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**PlaceMakers**

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New Zealand

## FOREWORD VIEW FROM THE GM OPERATIONS

### FRESHEN IT UP!



**As something becomes more familiar, we often start taking it for granted, and sometimes even stop paying attention**

Operating on autopilot can be ok in some instances, but in the long run, it's usually not in our best interests, or that of those around us. Take Blue September for example. PlaceMakers has been campaigning about the importance of getting checked for prostate cancer for years, and maybe you were checked a few years ago because of all the buzz, but since then it's gone off your radar because you're used to seeing it promoted.

This year, we're hoping our 'refreshing' new product – Blue September air fresheners – will encourage our builders to wake up and smell the roses and do all they can to keep their health intact. As a friend of mine with cancer said: "Health is everything; nothing else really matters. Or, to put it differently, you need to be in reasonable health before anything else can worry you".

So don't take your health for granted – invest in it like you would your most precious possession, and get checked!

Here at *Under Construction*, we're also aware that we can't take you, our readers, for granted, so we've done a refresh of the publication's design and are continually reviewing the content to ensure it remains the best and most relevant for your learning. It's not just your health we care about, but the health of your business too.

So, let's use the example of Blue September it as a prompt to stand up and take note of what's happening around you, follow up on what matters, and encourage those around you to do the same.

**Gary Woodhouse**

General Manager Operations



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TRADEMADE DEALS



\*Offer exclusive to PlaceMakers trade account holders. Purchases must be invoiced on a current trade account between October 1<sup>st</sup> & November 30<sup>th</sup> 2018. Qualifying spend of \$1,000+GST or more is limited to James Hardie RAB & HomeRAB products. Giveaway of the fishing packs are limited to 200 nationwide, while stocks last and to a max of one per qualifying trade account. Winners of the competition will be notified by the 14<sup>th</sup> of December. The first 200 qualifying customers will receive a fishing pack which will be available for collection from the winner's local PlaceMakers branch no later than the 20<sup>th</sup> of December 2018. All qualifying customers will automatically be entered into the draw to win the Heli-fishing experience. All bookings are subject to availability and must be redeemed by 30<sup>th</sup> November 2019. Prizes are not redeemable for cash or any other product or service.



# COMMUNITY

## HOW BLUE WILL YOU DO?



**For the fifth consecutive year, PlaceMakers teamed up with the Prostate Cancer Foundation to raise awareness of the disease during Blue September**

**B**ranches around the country embraced this year's theme – How Blue will you do? – by hosting their own 'Blue Do' events. At many events, PlaceMakers funded free blood tests for prostate cancer.

Bruce McEwen, NZ Distribution Chief Executive, said the whole organisation was as enthusiastic as ever to get stuck into raising as much money as possible for the cause.

"PlaceMakers continues to be right behind Blue September and this very important cause. It's more than just raising awareness and fundraising, we want Kiwi men to get checked and are giving these guys the opportunity to do so," said Mr McEwen.

"A quick blood test is all it takes to get a prostate cancer check, a simple and easy thing to do for peace of mind for

yourself and your family. All Kiwi men should man up and get checked!"

**PlaceMakers also launched a 'refreshing' new fundraising product – Blue September air fresheners**

### FRESHEN IT UP!

This year, PlaceMakers also launched a 'refreshing' new fundraising product – Blue September air fresheners – which were sold for \$3 and displayed on the counters of PlaceMakers branches nationwide, with all proceeds going to the Prostate Cancer Foundation. A number of customers also made further donations at the time of purchase.

For the eighth consecutive year, PlaceMakers staff and customers took awareness to the road as the Bikers

in Blue, an event which has grown significantly since then and extended to five regions for the first time this year! Read more on page 34!

### ABOUT THE PROSTATE CANCER FOUNDATION

The Prostate Cancer Foundation has a significant role in promoting public awareness of this disease. With over 3,000 New Zealand men being diagnosed each year, and with early detection leading to better outcomes, it is important that men understand the signs of potential disease and also of the checking and screening tests that are available from their doctor.

Each year, the Prostate Cancer Foundation uses Blue September to promote the issue and encourage businesses and community groups to get involved. ■



Trade Service Manager at Mount Manganui, Shannon Collier, said the Hamilton event was very successful and the huge amount of support was impressive

# COMMUNITY

## HELPING HAND FROM VIETNAM



**With a 2,500-strong team stretching from Kaitia to Invercargill, PlaceMakers is a household name in New Zealand. What might not be known is that the company extends all the way to Vietnam, with 40 people contributing to the company operations from Ho Chi Minh City**

**T**he PlaceMakers network handles more than 26,000 sets of customer plans annually. This involves providing truss layouts, detailing the plans for frame and truss manufacture (F&T) and estimating costs for the balance of materials.

Most of this work is done at the National Estimating Unit (NEU) in Hamilton and Christchurch, while F&T is detailed across the country.

However, these operations are also

taking place 9,000km away in Ho Chi Minh City, through a business solutions company called Platinum Global.

The Ho Chi Minh office consists of 40 highly skilled detailers and estimators led by manager Linh Nguyen.

"The team is proud to be part of the larger PlaceMakers family," says NZ Distribution Chief Executive, Bruce McEwen, who recently visited the team.

"They are as passionate about the

**It was fantastic being able to meet the Ho Chi Minh team and witness the great work they do for us**

PlaceMakers brand as the rest of us, and work tirelessly to get those plans turned around and back to our customers in NZ.

"It was fantastic being able to meet the Ho Chi Minh team and witness the great work they do for us." ■



COMMUNITY

CONNECTING WITH CUSTOMERS



PlaceMakers instant prize wheel was a big hit with those who attended



Four lucky recipients walked away with sweet draw prizes, including a Milwaukee Jobsite radio



PlaceMakers hosted a one-hour LBP skills maintenance session at the event



Attendees could enter the draw by signing up to WeChat



The WeChat App in action!



NZCBIA was very pleased with the turnout – more than 9,720 visitors in total!

PlaceMakers was proud to be a Diamond Sponsor at the 2018 New Zealand Chinese Builders Industry Association’s annual conference for the fourth consecutive year

With an increasing number of Chinese customers, PlaceMakers has been putting in extra effort to ensure they receive the same support by hosting LBP seminars in Mandarin and, most recently, sponsoring and running an exhibit at NZCBIA’s annual conference.

“Held in conjunction with the NZ International Property and Building Expo from 27 to 29 July, this year’s

theme was ‘Collaboration, Innovation & Productivity’,” says PlaceMakers Asian Business Manager Keven Chen. “It was definitely appropriately themed – the Vodafone Events Centre, where it was held, came alive for three days with a huge cross-section of building, trade and construction in attendance.”

NZCBIA president Frank Xu says he was pleased with the turnout and the feedback.

“It was a great opportunity for industry experts to come together to explore ideas, receive industry updates, share insights, be presented with awards, and participate in multiple networking opportunities,” says Xu.

“We had more than 450 people attend the forum, 630 people attend the gala dinner, and a record 120 business host exhibits, with 9,720 visitors in total. It was a fantastic result for the industry

and the response from those who attended was very positive.”

Xu was also grateful to the 33 sponsors who helped make the event the success it was.

“PlaceMakers was one of two Diamond Sponsors. We really appreciate the effort they’ve put into making our members feel welcome and valued as their customers.”

PLACEMAKERS PRESENCE

For the second year running, ‘The PlaceMakers Zone’ was a hub of activity, offering an enticing combination of information and excitement.

A number of key suppliers were on hand

It was a great opportunity for industry experts to come together to explore ideas, receive industry updates, share insights, be presented with awards, and participate in multiple networking opportunities

to share their knowledge, so visitors could learn about their latest products and innovations, and everyone had a chance to win instant prizes by spinning the PlaceMakers wheel.

PlaceMakers also organized a one-hour LBP session which was well-

attended, and used its WeChat App to let visitors know where the exhibit was and what was going on.

“This year’s Conference and Expo was another successful event,” says Keven. “The PlaceMakers zone was full of visitors and we were excited to use WeChat as one of our tools to engage with our customers.

“We sponsored the Expo again this year because we believe it adds value to our customers by providing opportunities to meet suppliers, improve knowledge and be exposed to product innovations and networking opportunities.

“At PlaceMakers, adding value to our customers is a real priority.”

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# COMMUNITY

## TIMARU AND TWIZEL OPERATIONS EXPANDED

**With building consents on the rise in South Canterbury, PlaceMakers Twizel and Timaru are expanding to meet local trade demand**

Over the course of the 2017-18 financial year, the Timaru District Council issued 2,158 building consents, an increase of 37% from the previous year.

Joint Venture Manager for PlaceMakers Timaru and PlaceMakers Twizel, Brendan Leary, says he is delighted to have been able to expand both stores' operations in response to such healthy building activity.

"Without question, there has been a building boom in Twizel and Timaru; there's a lot happening here," says Brendan. "It's important we make changes to facilitate growth."

Brendan says feedback at both stores has made the renovations even more rewarding.

Customers have responded positively to the extensions made to Twizel's range of items and physical space. The Twizel



Joint Venture Manager Brendan Leary (left) celebrates the cutting of the ribbon at the newly renovated showroom in Timaru

store now has new racking, interiors and a storage shed, plus a larger trade yard.

Two team members have also been welcomed to ensure high service standards are maintained in the face of increased demand.

Timaru has also seen new store additions. "Our Washdyke store just had its 2000m<sup>2</sup> showroom renovated, and everyone including our customers and staff enjoyed the cutting of the ribbon," says Brendan. "We're really proud with how it has turned out."

Improved racking makes it easier for

customers to navigate more than 7,500 products, including 1,000 new items. The store also features a new central checkout, as well as a modern bathroom and kitchen interior zone.

"Although we haven't increased in size, the redesign is so effective people have the impression we've expanded," says Brendan.

"It's been several years since our last expansion in Timaru, so we've wanted to make a change for a while. It's a significant investment in the South Canterbury community, which we're proud to be part of." ■

## PAYING IT FORWARD

**Competition winners are typically excited for what they receive, but for Lana Fox of Pleasant Point, it was a case of being excited to give something back**

Over April and May, Taubmans Paint ran a national competition through PlaceMakers, with every purchase of their products put in the draw to win. The prize was nothing less than a \$16,000 KTM motorbike and \$1,000 in accessories.

Many people would have been crossing their fingers hoping to take that motorbike home. However, when Lana arrived to claim the prize, she stunned everyone by announcing she would be donating it to Hospice South

Canterbury to raffle off at next year's Rock and Hop.

As a long-time supporter of the Hospice, the decision was easy after seeing the work they did while her mum and friend were in their care. "They do an amazing job," says Lana.

