ISSUE 56

UNDER CONSTRUCTION

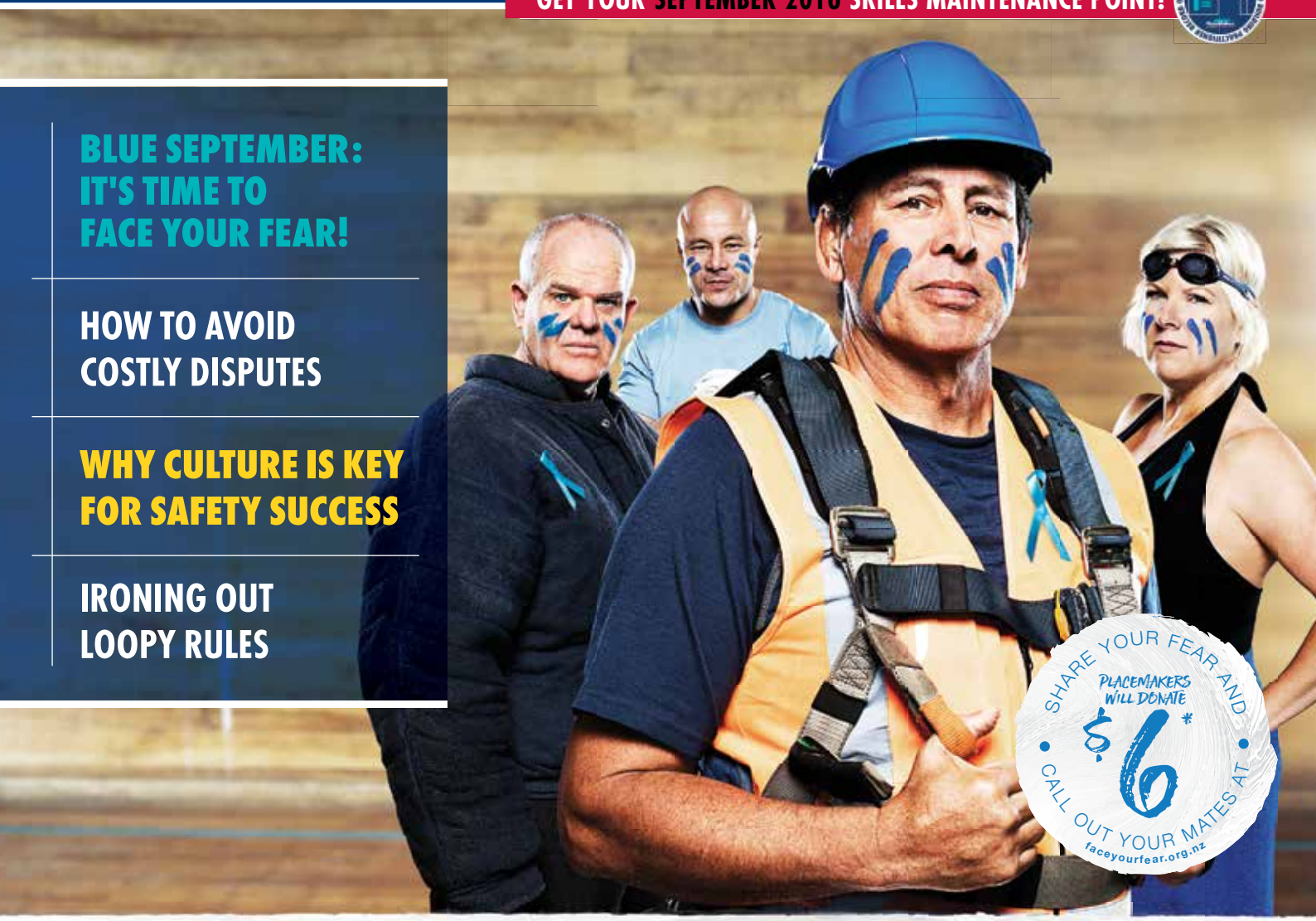
GET YOUR SEPTEMBER 2016 SKILLS MAINTENANCE POINT!

BLUE SEPTEMBER: IT'S TIME TO FACE YOUR FEAR!

