckland Wards	310	441	231	Masterton District	15	12	13
Manukau/Howick Wards	189	265	84	Carterton District	2	8	6
Manurewa-Papakura Ward	148	142	143	South Wairarapa District	5	8	13
Franklin Ward	47	83	43	Tasman District	43	53	27
Thames-Coromandel District	30	22	19	Nelson City	16	17	58
Hauraki District	9	8	10	Marlborough District	25	10	20
Waikato District	100	77	61	Kaikoura District	4	5	4
Matamata-Piako District	13	22	19	Buller District	5	4	6
Hamilton City	211	155	151	Grey District	7	3	1
Waipa District	44	37	35	Westland District	6	5	4
Otorohanga District	4	1	4	Hurunui District	11	12	8
South Waikato District	3	2	4	Waimakariri District	56	71	64
Waitomo District	3	3	1	Christchurch City	230	235	234
Taupo District	23	18	28	Selwyn District	132	133	106
Western Bay of Plenty District	34	36	32	Ashburton District	11	19	30
Tauranga City	137	92	133	Timaru District	12	15	6
Rotorua District	25	30	12	Mackenzie District	13	21	19
Whakatane District	14	11	4	Waimate District	2	0	3
Kawerau District	0	0	1	Chatham Islands Territory	0	1	3
Opotiki District	3	6	3	Waitaki District	7	7	9
Gisborne District	9	8	11	Central Otago District	20	30	23
Wairoa District	2	1	0	Queenstown-Lakes District	232	73	77
Hastings District	28	36	26	Dunedin City	44	41	35
Napier City	16	21	16	Clutha District	3	5	8
Central Hawke's Bay District	9	7	5	Southland District	16	10	11
New Plymouth District	51	36	28	Gore District	0	2	2
Stratford District	1	3	4	Invercargill City	20	7	10
South Taranaki District	3	4	5	Area Outside TA	0	0	0
Ruapehu District	4	3	1				
Whanganui District	12	11	5	Total	3347	3261	2559
Rangitikei District	9	6	2				
Manawatu District	12	17	12				
Palmerston North City	51	39	23				
Taranua District	0	2	0				

- Based on 2006 census areas
- Each dwelling unit in a housing project is counted separately
- Figures in these tables may differ from published statistics

Source: Statistics New Zealand

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