The entire South Canterbury region will benefit from the money raised through the raffle, and PlaceMakers Joint Venture Manager Brendan Leary will be working with Lana to maximise proceeds. ■



Checking out the new motorbike are (from left) PlaceMakers paint specialist Donna Jenkins, Watty-Taubmans territory manager Jon Bennett, winner Lana Cox, PlaceMakers Timaru and Twizel owner-operator Brendan Leary and Watty regional manager Steve Price

## PLACEMAKERS APPRENTICE CREW



## APPRENTICE OF THE MONTH

### JULY

**Despite being a first-year apprentice, Wellingtonian Ian Labrador spoke up when he believed something wasn't being done right, helping the crew avoid a costly mistake**

In the middle of a rush to beat a deadline, Ian was faced with the challenge of having to convince a more experienced crew to pause and ensure the task was being done correctly.

What they discovered during the quick observation was that the team had incorrectly fixed a pre-made wall frame with a large window in a firewall. The crew insisted they were correct, as the work was in line with the drawings, but Ian knew it had to be wrong, as it shouldn't have been fixed in a firewall.

To convince them, he said: "If we carry on without checking, and it is wrong, it could be much more costly and difficult to repair later on. Whereas now,

we'll only spend ten minutes double-checking".

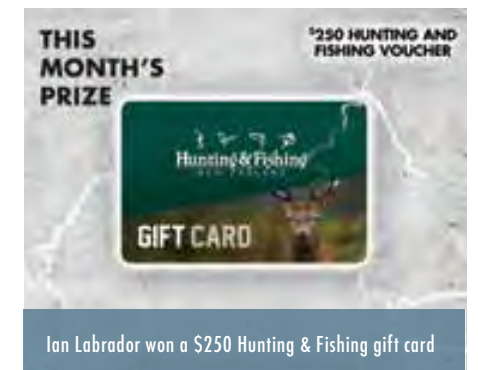
They finally agreed to have the supervisor inspect it, and found out that Ian was correct. The set of drawings had actually been revised but the crew had not been updated.

It took the team half a day longer to start the Ecoply install, but saved them a massive headache down the line, and encouraged Ian to speak up, ask questions, and get answers before carrying on.

"It pays to make sure that your work is being done 100% correctly, otherwise you will have layers of mistakes and more difficult remedial work ahead,"

says Ian.

The judges were impressed by Ian's actions, saying: "He showed initiative and leadership by speaking up when something wasn't right." ■



Ian Labrador won a \$250 Hunting & Fishing gift card

### AUGUST

**A second-year apprentice from Wanaka, Danny Murphy, took to the challenge of managing his first full home build by studying the plans and paying careful attention**

When his boss approached him with the challenge and asked for frames and trusses to be ready for inspection within two weeks, Danny dug his face into the building plans – even smokes couldn't pry him away from the details.

Carefully following the correct processes he had learnt during his apprenticeship, Danny executed the job to perfection.

After hours of work alongside his colleague Jeremy, and plenty of double-checking, they achieved a 100% pass rate from the building inspector.

The few minutes he spent each evening studying plans and writing a step-by-step list to prepare for the next day could be seen in the attention to detail and craftsmanship.

Danny was quick to give credit to the invaluable knowledge he gained from the builders around him since beginning his apprenticeship.

"This whole experience has taught me to use all the skills I've been taught, and to pay close attention to the fixing plans provided to me," he says.

"Communication with sub-contractors and ensuring a smooth workflow for the



Danny Murphy won Skullcandy Hesh 3 Wireless over-ear headphones

next guys coming in was a big part of the process too, and involved regular catch-ups with the project manager." ■



A PREFAB FUTURE?

Builders' Business is a column by builders for builders. Its objective is to provide a forum, particularly for small business operators, in which to share knowledge, experience, tips and ideas

Q: What do you think about prefab construction as a solution to New Zealand's housing shortage?

**Firm:** Bailey's Builders  
**Principal:** Roy Bailey  
**Location:** Wanaka  
**Staff:** 7

I don't think there's one answer to New Zealand's housing shortage or the cost of housing – that's probably above my pay-scale! – but I could see it speeding up the build process in some instances.

However, we tend to deal with more of the higher end stuff, so we're not really going for the bulk, 'punch-out-a-hole' approach with one hundred things looking the same.

Most of the homes we build are in Central Otago, so we're looking for high insulation value in our buildings, and the whole 'build a lot of homes quickly' train of thought doesn't work well with that.

I do believe there's a place for it – we're definitely starting to see structural insulated panels (SIPs) used more frequently and I don't think it's a bad thing, as it obviously works well in the right circumstances.

**Firm:** Form Builders Ltd  
**Principal:** Matt Stevenson  
**Location:** Christchurch  
**Staff:** 13

I feel that it is a good energy-efficient solution to your standard-type homes, rather than your bespoke homes, but I don't know that I'd say that it's a solution to the housing shortage.

When you are dealing with houses that feature a modular design, I can definitely see the enormous benefits of pre-fabrication. It is when you move into the more architecturally designed homes that elements like SIPs begin to lose their economy and the benefits are mitigated.

In certain parts of New Zealand, for instance the lower portion of the South Island, if we're thinking about building energy-efficient homes and keeping them to a limited design, pre-fabricated buildings need to offer more benefits and be more economically viable.

That being said, I think it will become a thing of the future, and we will see it progressively become more common as we head further into advanced technology. Even though I haven't worked with pre-fabricated buildings yet, I'd like to start doing some work with it in my own business.

**Firm:** Robêrt Construction  
**Principal:** Hayden Robêrt  
**Location:** Wellington  
**Staff:** 2

I was building for several years in Christchurch, and now Wellington, and haven't come across too many people who are keen on prefab. In Christchurch, several homes I worked on specified a wall panel prefab system, so I used it then, but no one in Wellington has requested it. Most people in Wellington I've worked for want bespoke homes that suit the style of the neighbourhood they're in, and prefab doesn't tend to work well.

Then again, some might say I'm a bit old-school, as I also build my own frames. I find it's more cost effective, because I can alter it as required and make it suit exactly what I'm building.

I don't know if prefab is the solution to the housing shortage, but it does seem like a cost-effective and speedy option for some places, if a large number of similarly spec'd homes are being built.

However, I think it's just as, if not more, important to continue recruiting good people into building, and be able to provide the support they need to learn the right skills. I don't think there will ever be a time when everyone is happy to have a prefab house.

NOW HAVE YOUR SAY...

WHAT DO YOU THINK OF THE NEW 'MANA IN MAHI' PROGRAMME THAT WILL HELP FUND EMPLOYERS TO TRAIN UNEMPLOYED YOUTH?

ANSWER THIS QUESTION TO ENTER OUR QUARTERLY PRIZE DRAW

Email your answer with your full name, contact phone number, company name, number of full-time staff and the city or town in which you're based to [editor@pmundersconstruction.co.nz](mailto:editor@pmundersconstruction.co.nz). All responses must be submitted by 25/10/2018. The answers to this question will be published in Under Construction December/January 2018/19.



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MBIE

CONCRETE FOUNDATION WALL REINFORCING

Reinforcing concrete foundation walls may not be the most challenging part of a build, but it can often be a sticking point at inspection time. This article provides some tips to get it right, first time

NZS 3604:2011 *Timber-framed buildings* describes reinforcing for in-situ concrete and concrete masonry foundation walls with a piled foundation system supporting lightweight timber-framed construction (refer to paragraph 6.11.7 and Figures 6.13, 6.14 and 6.15 of the Standard). Reinforcing generally consists of 12mm diameter deformed (D12) bars. The

- use of deformed bars, which have an irregular surface, creates a good bond between the reinforcing and the concrete. They are installed both horizontally and vertically at certain spacings depending on:
- The height of the wall.
  - Whether the wall is in-situ concrete or concrete masonry.

- Whether the wall is to support one or two-storey construction.
  - Whether the wall is cantilevered or not.
- The details for reinforcing in-situ concrete and concrete masonry foundation walls are summarised in Table 1 and shown in Figures 1 and 2.

Table 1: Reinforcing for foundation walls

Type of foundation wall		Reinforcing		
		Footing	Horizontal	Vertical
In-situ concrete	One-storey (not cantilevered)	1/D12*	D12 @ 600mm centres	D12 @ 450mm centres for walls > 1m high
	Two-storey (not cantilevered)	2/D12	D12 @ 500mm centres	D12 @ 450mm centres for walls > 1m high
	Cantilevered (one or two-storey)	D12 @ 400mm centres both ways (see Fig. 4)	D12 @ 400mm	D12 @ 400mm centres max
Concrete masonry	One-storey (not cantilevered)	1/D12*	D12 @ 800mm centres	D12 @ mid height for walls > 1m high and D12 @ top
	Two-storey (not cantilevered)	2/D12	D12 @ 800mm centres	D12 @ mid height for walls > 1m high and D12 @ top
	Cantilevered	D12 @ 400mm centres both ways (see Fig. 4)	D12 @ 400mm centres	D12 in bond beams @ 800mm centres maximum and D12 @ top

Figure 1:

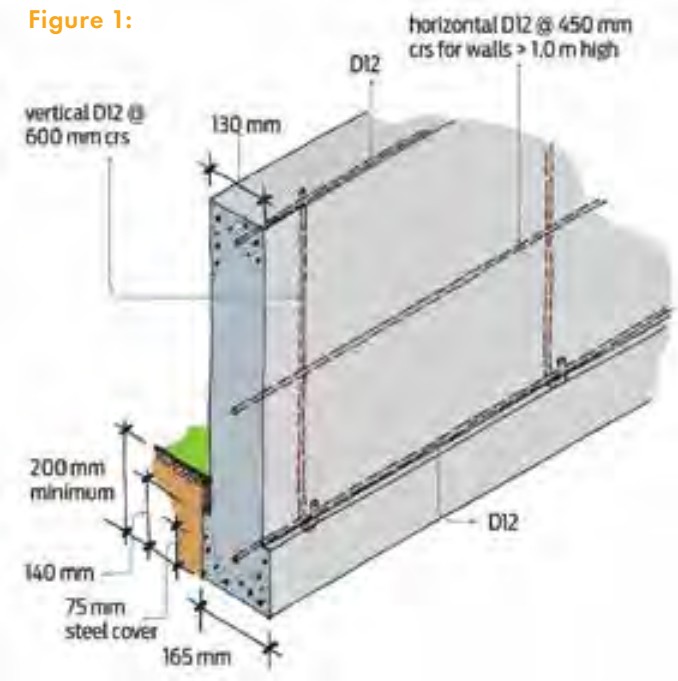
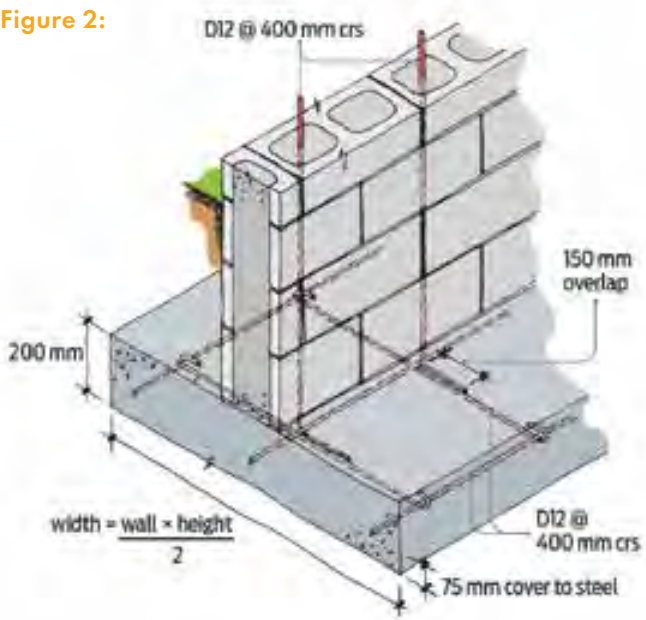


Figure 2:



REINFORCING FOR FOUNDATION WALLS COMBINED WITH CONCRETE SLAB-ON-GROUND FLOORS

NZS 3604 contains examples of reinforcing for foundation walls combined with concrete slab-on-ground floors supporting light-weight construction (refer Figures 7.13(B), 7.14(B) and 7.14(C)). The Standard also contains examples of the reinforcing if the combined

foundation/concrete slab-on-ground floor also supports masonry veneer cladding (refer Figures 7.15(B), 7.16(B) and 7.16(C)). The details for reinforcing combined footing/concrete floor slabs are summarised in Table 2 and shown in Figures 3 and 4.