HOW TO AVOID COSTLY DISPUTES

WHY CULTURE IS KEY FOR SAFETY SUCCESS

IRONING OUT LOOPY RULES



FACE YOUR FEAR FOR BLUE SEPTEMBER

We've all got fears. But a prostate check shouldn't be one of them. So this month for Blue September, we want you to face your fear and call out your mates. Buck did. Watch him and this lot front up at **faceyourfear.org.nz**.

#faceyourfear

BlueSeptember
Facing up to Prostate Cancer

*Terms and conditions apply. Maximum PlaceMakers donation to the Prostate Cancer Foundation $25,000. Fear must be shared on www.faceyourfear.org.nz between 1-30 September 2016. See placemakers.co.nz for more details.

PlaceMakers®

Face your fear

If you've recently been busy focusing on health and safety within your business – and who hasn't? – this is the month to turn attention to the wellbeing of you and your staff beyond the building site.

Blue September is the Prostate Cancer Foundation's annual appeal to raise awareness of men's health and the importance of getting regularly checked. It's a campaign PlaceMakers gets behind every year – with great support from our builders – and we are proud to be the principal sponsor.

This year's campaign, 'Face Your Fear', encourages men to bite the bullet and ask their doctor for a prostate cancer check. It's about 'everyone has a fear, but a prostate check shouldn't be one of them'. These checks should become a regular date on your calendar, rather than something you'll 'get round to later'.

If anything, we should be afraid of what not getting checked could mean – not only for ourselves but for our families too. If prostate cancer is detected early, it can be treated; if not, it can be fatal.

Buck Shelford recently had his regular check-up and shares his experience on camera - an inspiration to us all! Head to **www.faceyourfear.org.nz** to see Buck overcome his fear of heights.

So come on, share your fear at **www.faceyourfear.org.nz** and challenge a mate and we'll donate $6 to the Prostate Cancer Foundation.

On another topic, putting yourself in someone else's shoes is often a good way to better understand a situation and may even lead to a breakthrough for change. That's one method covered in The Successful Builder's article on how to change workplace culture on pages 18-19.

Also this month, *Under Construction* talked to building control officers around the country to gain insight into their experiences – check out what they had to say on pages 12-13.

As usual, we have plenty more articles covering various aspects of the industry to help keep you informed and earning skills maintenance points. Look out, too, for our next round of seminars – details on page 2.

Finally, congratulations to the Hurricanes, whose excellent form carried them through to a home win and their first Super Rugby title! PlaceMakers has been proud to sponsor another season of excellent competition, with some old favourites and new faces doing battle. Well done to everyone for playing their part on the paddock!

Gary Woodhouse

General Manager Operations & Marketing

BlueSeptember | PRINCIPAL SPONSOR PlaceMakers

NEWS

FEATURES

OTHER STUFF

ISSUE 56 > SEPTEMBER 2016

>PUBLISHER > DCL Corporate Publishing > ENQUIRIES > editor@pmunderconstruction.co.nz; (04) 384 5689

New round of PlaceMakers seminars!

In an industry that's committed to building safer, healthier and more durable buildings, it's inevitable that the regulations surrounding it continue to evolve in line with construction techniques and products.

To support its customers in navigating these changes, PlaceMakers continues to offer opportunities for upskilling. This spring, PlaceMakers will once again be providing its builders the opportunity to get up to speed with industry changes – and earn elective skills maintenance points – by attending its next round of seminars.

"Ensuring that our customers can earn all their required elective skills maintenance points through PlaceMakers initiatives is a key focus for us," says general manager operations and marketing Gary Woodhouse. "We want to support our builders' professional development and, in turn, the industry's professionalism and competency as a whole."

HEALTH AND SAFETY FOCUS

The new Health and Safety at Work Act continues to be very topical for our builders, so we'll spend a bit of time on this. We are doing our best to provide our builders with relatable examples of the Act in practice; covering the key areas including collaboration, overlapping duties, PCBU's, hazards vs risk management and myth busting.

IN-DEPTH LOOK AT LBP ISSUES

While touching on the latest board complaints (e.g. number of complaints, outcomes and what the majority of the complaints are about compared to previous years), we will spend some time on one of the most common LBP complaints, namely "poor understanding and application of site supervision".