Note that B1/AS1 Amendment 11 removed the untied slab/footing details in Figures 7.13(A), 7.14(A), 7.15(A) and 7.16(A) of the Acceptable Solution. All concrete slab-on-ground floors must now be reinforced and the slab reinforcing tied into the foundation wall reinforcing.

Figure 3:

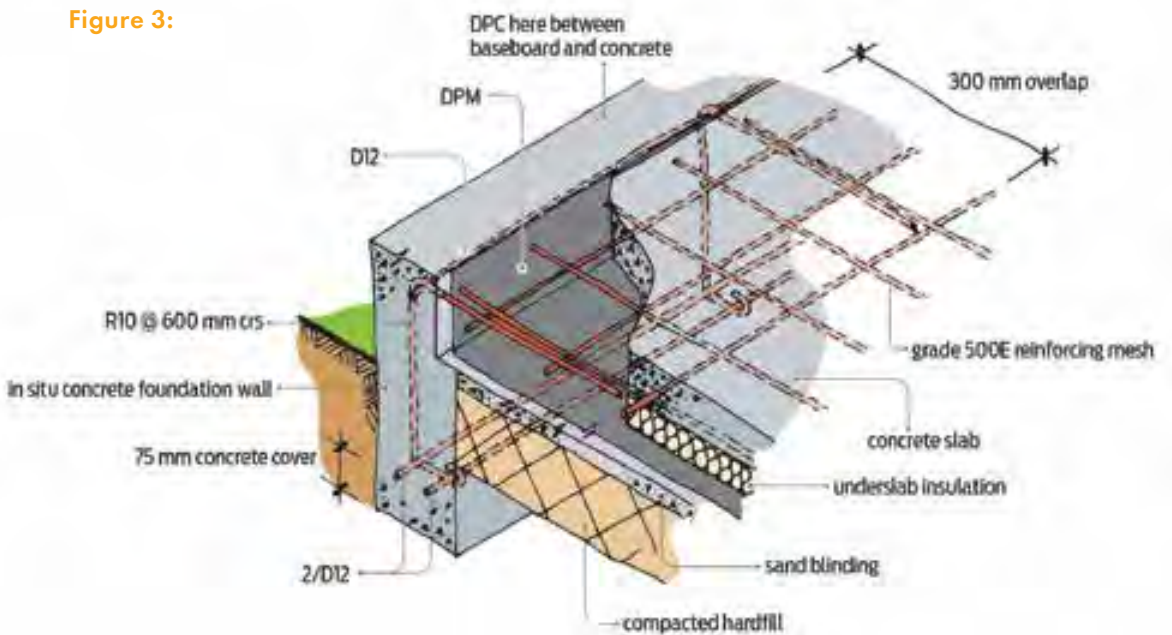


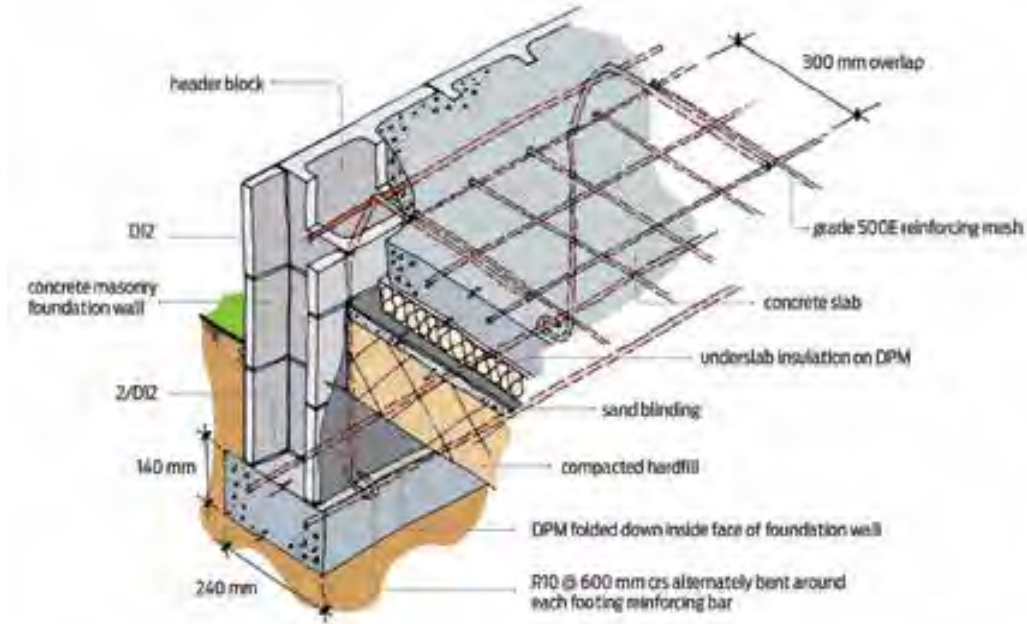




Table 2: Reinforcing for combined foundation/concrete floor slab

Foundation edge detail	Reinforcing			
	Footing (base of foundation wall)	Horizontal (top of foundation wall)	Vertical	Lap (slab mesh and footing reinforcing)
In-situ concrete (one or two storeys)	2 D12	1 D12 (top)	R10 @ 600mm centres	300mm
In-situ concrete (one or two storeys supporting masonry veneer)	2 D12 (placed horizontally)	1 D12 (top)	R10 @ 600mm centres	400mm
Concrete masonry (one or two storeys supporting lightweight cladding)	2 D12 (placed horizontally or vertically)	1 D12 (top)	R10 @ 600mm centres (hooked around horizontal reinforcing in footing in alternating directions – see Fig 4)	300mm
Concrete masonry (one or two storeys supporting masonry veneer)	2 D12 (placed horizontally)	1 D12 (top)	R10 @ 600mm centres (hooked around horizontal reinforcing in footing in alternating directions – see Figure 4)	400mm

Figure 4:



LAPS AND CHANGES IN DIRECTION

Where horizontal reinforcing bars change direction, and in other situations where they must be lapped, the overlaps must be a minimum of 500mm. At corners, the laps must be at least 500mm in each direction as shown in NZS 3604: Figure 6.15(a).

Lapped reinforcing should be tied with 1.6mm black annealed steel wire, which is soft and easily bent, at each end of the lap and at regular spacings in between.

LINKING HORIZONTAL REINFORCING BARS

Where pairs of horizontal reinforcing bars are required in the footings of combined foundation wall/concrete slab-on-ground floors, they must be linked by stirrups. The stirrups are formed from the R10 reinforcing bars installed at 400mm centres and tied with steel wire ties at the junctions of the reinforcing and the stirrups (see Figure 4).

The bends in the reinforcing that form a hook or create a right angle must be at least five times the diameter of the

bar, eg, the minimum bend diameter for 12mm diameter deformed reinforcing is 60mm.

OTHER REINFORCING REQUIREMENTS

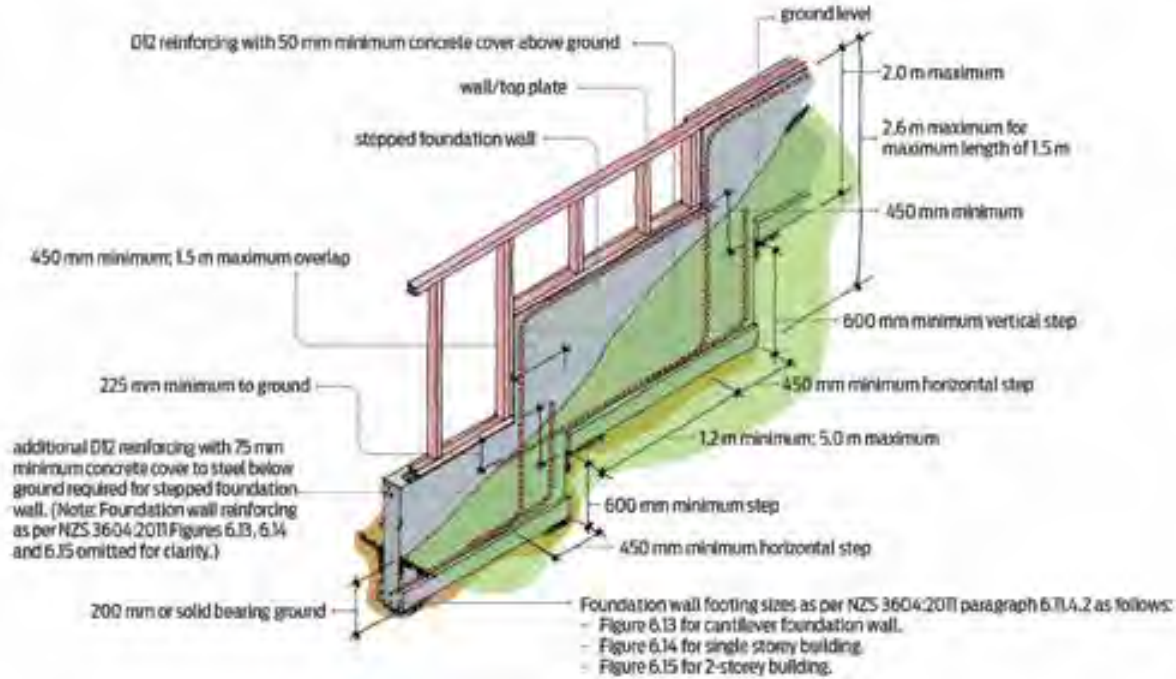
Other reinforcing requirements for foundation walls and footings include:

- Stepped footings – these must have additional reinforcing in accordance with NZS 3604: Figure 6.12 (see Figure 5).
- Where concrete or concrete

masonry is against ground, reinforcing must have a minimum concrete cover of 75mm.

- Openings in foundation walls larger than 300mm in any direction must have one D12 trimming bar on each side of the opening. These bars must extend at least 600mm past each corner of the opening. Where a lintel is less than 650mm deep, the jamb trimming bars must be bent over 60mm from the top of the concrete. ■

Figure 5:



Further information on the Amendment Act and retentions is available on the MBIE website [www.business.govt.nz](http://www.business.govt.nz)

CODEWORDS QUIZ ISSUE 85



- 1 The reinforcing for concrete and concrete masonry foundation walls is generally:

  - a) 8mm in diameter.
  - b) 10mm in diameter.
  - c) 12mm in diameter.
  - d) 16mm in diameter.
- 2 Deformed bars are used because they:

  - a) Slip more easily through the concrete.
  - b) Form a good bond with the concrete.
- 3 Laps to horizontal reinforcing must be at least:

  - a) 300mm
  - b) 500mm
  - c) 700mm
  - d) 1000mm
- 4 The minimum bend diameter of 10mm reinforcing is:

  - a) 50mm.
  - b) 55mm.
  - c) 60mm.

NB: The questions and answers in this section have been produced by the publisher and do not necessarily reflect views or opinions of the contributing organisation.



LBP HANDBOOK HAS IT ALL



The recently refreshed LBP handbook is a valuable resource for all current and aspiring LBPs

MBIE recently refreshed its LBP handbook, previously known as ‘Understanding the Regulatory Environment’.

The handbook is primarily a resource for building practitioners during the LBP application process, to help them understand the regulatory environment LBPs operate in. However, it is a valuable tool for all LBPs as it provides an easy-to-understand update on the wider building and construction system.

WHAT THE HANDBOOK COVERS

Part one sets out general information about the LBP scheme. This section outlines the definitions of restricted building work and supervision. It also provides information about the minimum standard of licensing, LBP licence classes, skills maintenance and working within your competence.

Part two looks at the roles and responsibilities of LBPs, home owners, registered and non-registered trades, and building consent authorities. This is worth checking out if you engage with clients and other practitioners.

Part three outlines the contractual relationship between contractors and clients. It includes information about obligations: eg, a contractor must provide a residential client with a written contract and other documentation if the project will cost \$30,000 or more (including GST), or if a client requests one.

Part four sets out rights and responsibilities under the Health and Safety at Work Act 2015.

Part five outlines the building regulatory framework including relevant information under the Building Act 2004, the NZ Building Code and relevant building standards.

Part six describes the building and resource consent process, including applying for a building consent and/or variation of a building consent, inspections, obtaining a code compliance certificate and the penalties for building without a consent where one was required. This section will be useful if you regularly advise clients about the consent process.

HOW THE HANDBOOK CAN HELP YOU

The handbook can provide anyone with a great summary of the building system and how their role fits in. It includes self-assessment questions that summarise content and allow you to test your knowledge. Rules do change over time and it is your responsibility to keep up to date with those changes. The handbook can help you meet your responsibilities.

HOW YOU CAN ACCESS THE HANDBOOK AND OTHER IMPORTANT INFORMATION

You can find and download the handbook on the LBP website (www.lbp.govt.nz).

The handbook provides guidance on understanding your obligations, and you can also keep up to date by subscribing to LBP Updates on the LBP website. You can get the latest versions of technical documents and guidance and subscribe to the Codewords e-newsletter on the Building Performance website (www.building.govt.nz).

INDUSTRY FEATURE

MBIE SUSPENDS SIX ACP CODEMARK CERTIFICATES

Aluminium composite panel (ACP) use needs to be considered on a case-by-case basis according to Acting Building System Assurance Manager

Following a number of high-profile fires involving combustible, polyethylene core aluminium composite panels (ACPs) as external cladding, the use of the ACP became the subject of a number of avenues of inquiry, both in New Zealand and internationally. Following the New Zealand inquiry, MBIE decided to cancel six ACP Codemark certificates due to a lack of documentation.

LINES OF DEFENCE

New Zealand’s performance-based Building Code provides multiple lines of fire defence. A multi-storey building constructed in New Zealand would have active fire protection (for example smoke detection, a building wide alarm, system and an automatic sprinkler system), passive fire protection (solid fire-rated construction), and an all-out evacuation plan.

Changes have been made to the NZ Building Code Acceptable Solution for Protection from Fire to restrict the use of combustible cladding on buildings above three storeys.

Metropolitan councils provided information on ACP use in New Zealand, and MBIE is satisfied there is no systemic issue of ACP use in high-rise buildings in New Zealand. No significant concerns about ACP and building safety have been raised by councils to date.

“MBIE commissioned an audit and peer review of CodeMark certificates attached to ACP products. This work was not intended to identify specific safety concerns with ACP cladding, rather to identify if there was sufficient documentation with ACP CodeMark certificates,” says Acting Building System Assurance Manager Paul Hobbs.

“The expert advice found there was insufficient documentation to support six CodeMark certificates, and manufacturers have been unable to satisfy the evidence-based requirements outlined by MBIE to support claims made in the CodeMark certificates.”

Changes have been made to the NZ Building Code Acceptable Solution for Protection from Fire to restrict the use of combustible cladding on buildings above three storeys

Under Section 271 of the Building Act 2004, MBIE has suspended the following CodeMark certificates:

- CMA-CM40035 Alucobond Cladding Systems
- CMA-CM40075-I01-R01 Alpolc FR ACM Panel Cladding
- CMA-CM40100 Larson FR
- CMA-CM40094 Symonite (Alubond) Cladding Systems
- CMA-CM40111-I02-R03 Symonite Cladding Systems (Reynobond FR)
- CMA-CM40193-I01-R01 Vitrabond FR Cladding System

Manufacturers now have the opportunity to rectify issues identified with their CodeMarks, which are suspended indefinitely. If these issues are not rectified, MBIE may revoke the

CodeMark certificates.

“Throughout this process, MBIE’s focus has been to ensure the safety and code compliance of ACP panels, while running a fair and legally sound process.

“This process has not unearthed evidence that these products are dangerous, only that their use needs to be considered on a case-by-case basis by building consent authorities (BCAs) when considering a building consent,” Mr Hobbs says.

Building owners with concerns about cladding should contact their local council, and tenants should contact their landlord in the first instance.

ABOUT CODEMARK

CodeMark is a voluntary product certification scheme that provides an easily-understood and robust way to show a building product meets the requirements of the New Zealand Building Code. A product can be a building or construction method, building design or a building material.

CodeMark is suitable for any building product but is particularly beneficial to manufacturers and suppliers of products that are innovative, new to the market or would have serious consequences if they failed.

CodeMark is an unchallengeable form of product assurance. Building consent authorities (BCAs) must accept a product certificate as evidence of compliance with the Building Code – that is, as long as the product is used in accordance with the use and limitations defined on the certificate.

CODEWORDS QUIZ ISSUE 85



- 5 Who will benefit from reading this handbook?
- a) Licensed building practitioners.
  - b) New LBP applicants.
  - c) Homeowners.
  - d) All of the above.

- 6 This handbook will tell you how to comply with the Health and Safety at Work Act 2015?
- a) True, it will give you a step by step guide to on-site compliance.
  - b) False, it will only give you information about your rights and responsibilities.

- 7 You would only need to read this handbook when you are applying for an LBP licence?
- a) True, once you get your licence, the learning stops!
  - b) False, it will be useful anytime you need a refresher.

- 8 Can you find information in this handbook about building consent authorities’ responsibilities during the construction process?
- a) Yes.
  - b) No.

NB: The questions and answers in this section have been produced by the publisher and do not necessarily reflect views or opinions of the contributing organisation.



# INDUSTRY FEATURE

## BCITO INTRODUCES 'MICRO-CREDENTIALS'



As well as encouraging people to get their foot in the door, the qualifications also seek to incentivise specialist firms to train staff

**As forecasts for construction over the next five years stress the increasing need for skilled tradesman, BCITO's 'Micro-Credentials' offer a way of providing specialised training to meet such demands**

**B**CITO has recently announced – alongside the government – the recognition of micro-credentials under New Zealand's education and training system.

Micro-credentials, or 'Managed Traineeships' as BCITO calls them, are recognised specialist training qualifications that reflect the segmentation of the construction industry.

BCITO chief executive officer, Warwick Quinn, points to the fact that, if you look at any contemporary new construction environment, a different person is often responsible for each part of the build process.

"What we've noticed over the past 25 years is that construction has become more specialised. In new construction especially, the builder plays a significant coordination role

whereas, in the old days, the builder did the lot," said Quinn.

He said that even the traditional role of a carpenter has been influenced by specialisation.

"Now their work is often split into someone specialising in certain aspects. The supply and install model is common, e.g. supplying and installing windows or wall linings. Micro-credentials provide a way of recognising the unique skill sets this segmentation triggers and allows trainees to specialise in their area of practice.

"If you're a school kid with few qualifications, the thought of going into a four year programme may be daunting. However, completing a micro-credential may be an alternative option that encourages more into construction than we might otherwise have had.

As well as encouraging people to get their foot in the door, the qualifications also seek to incentivise specialist firms to train staff. Previously, only firms who were able to offer the full scope of work required of a full apprenticeship could provide training that resulted in a qualification.



**What we've noticed over the past 25 years is that construction has become more specialised. In new construction especially, the builder plays a significant coordination role whereas, in the old days, the builder did the lot**

- BCITO chief executive officer  
Warwick Quinn

CONTINUED >

"A company can now train towards a recognised qualification actually aligned to what they do, when a full qualification was not relevant to them," Quinn said.

"This way, you can recognise specialist skillsets that are valued by the market and valued by the employer."

Quinn acknowledges that some are concerned that micro-credentials could cannibalise the numbers of traditional apprentices, by people opting for

them instead of a full apprenticeship, however he is confident each have their own place in the market.

"The employer will determine what he/she wants and what is best for his/her business. The firm that needs the fully rounded apprentice can carry on. However, the firm that has no need for such a qualification, and indeed cannot offer the scope of work anyway, can now have their specialisation recognised. The market self-regulates."

Quinn believes fully qualified apprentices will continue to be in demand, but that it is an appropriate time to facilitate and appreciate more specialised skillsets.

"Some do the lot, some do bits, but they're each valuable in their own right. The market has moved on, the world is different now to what it was 25 years ago and we need to recognise that. Micro-credentials were brought in as a way of doing that." ■

## CONSENTS SOFTEN AGAIN IN JULY

### Growth in consents for apartments and townhouses continues

**A** total of 2,752 new dwellings were consented in July, which represented a seasonally adjusted fall of 10%, following a 7.6% fall in June and a 6.7% rise in May.

The figure included 1,731 stand-alone houses, 347 apartments, 139 retirement village units and 535 townhouses or similar.

"The number of new homes consented can be quite volatile on a monthly basis, particularly as the number of apartments consented tends to fluctuate a lot," said Stats NZ construction indicators manager Melissa McKenzie.

"Looking at the longer-term picture, we are seeing growth in building consents for apartments and townhouses, while consents for stand-alone houses have been quite flat over the past two years."

For the year ended July, 32,850 new dwellings were consented – an 8% increase on the July 2017 year.

The annual increase reflected more consents for apartments; townhouses, flats, and units; and retirement village units (up 29% for the three groups to a total of 11,843). The number of stand-alone houses consented fell 1% to 21,007, with Auckland accounting

for 39% of all new homes consented in New Zealand during that period (with 12,845 new homes consented in the region).

### IN THE REGIONS

Five out of the 16 regions consented more new dwellings in July 2018 compared to July 2017, led by Auckland (up 476 to 1250; +61%) and Manawatu-Whanganui (99 new dwellings), West Coast (9 new dwellings) and Southland (33 new dwellings), which were all up 50%.

Hawke's Bay (up 9 to 55; +19%) was the only other region to consent more new dwellings month-on-month.

Nelson (down 17 to 11; -61%), Bay of Plenty (down 132 to 128; -50%), Canterbury (down 234 to 309; -43%) and Marlborough (down 9 to 13; -41%) recorded the biggest decreases. Northland, Waikato, Gisborne, Taranaki, Wellington, Tasman and Otago were the other regions to consent fewer dwellings in June 2018 compared to June 2017. ■



Five out of the 16 regions consented more new dwellings in July 2018 compared to July 2017, led by Auckland. Growth in consents for apartments and townhouses continue to grow



# INDUSTRY FEATURE

## UNLICENSED BUILDER CHARGED BY CCC

**An unlicensed builder who faked building consents while taking money from a Christchurch couple has been prosecuted by Christchurch City Council. The builder pocketed close to \$1,500 in documentation fees from the couple after lying about obtaining Building Consent**

**T**ravis Jansen, who ran Old School Builders Ltd, faces 11 months' home detention after pleading guilty to four charges.

After employing Mr. Jansen to renovate their kitchen, remove an internal wall and install a beam into the roof of their house, the owners were told that the council was "a pain to deal with", the court heard.

To assure the owners that the job would be undertaken correctly, Mr. Jansen lied, saying he had a friend in the council who could help get necessary consents processed quickly. He then charged them \$1,436 after acquiring fake consent documents printed on a Christchurch City Council letterhead.

The invoice was paid in full by the couple despite no building consent ever being applied for or approved. A follow-up invoice totalling \$15,000 was also paid to cover building work.

In June 2017, Mr. Jansen told the owners that a council inspector had come to the site and had approved the work. However, the couple identified problems with the plasterboard and asked that the work be redone.

After receiving no response from Mr. Jansen, one of the owners organised for her father to complete the work. She then asked for an itemised list of materials and labour from Mr. Jansen to seek a refund for the work her father would have to finish.

**// Travis Jansen received home detention for using forged documents for financial gain and was convicted for carrying out Restricted Building Work when he was not licensed and doing work without a building consent**

The owner received the list, but was told they owed a further \$3,239. Mr. Jansen then emailed through a Code Compliance Certificate that was forged and not issued by the council.

Judge David Ruth ordered home detention for using forged documents for financial gain. He also convicted Mr. Jansen for carrying out Restricted Building Work when he was not licensed, and doing work without

a building consent.

LBP Registrar Paul Hobbs says this serves as a reminder to homeowners and builders that practitioners need to be licensed to carry out Restricted Building Work.

"Compliance with regulations is really important for practitioners in the industry. If a builder wants to carry out restricted building work they must be a licensed building practitioner or supervised by one," says Mr Hobbs.

"We encourage anyone engaging or employing a building practitioner for Restricted Building Work to check that they are appropriately licensed on the public register. Practitioners need to be aware that they must hold a licence or be supervised by an LBP to carry out restricted building work and they should know when building consents are needed for work they are going to undertake."

Unlike LBPs, who are investigated and prosecuted by the Building Practitioners Board, non-LBPs are prosecuted by territorial authorities or, if the TA is unable or unwilling, by MBIE. ■



Travis Jansen of Old School Builders Ltd now faces home detention after forging multiple consents and fabricating costs while working for a Christchurch couple

## CONSTRUCTION SALARIES RANGE ACROSS THE COUNTRY



Company size and location are the biggest factors impacting salaries in construction around the country

**Findings in the 2018 Hays Construction and NZIOB Salary Guide reveal that while the national trend is on the rise, salaries are being affected by company size and location more than they have been in the past three years**

**N**ew Zealand Institute of Building (NZIOB) CEO Malcolm Fleming points to "many nuances in play" behind the general trend of wage increases across the country.

"The Hays Construction and NZIOB Salary Guide provides a benchmark for the industry and serves as a barometer of demand for specific roles, within certain regions and sectors of the market," writes Fleming in his introduction to the report. "Some roles within certain sized companies or regions [are] reporting decreases. Some of these decreases are significant."

Jason Walker, Managing Director of Hays New Zealand, identifies "the unique challenges each location faces" as a determining factor in salary levels. These challenges include the slowdown in Canterbury, increased activity in Wellington and Auckland's ongoing population growth.

"Simply put, it's a matter of supply and demand," he says. "With slowing rebuild momentum in Canterbury, demolition work in Wellington, private and public investment in major development projects in Auckland, and many locations across the country

facing infrastructure challenges resulting from population growth, the demand for skills is location specific."

"Remuneration has increased in regions that have been targeted by the government for substantial construction spend, such as Northland, as opposed to regions such as Otago, where remuneration has reduced across the board," adds Fleming.

### KEY FINDINGS

Construction roles in Auckland remain among the highest rewarded in the country (reflected by base salary only), but if you're an apprentice, you can earn the most in Waikato or Wellington (\$55,000, as opposed to \$50,000).

Similarly, wages for a Leading Hand or Foreperson are pretty uniform across the country, ranging from \$60,000-\$65,000.

One of the highest base salary ranges is for a Senior Project Manager – from \$150,000 in several locations up to \$180,000 in Tasman.

Conversely, a Tasman Business Development Manager earns, on average, \$45,000 less than their

counterpart in Northland.

### INDUSTRY TRENDS

Entry-level roles are by far the easiest to recruit for, with management roles significantly harder.

Word of mouth is the leading recruitment strategy among construction companies, with 71% saying they use that medium. Recruitment websites, such as Seek and TradeMe and agencies, are the next most used mediums (64%), followed by direct applications (56%), social media (27%), newspaper advertising (17%) and 2% other means.

The management workforce is split between 81% men and 19% women.

More businesses than not employed contract staff in both management (57%) and labour (64%) positions last year, with 44% saying that would remain the same over the next 12 months and 24% saying it would increase.

Most businesses (49%) believe the economic outlook will remain static, while the remainder are split between 26% believing it will weaken and 25% believing the opposite. ■



## WORKING SAFELY WITH ASBESTOS



Only licensed professionals can handle and remove asbestos containing materials, but builders should still take safety measures when working around asbestos

### Worksafe has released a new guide to help manage risks and protect yourself and others from asbestos fibres

Asbestos is a dangerous substance that can lead to fatal diseases, and builders are among the highest at risk. This is because they often work with products that may contain asbestos, such as fibreboard, lino and vinyl flooring, and laminated bench tops in kitchens.

Note: The guide offers advice for builders who work by themselves or have other people working for them. This only provides tips on how to avoid irritating asbestos or working around asbestos. It is important to note that licensed professionals should be the only ones to remove or manage asbestos, as this process must be executed correctly to avoid hazards.

#### IF ASBESTOS IS SUSPECTED

If you uncover or damage asbestos containing materials (ACM):

- Stop work immediately.
  - Keep people away.
  - Minimise the risk of contamination/spreading.
  - Get advice from asbestos experts.
- In the event that asbestos needs to be removed:
- A licensed asbestos remover must remove all friable asbestos (in powder form).
  - For non-friable asbestos (not able to be crumbled) over 10m<sup>2</sup>, a licensed asbestos remover must be contacted to deal with the removal.

#### THE RISK OF ASBESTOS

Breathing in airborne asbestos poses a serious risk to people's health,

causing lung cancer, asbestosis, mesothelioma or other lung diseases.

Symptoms for diseases like those mentioned above can take between 10 to 40 years before they start to appear. This emphasises the need for safe work practices to protect workers from exposure to asbestos fibres now.

#### WHERE IS ASBESTOS LOCATED?

Any building built before January 2000 is likely to contain some form of asbestos. Even some recently constructed buildings may have asbestos or asbestos containing materials (ACM).

It is important to note that asbestos and ACMs are not dangerous if they are in good condition and remain undisturbed to avoid any airborne fibres from being released.

#### BEFORE YOU WORK

##### Commercial or industrial site:

When you begin the planning process and arrive at site, ask if there is an Asbestos Management Plan. If asbestos or ACM is found or is expected to be discovered, the PCBU along with management must prepare an Asbestos Management Plan.

This management plan must tell you the location and condition of any asbestos on site, or where it is expected to be. It must also point out how the identified asbestos should be managed on site.

##### At a residential site:

Ask the homeowner if they are aware of any asbestos in and around the house. If no one is certain, carry out checks so control measures can be put in place if any is encountered.

#### HOW TO WORK SAFELY WITH ASBESTOS

##### Training:

The best way to learn how to identify and safely work around asbestos is to attend asbestos awareness training. Courses are available across New Zealand and usually take a couple of hours.

##### Protection:

It is imperative builders take measures to protect themselves when working near asbestos, no matter how small the job is. If possible, plan the job so that

no asbestos is disturbed, and don't start work until having the right information and training to work safely.

##### Reduce dust:

Keeping ACM damp (but not too wet) prevents dust fibres from circulating.

Before starting a job, you can wet ACM by using a low-pressure water spray such as a hand-held squirt bottle. Maintain the appropriate level of wetness while working to reduce the chances of asbestos becoming airborne.

Do not use a high-pressured hose to wet ACM, as this will irritate the asbestos and increase the risk of breathing it in.

Use dust collection equipment wherever possible, and use plastic sheets to cover your work area.

**The best way to learn how to identify and safely work around asbestos is to attend asbestos awareness training**

##### Restrict power tool use:

WorkSafe recommends that power tools are not used around asbestos, if possible. There are regulations that restrict the use of power tools for asbestos work. Power tools and other equipment may only be used around asbestos if they are used in an enclosed

area or designed to capture/suppress asbestos.

##### Wear the right equipment:

Respiratory protective equipment protects builders from breathing in hazardous substances.

A disposable 'P2' mask is the minimum amount of protection required. It's important to make sure your mask fits correctly and that facial hair isn't creating any gaps that asbestos may breach.

Disposable coveralls also stop asbestos from getting on your clothes. Wearing a pair that is slightly too big helps prevent any rips at the seams.

Footwear should completely cover each foot.

#### GETTING RID OF ASBESTOS WASTE

All asbestos waste must be disposed at an authorised disposal site. Local councils can help find a dump that accepts asbestos waste.

All waste, including disposable protective gear, should be double-bagged in heavy-duty plastic bags and sealed so that contents are fully enclosed. The bags should be clearly marked that they contain asbestos waste.

For more detailed tips and methods about working with asbestos, visit [worksafe.govt.nz/topic-and-industry/asbestos](https://worksafe.govt.nz/topic-and-industry/asbestos). ■

## PROVE YOUR KNOWLEDGE

Tick the correct answers below and record what you've learnt in the record of learning on the back page!

- |  |  |   |
|--|--|---|
| <b>1)</b> What is NOT a requirement of an Asbestos Management Plan?<br><br>a) The location and condition of the asbestos.<br><br>b) How it should be managed.<br><br>c) A list of previous projects where ACM was found. | <b>2)</b> If you uncover or damage any ACM, you should:<br><br>a) Quickly finish the job that you're doing.<br><br>b) Stop work immediately.<br><br>c) Bring everyone over to show them. | <b>3)</b> To reduce airborne asbestos from spreading, you should:<br><br>a) Keep it damp using a low-pressure water spray.<br><br>b) Keep it damp using a high-pressure water spray.<br><br>c) Use a blower to disperse the dust. |
|--|--|---|

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## GET DECKED OUT FOR SUMMER



As summer approaches, many builders are receiving requests to build or replace decks

With summer fast approaching, now is a good time to brush up on your deck building skills, as homeowners prepare for long evenings spent around the BBQ

An Acceptable Solution for deck construction is provided by NZS 3604:2011 Timber-framed buildings. In this article, we'll show you how to design and build an external open-slatted timber deck.

An L-shaped deck addition is proposed for an existing house. It will be 6.3m long in one direction, project 3.0m from the face of the building and have a total area of 21m<sup>2</sup> (see Figure 1). The finished deck level will be 100mm below the floor level of the house.

### GETTING STARTED

The requirements of foundations, subfloor framing, bracing, decking selection, fastenings and fixings can be found

in NZS 3604 section 7.4. The house is in earthquake zone 3 (NZS 3604 Figure 5.4). As there is no subsoil classification, E must be assumed and a multiplication factor of 1.0 (NZS 3604 clause 5.3.3 and Table 5.8) used for bracing calculations.

The section slopes away from the house, starting at approximately 1.0m below floor level adjacent to the house to approximately 2.0m below floor level at the edge of the deck.

Joists are to be cantilevered 900mm beyond the line of the piles and bearer (see Figure 1).

The building owner would like

Figure 1: Proposed deck

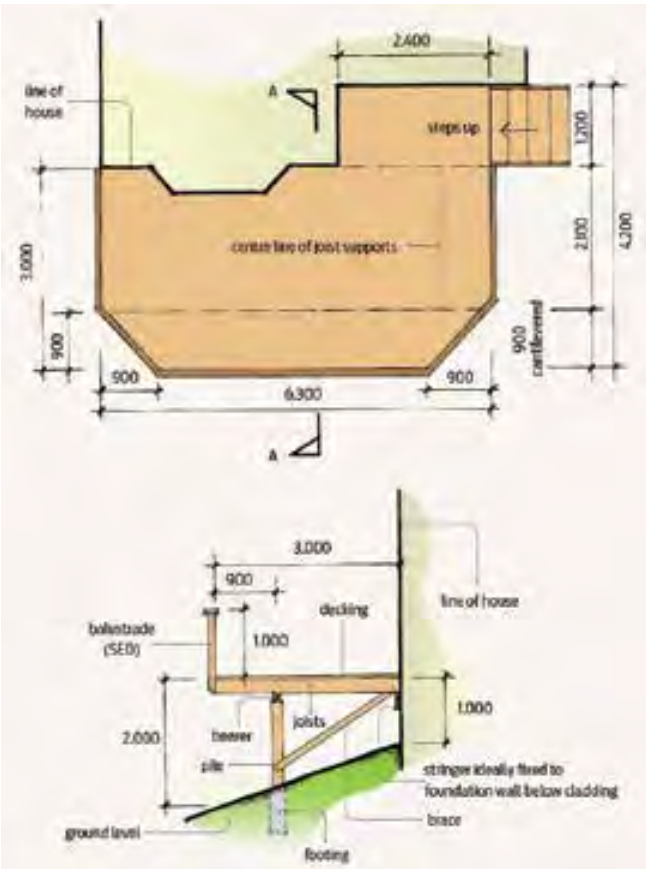


Figure 2: Proposed subfloor framing for the deck



to use a 32mm Kwila decking, so joist spacing may be up to 600mm. However, as the deck is to support a cantilevered balustrade, NZS 3604 clause 7.4.1.3 requires that joists must be at 400 centres maximum and at least 190mm deep.

### STEP 1: SELECT THE TIMBER

New Zealand Building Code clause B2 Durability sets out the durability requirements for building elements and cites NZS 3602:2003 Timber and wood-based products for use in building for timber treatment levels.

Generally, structural elements must have not less than 50-year durability, and stairs, handrails and decking require not less than 15-year durability. All structural fixings must have the same durability as the elements with which they are associated and will need to be stainless steel.

So, from NZS 3602: Table 1:

- Piles must be H5 treated (ground contact).

- All other structural members – ie, bearers, stringer, braces, joists and safety barrier support posts – must be at least H3.2 treated (exposed to the exterior but not in ground contact).

NZS 3604 clause 2.3.2 requires SG8 (structural grade) timber for wet-in-service conditions.

### STEP 2: CALCULATE THE BRACING REQUIREMENT

Using the multiplication factor E for zone 3 = 1.0

$$15 \text{ BU/m}^2 \times 1.0 = 15 \text{ BU/m}^2$$

Paragraph 7.4.2.2 states that decks that project more than 2.0m from the building require subfloor bracing at half the bracing demand required by Table 5.8 for 'light/light/light' cladding, 0° roof pitch and for 'subfloor structures'.

Divide the number of BUs required by two:

$$15 \text{ BU/m}^2 / 2 = 7.5 \text{ BU/m}^2 \text{ are required.}$$

Multiply the number of BU/m<sup>2</sup> by the area of the deck to obtain the total BUs required for the deck:

$$7.5 \text{ BU/m}^2 \times 21\text{m}^2 = 157.5 \text{ BUs in each direction.}$$

Bracing may be provided by anchor, braced and cantilevered piles. NZS 3604 section 6 Brace pile gives the bracing capacity ratings of subfloor bracing elements. Both anchor and braced piles provide 120 BUs per bracing element.

However, as anchor piles may only be 600mm above ground level, and the ground level is 1.0–2.0m below the deck, anchor piles cannot be used.

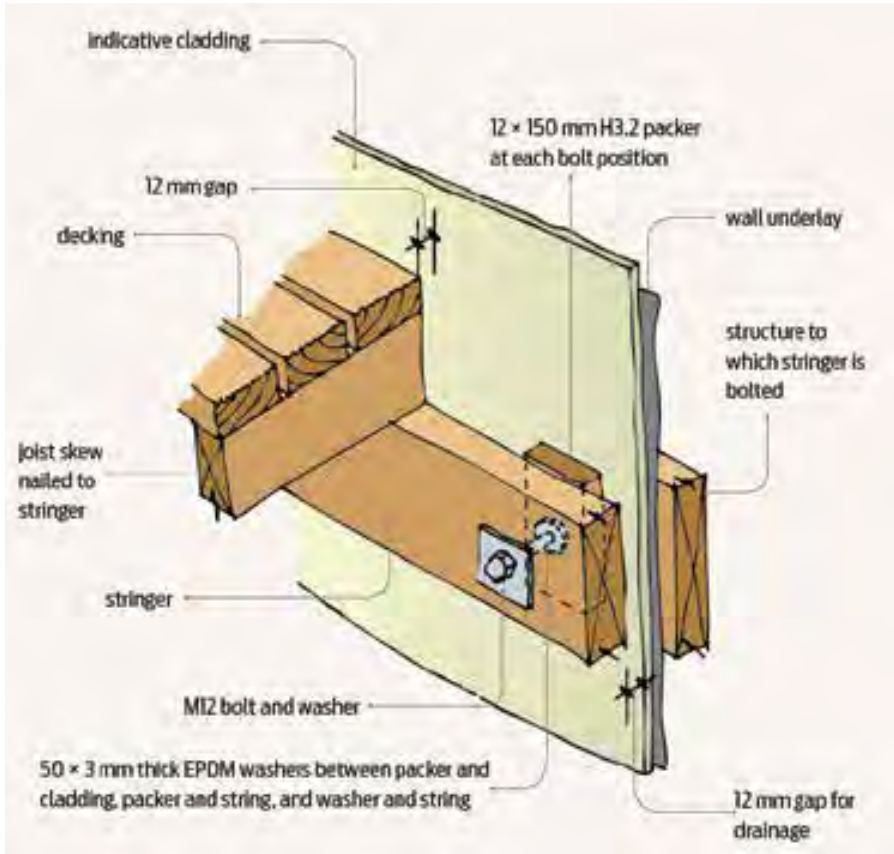
Similarly, cantilevered piles may only extend 1.2m maximum above ground level and in addition provide only 30 BUs per pile, requiring more cantilevered piles to achieve the BUs needed.

Braced pile systems offer the best solution. As they provide 120 BUs for



## GET DECKED OUT FOR SUMMER CONT.

Figure 3: Connection of deck stringer to cladding - direct-fixed



earthquake resistance, two braced pile systems are required in each direction.

Braces will be less than 3.0m long, so the brace size may be 100 x 75mm.

### STEP 3: SELECTING JOISTS

As the line of support (ie, piles and bearer) is 2.1m from the house, according to NZS 3604 Table 7.1(b) (2 kPa floor load and wet in service), 140 x 45mm joists may be used, and Table 7.2 for cantilevered joists allows a cantilever of up to 1150mm.

However, at the bottom of Table 7.2, a note states that 140mm joist depth is insufficient where cantilevered balustrades are to be used (as in this situation).

So, select the next size up: **190 x 45mm joists**. At 400 centres, these may cantilever up to 1600mm.

### STEP 4: SELECTING BEARERS

Select bearers from NZS 3604 Table 6.4(b) (2 kPa floor load and wet in service).

To determine the loaded dimension of the bearers, refer to NZS 3604 Definitions.

From Figure 1.3(G), the loaded dimension = (span 1/2) + span 2 (where span 1 = 2.1m and span 2 = 900mm) = 2.1/2 + 900 = 1.95m

From NZS 3604 Table 6.4(b) (2 kPa floor load and wet in service):

- For maximum bearer span = 1.3

and a loaded dimension of 2.3m, bearer = 140 x 70mm, or

- For maximum bearer span = 1.65 and loaded dimension 2.7m, bearer = 190 x 70mm.

Use 140 x 70mm bearers with supports at 1.3m centres maximum.

### STEP 5: SELECTING STRINGERS

Stringers will be used against the house.

Ideally, stringers should be packed off and fixed to the foundation wall.

Maximum joist span is 2.1m, so from NZS 3604 Table 6.5, the stringer may be either:

140 x 45mm or 190 x 45mm

Both will need bolt fixings at 1600mm centres.

### STEP 6: SELECTING PILES AND FOOTINGS

A combination of ordinary and braced piles must be used. Select 140mm diameter timber piles.

For pile footings, use NZS 3604 Table 6.1.

For ordinary piles:

- Maximum bearer span = 1.3m; maximum joist span = 2.1m.
- Footings – 260mm diameter, 200mm minimum deep (NZS 3604 Figure 6.2).

For braced piles:

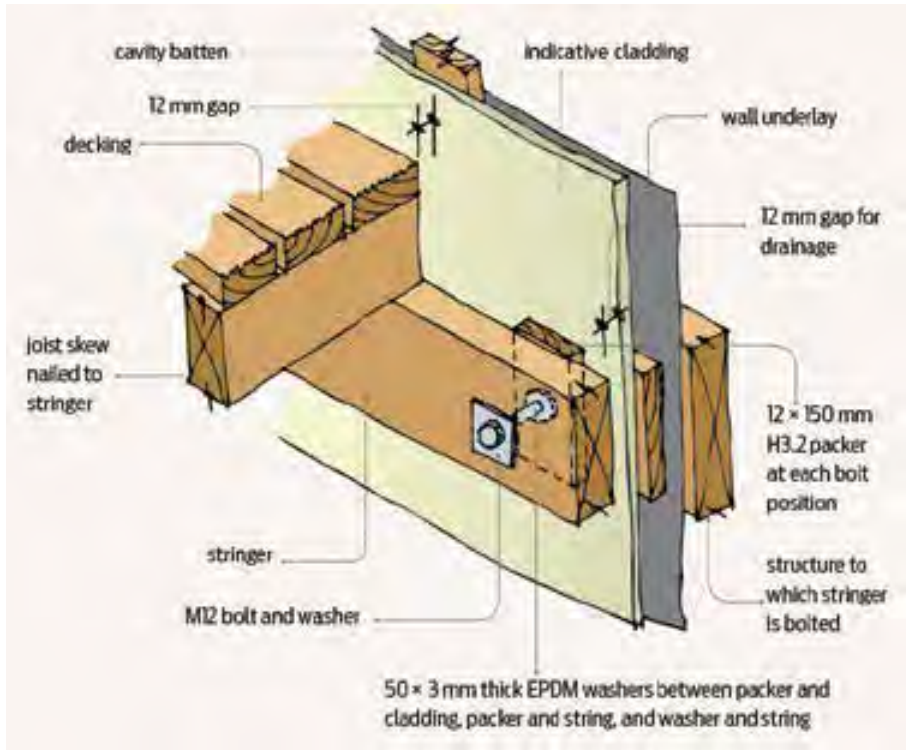
- Two systems in each direction.
- Footings – 400mm diameter, 450mm minimum deep (NZS 3604 clause 6.8.1.1).

### STEP 7: STRING FIXING THROUGH CLADDING

When installing slatted timber decking, leave:

- A 12mm minimum gap between the stringer and the decking.
- A 12mm minimum gap between the cladding and the decking for drainage (E2/AS1 paragraph 7.1.1) – see Figures 3 and 4.
- A 3–6mm gap between decking timbers lengthways (NZS 3604 recommends using a 100 x 3.75mm nail as a spacer) to allow timber movement due to moisture and temperature changes and for water to drain. ■

Figure 4: Connection of deck stringer to cladding - cavity



©BRANZ 'Timber Decks – Build magazine supplement December 2013'

## PROVE YOUR KNOWLEDGE

Tick the correct answers below and record what you've learnt in the record of learning on the back page!

- |  |  |  |
|--|--|--|
| <p>4) What is the minimum gap you must leave between a stringer and slatted timber decking?</p> <p>a) 12mm.</p> <p>b) 18mm.</p> <p>c) 6mm.</p> | <p>5) When are anchor piles appropriate as bracings?</p> <p>a) When the ground level is less than 600mm below the deck.</p> <p>b) When the ground level is more than 600mm below the deck.</p> <p>c) When the deck supports a cantilevered balustrade.</p> | <p>6) What is the required durability of stairs, handrails and decking?</p> <p>a) At least 5 years.</p> <p>b) The lifetime of the deck.</p> <p>c) At least 15 years.</p> |
|--|--|--|

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SITE SAFE

THE LOWDOWN ON SAFETY GEAR



If a worker isn't wearing their safety glasses, it's the PCBU's responsibility to find out why and provide a suitable solution

If you're an employer, it's up to you to ensure your workers have the right personal protective equipment (PPE) for the job, and to provide it for them if they don't

The Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 state that an employer/person conducting a business or an undertaking (PCBU) carrying out work at a workplace must ensure that:

- They or another PCBU has provided workers with the PPE appropriate for the job.
- They ensure, as far as is reasonably practicable, that workers use or wear the PPE provided.

The following example from the guidance illustrates those duties:

"To prevent eye injuries, the PCBU of a welding workshop provided its welders safety glasses to wear under their welding helmets. However, even after being instructed by the PCBU to always wear the safety glasses while welding, one worker regularly removed them.

"As the PCBU must ensure workers wear PPE so far as is reasonably practicable, the PCBU talked to the worker to find out why the worker removed their safety glasses. The worker told the PCBU that it was because wearing the safety glasses over their prescription glasses caused discomfort. The PCBU then worked with the worker to find safety glasses that he could wear without discomfort."

**WHAT YOU NEED TO KNOW**  
The PPE provided by employers must be compatible with any other safety equipment or clothing required for the job, fit correctly and comfortably, and be suitable for the nature of the work.

Employers also have a duty to ensure that workers' PPE is maintained properly and replaced when necessary. Proper training on use and maintenance should also be provided to workers.

On the other side of the equation, workers are responsible for ensuring

they use PPE in line with the information and training given to them by the PCBU

**The PPE provided by employers must be compatible with any other safety equipment or clothing required for the job, fit correctly and comfortably, and be suitable for the nature of the work.**

They also must not intentionally damage safety equipment, and they must tell the PCBU when PPE needs to be cleaned, decontaminated or has been damaged.

**EXCEPTIONS**  
The only exception to the provision to providing workers with PPE is when the worker 'genuinely and voluntarily chooses to provide their own'. In these cases, the PCBU must be satisfied the

gear is appropriate and meets all necessary regulations.

It is important to note that workers may change their minds about this at any time; however, they must give appropriate notice if they wish the PCBU to begin supplying their PPE.

**TIPS**  
Remember that PPE must only be used as a risk control once other methods to eliminate or minimise risks have been considered. Normally PPE is used to support other methods of risk control

**PPE requirements on site will usually be set by the main contractor or project manager**

rather than as a standalone means of protection.

For instance, a dust mask would be worn when cutting cement board on site; however, the primary means of control may be the use of an extractor to remove the dust.

WHAT PPE DO I NEED TO PROVIDE?

The type of PPE you need to provide as an employer/PCBU will depend on the nature of the tasks the workers will be doing and the risks they will be exposed to. In addition, PPE requirements on site will usually be set by the main contractor or project manager. For some guidelines about what is recommended, check out Site Safe's PPE factsheet at [www.sitesafe.org.nz](http://www.sitesafe.org.nz)



The PPE provided by employers must fit correctly and comfortably

Site Safe is a not-for-profit, membership-based organisation that promotes, inspires and supports a culture of health and safety in New Zealand construction.

PROVE YOUR KNOWLEDGE

Tick the correct answers below and record what you've learnt in the record of learning on the back page!

- |  |   |  |
|--|---|--|
| <b>7)</b> The PPE provided by employers must be:<br><br>a) Compatible with other safety equipment or clothing required for the job; fit correctly and comfortably; be replaced every six months.<br><br>b) Compatible with other safety equipment or clothing required for the job; fit correctly and comfortably; be agreed upon with the worker.<br><br>c) Compatible with other safety equipment or clothing required for the job; fit correctly and comfortably; be suitable for the work. | <b>8)</b> What is NOT a PCBU responsibility when it comes to PPE?<br><br>a) Ensure workers have PPE appropriate for the job.<br><br>b) Ensure, as far as is reasonably practicable, that workers use or wear the PPE provided.<br><br>c) Ensure wages can cover the costs of PPE. | <b>9)</b> What responsibilities do workers have regarding PPE?<br><br>a) They must use PPE in line with the information and training given to them by the PCBU.<br><br>b) They must provide their own PPE appropriate for the task they are undertaking.<br><br>c) They don't have any PPE-related responsibilities. |
|--|---|--|

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# THE SUCCESSFUL BUILDER

## FINDING THE BOOT THAT FITS



It's a good idea to ask all candidates to complete a small building task so you can assess the quality of their workmanship

**You don't pour foundations without first knowing what is below the ground, so you probably shouldn't employ a new team member without first checking their suitability**

Finding tradespeople in the midst of a nationally recognised skills shortage is a challenge. When an applicant comes across your radar, you may be tempted to quickly hire them in an attempt to fill a void. However, it is important to take a patient approach to ensure the people you are hiring will suit your workforce and display the type of character that fits your company culture.

This article provides four key safeguards against hasty recruiting.

### 1. FACE-TO-FACE

When interviewing builders, it is usually best to meet them in person, as it helps you get a well-rounded impression. Think of it like buying a used truck online — usually we want to view it first to ensure it's all it's cracked up to be.

Of course, if you're hiring from abroad, you may not have the option of meeting in person. The next best option is a video call, as we learn much more by seeing than by hearing. When you can see somebody it allows you to assess not only what they might say, but all the things they don't say.

Psychology Today says that 55% of communication is via body language, 38% is by the tone of voice, and only 7% is through the actual words spoken. So if you can only hear your candidate, you may only get half the story!

It is also worth taking notice of how your candidate dresses for the interview. It can tell you a lot about their personal pride and respect for others.

### 2. GET EVIDENCE - TEST

You're struggling to find staff, when suddenly you get a hit with a CV in response to your advert. It's well presented and they are a qualified builder with good experience — great! However, don't be blinded by the light. Get your own evidence by testing their skills.

Ask all candidates to complete a small building task/test. This way, you can assess the quality of workmanship and select more carefully. Some builders even travel overseas to test candidates in this way.

### 3. BEHAVIOURAL INTERVIEW QUESTIONS

Asking the right questions is another effective way to recruit the right builder. Past behaviour is a good predictor of future performance. How many times have you heard of someone hiring a builder who looked good on paper, only to find out they were a bad fit for the team and company? They would turn up late to jobs, wouldn't pull their weight, or just didn't get on with the rest of the team.

Asking competency/behaviour-based questions, which look at actions taken in past situations, can help you to assess whether the candidate has the right skills and attitudes for the job.

Here are some examples:

- Tell me about a time when you displayed leadership?
- Give an example of a time when you had to go beyond what was required of you to ensure the customer was satisfied?

- Tell me about a situation when you showed exceptional teamwork?
- Give an example of a time when you had a negative run-in with a teammate. How did you handle it?
- Describe a time when you had to learn a new skill quickly.
- Give an example of a time when you used your initiative to overcome an obstacle.

The best way to find behavioural questions is to look at your job description and identify the key competencies, skills and attitudes necessary for the role.

From here, create two to three questions for each, like the ones above, that will ask the candidate to give examples of when they have displayed the skills you are looking for.

#### Listening:

The key part is to listen for the actions they took. Don't get caught up in the details of the actual situation or the result. It's the behaviours they displayed that will tell you the most. You may need to ask probing questions

**Asking the right questions is another effective way to recruit the right builder. Past behaviour is a good predictor of future performance**

to your candidate to get the information you want.

A simple tool is the 'CAR' technique:

- C** - Context. What was the situation you found yourself in?
- A** - Action. What actions did you take?
- R** - Result. What was the result/outcome?

You may even want to qualify some situations with an additional 'L - Learnings': What did you learn from this situation?

### 4. REFERENCES

You wouldn't buy a car without first looking under the hood and checking the service history. Similarly, you wouldn't hire a builder without first checking with their past employers. References are an integral part of the recruitment process. As a rule of thumb, a minimum of two references should be contacted. Ask for their current employer and most recent employers.

When doing the reference check, listen to the tone of voice as well as what is not said.

Here are some examples of reference questions:

- How would you rate Bob's attention to detail?
- How likely would you be to hire Bob again?
- As a team member, how did he relate to others?
- How would you describe his trustworthiness?
- Was he always punctual?
- What would you say are his top three strengths?
- What would you say are areas for improvement?
- Is there anything else you think we should be aware of?

Finding the right builder for your team does take some effort. However, the benefits of going through a structured interview process far outweigh the risk (and cost) of hiring the wrong person. ■

Graeme Owen, based in Auckland, is a builders' business coach. Since 2006, he has helped builders throughout New Zealand get off the tools, make decent money, and free up time for family, fishing, and enjoying sports. [www.thesuccessfulbuilder.com](http://www.thesuccessfulbuilder.com)

## PROVE YOUR KNOWLEDGE

Tick the correct answers below and record what you've learnt in the record of learning on the back page!

- |  |  |   |
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| <b>10)</b> Who would be the most important reference to hear from to get feedback about the applicant?<br><br>a) A past school teacher.<br>b) Most recent employer.<br>c) Friends or family. | <b>11)</b> What is NOT something to listen for as the applicant answers behavioural questions?<br><br>a) Actions.<br>b) Behaviours.<br>c) Details. | <b>12)</b> What is an important element of meeting an applicant in person?<br><br>a) Body language.<br>b) Words we used.<br>c) Tone of voice. |
|--|--|---|

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REDUCE BAD DEBT RISK



Whatever your payment terms are, it's important that you're quickly aware when a deadline for payment is missed

Ben Rickard, Construction Risk Specialist at Builtin Insurance, shares his views on how to avoid unpaid invoices

The recent collapse of EBERT Construction has brought into the open a well-known problem within the construction industry: margins are often too narrow to provide contractors with a financial buffer to absorb costs if something unexpected happens.

When any business takes on a project, there are risks associated with doing so. That's why limited liability companies were created, to protect shareholders from these risks. It's also why businesses are entitled to make a margin – it's their reward for assuming these risks when taking on a contract. From the principal's perspective, this margin is the cost of transferring their risk to the contractor, within the terms of an agreed contract.

Problems arise when markets become unbalanced (or companies are poorly managed) and too much risk is assumed by contractors without adequate contingency or margin buffer should the project perform poorly.

This is the crux of the argument we're hearing currently: contract terms are weighted too heavily in favour of

the principal when it comes to risk, and contractors are not securing the appropriate margin to reflect the risk they're taking on.

Businesses in all industries face the risk of not getting paid for what they do, so what are the tools and processes you can put in place to limit this risk?

BEFORE YOU START – GOOD PREPARATION

Do you know the annual cost to your business of bad debt? Your first step should be to work this out. Next ask yourself how much can you afford to lose if a contract goes bad? These are key figures that will help you decide how important the following measures are to your business.

1. Check references & reputation

In this industry, you're generally only going to be paid after you've supplied your labour and materials (although in some cases this is changing as suppliers demand deposits before supplying major components). This means it's important to find out if your customer is

a good payer before you agree to work for them. You should consider:

- Asking to see their latest financial statements (good luck getting these though!), so you can assess their financial solvency and ability to pay.
- Asking for references, so you can speak to previous or current suppliers.
- Checking their credit rating using a system like [www.creditworks.co.nz](http://www.creditworks.co.nz) for construction companies or [www.veda.co.nz](http://www.veda.co.nz) for individuals or other businesses.
- Asking other tradespeople about their experiences with the contractor.
- Checking out review sites like [www.builderscrack.co.nz](http://www.builderscrack.co.nz) and [www.nocowboys.co.nz](http://www.nocowboys.co.nz).

If you get a bad vibe, rather than taking the risk, your time may be better spent doing a bit of "sales and marketing" to find better quality work. After all, do you need the work that badly that you're

prepared to work for free if it all goes pear shaped?

2. Have something in writing every time

A contract outlining the work to be done, and payment terms, is a powerful tool if a dispute over payment arises. Just having one in place will help ensure payments are made as agreed, but if legal action needs to be taken the old adage holds true that: "if it's not in writing, it didn't happen". It may feel unnecessary in some situations but it's better to be safe than sorry. Standard sub-contract agreements are available from most trade associations, including the Specialist Trade Contractors Federation ([www.nzstcf.org.nz](http://www.nzstcf.org.nz)).

3. Register with the PPSR

To avoid losing materials and equipment you've supplied if a main contractor goes bust, you should register a security interest in them on the Personal Property & Securities Register (PPSR). This means you'll be at the front of the queue to get your property back. Otherwise, it could be sold by the liquidator or receiver to pay secured creditors. Go to [www.ppsr.govt.nz](http://www.ppsr.govt.nz) for more information and to register.

PAYMENT SECURITY OPTIONS

4. Use a service such as Build Safe

For a fee, Build Safe ([www.buildsafe.co.nz](http://www.buildsafe.co.nz)) will hold the money needed to pay a sub-contractor in its independent trust account. You will need to make this a condition of your quote and/or contract and get your customer to agree. This approach requires the owner/main contractor to transfer funds into Build Safe's trust account in advance of work starting.

5. Take out trade credit insurance

This effectively insures the company's

accounts receivable asset (ie, the money owed to it by customers) against non-payment. So, if the customer becomes insolvent or doesn't pay for a protracted period, the contractor can claim the cost of that bad debt from their trade credit insurer. It is more suited to large projects.

6. Provide a bond instead of retentions

Recent changes to the Construction Contracts Act (CCA) require main contractors to hold your retentions "on trust". This doesn't mean they have to put it into a separate, protected trust account, merely that they must account for it separately rather than using it for working capital. It means if they go bust, you'll have a better chance of getting your retentions back. But it still assumes there's any money left to distribute.

Instead of having cash retentions deducted from your payment claims, you can have an insurance company provide a bond on your behalf. Although you pay a non-refundable premium, this will improve your cash flow and eliminate the risk of losing your money if the main contractor goes bust. Contact Builtin (<https://builtininsurance.co.nz>) for a bond application form. Your principal/main contractor will need to agree to accept a bond in lieu of retentions, but there is no good reason for them not to and objecting to this can be a red flag that they're using your money to fund their own cashflow. A bond in lieu of retentions can easily be added as a special condition to any contract.

DURING THE CONTRACT – GOOD ADMINISTRATION

7. Submit invoices that comply with the Construction Contracts Act

Under the CCA, valid written payment claims must be paid within 20 days of receipt, unless a written alternative

payment schedule is proposed (which could be earlier). If this does not happen, you can immediately start a fast-track adjudication process. The adjudicator can make a decision within a very tight timeframe and the decision is binding on both you and the contractor/owner. It is also enforceable as a court judgment. A number of trade support organisations, including the Building Hub ([www.buildinghub.co.nz](http://www.buildinghub.co.nz)), have developed payment claim templates to help you.

8. Good accounts receivable processes

Whatever your payment terms are, it's important that you're quickly aware when a deadline for payment is missed. Reminder notices should be sent out swiftly and followed up to understand the reasons for non-payment. Missed or late payments are often your first indication that all is not well, and the sooner you investigate this, the sooner you can decide whether to cease work until issues are resolved.

There are many good accounting, business and project management applications that help small and medium-sized trade businesses maintain good credit control. Check out [www.nextminute.com](http://www.nextminute.com) for one example.

IN A NUTSHELL

Despite the best due diligence, the best contract and the best accounts, administration issues will always arise. Our industry is highly fragmented, highly competitive and margins are tight, which means bad debt is a cost of doing business and the risk of not getting paid is ever present. Whether it's related to a dispute or an insolvency, following the above guidance will help you reduce this cost to your business and increase your profit. ■

This article was written by Ben Rickard from Builtin New Zealand Limited. Builtin are New Zealand's Trade Insurance Experts, with policies tailored to meet the needs of building industry professionals. Contact Ben on 0800 BUILTIN, [ben@builtin.co.nz](mailto:ben@builtin.co.nz) or visit their website: [builtininsurance.co.nz](http://builtininsurance.co.nz).



PLACEMAKERS REVS UP FOR BLUE SEPTEMBER



Bikers in Blue support stronger than ever

For the first time since it began, Bikers in Blue took place at five different PlaceMakers stores across NZ. Everyone from local families, PlaceMakers staff, bike enthusiasts, and interested spectators turned up in their hundreds to support men’s health as part of Blue September.

As sponsor of the event, PlaceMakers was delighted to see such strong participation and enthusiasm for the motorcycle rides organised around its stores in Auckland, Waikato, Wellington,

Christchurch, and Invercargill.

Bikers in Blue, which has taken place for the past eight years as a symbol of support for those affected by prostate cancer, has seen continuous growth since its humble beginnings. For one day, bikers ditch their traditional black leathers for wild blue outfits to raise funds that go toward prostate cancer research and to support those living with the disease.

The rides started and finished at

PlaceMakers stores in neighbouring areas, with barbeques, raffles and other fundraising activities held at either end to contribute to the cause.

As part of the event, PlaceMakers funded free blood tests for prostate cancer at each of the Bikers in Blue locations. Research shows that by encouraging testing and making it more accessible, the chances of identifying the disease early is higher, and can prevent it from developing into a more serious threat. ■

PROVE YOUR KNOWLEDGE

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