This recently prompted the Building Practitioners Board to extend the definition of supervision for LBPs. During the seminar, we will run through various scenarios with attendees to ensure everyone is on the same page about what is and isn't considered supervision.

REGULATORY UPDATES

The seminars will also include reminders about recent regulatory changes, including the government's response to the 'loopy rules' report, Residential Tenancy Act changes, the recent ban on retrofitting foil insulation and more.

PLACEMAKERS BRANCH	DATE
WEEK 1	
Napier (Hawkes Bay)	Monday, 12 September 16
Whakatane	Monday, 12 September 16
Taupo	Tuesday, 13 September 16
Te Kuiti	Tuesday, 13 September 16
Mt Maunganui	Wednesday, 14 September 16
Thames	Wednesday, 14 September 16
Whitianga	Thursday, 15 September 16
Te Rapa/Huntly	Thursday, 15 September 16
Morrinsville	Friday, 16 September 16
WEEK 2	
Clarence Street (Hamilton)	Monday, 19 September 16
Cook Street	Wednesday, 21 September 16
Mt Wellington	Wednesday, 21 September 16
Pukekohe	Friday, 23 September 16
WEEK 3	
Pakuranga	Monday, 26 September 16
New Lynn	Monday, 26 September 16
Waiheke	Tuesday, 27 September 16
Wairau Park	Wednesday, 28 September 16
Albany	Wednesday, 28 September 16
Silverdale	Thursday, 29 September 16
Nor-West/ Westgate & Helensville	Thursday, 29 September 16
WEEK 4	
Whangarei	Tuesday, 4 October 16
Kaitaia	Wednesday, 5 October 16
Kerikeri	Wednesday, 5 October 16
Mangawhai	Friday, 7 October 16
WEEK 5	
Queenstown	Monday, 10 October 16
WEEK 6	
Invercargill	Monday, 17 October 16
Gore	Tuesday, 18 October 16
Mosgiel	Tuesday, 18 October 16
Cromwell	Wednesday, 19 October 16
Dunedin	Thursday, 20 October 16
Te Anau	Thursday, 20 October 16
Alexandra	Friday, 21 October 16
WEEK 7	
Twizel	Monday, 31 October 16
Wanaka	Monday, 31 October 16
Oamaru	Tuesday, 1 November 16
Ashburton	Tuesday, 1 November 16
Riccarton/Antiqua St	Wednesday, 2 November 16
Cranford St/Kaiapoi/Hornby	Wednesday, 2 November 16
Timaru	Thursday, 3 November 16
WEEK 8	
Motueka	Monday, 7 November 16
Blenheim	Monday, 7 November 16
Nelson (Saxton Road)	Tuesday, 8 November 16
Wellington Session 1 - Kaiwharawhara, Evans Bay, Hutt City	Thursday, 10 November 16
Wellington Session 2 - Porirua	Thursday, 10 November 16
WEEK 9	
Kapiti	Monday, 14 November 16
Levin	Tuesday, 15 November 16
Palmerston North	Tuesday, 15 November 16
Ohakune	Wednesday, 16 November 16
Wanganui	Wednesday, 16 November 16
Hawera	Thursday, 17 November 16
New Plymouth	Friday, 18 November 16

For times, visit www.placemakers.co.nz/trade
To register your interest, please contact your local PlaceMakers store.

Safety starts with culture

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 have you done to build a health and safety culture in your business?*

Firm: A E S Builders Ltd
Principal: Austin Simmonds
Location: Whangaparaoa
Staff: 1

One of the biggest things for me has been becoming a HazardCo member. The kits and advice they provide, such as guides for site inductions and hazard identification booklets, make health and safety a lot simpler.

They provide a site pack for every job we do. The packs include a customised safety sign to stick on your site entrance. Before the job starts, a HazardCo officer goes through all the hazards with you that may be on the site and puts them on your sign.

Toolbox talks are also useful. I run them as new hazards come to light, maybe when scaffolding goes up or when we've got cranes or hi-abs operating on site – I just address issues as they come up. I also make sure that my workers have all the safety gear they need, such as hi-vis work clothing, gloves and goggles.

None of my staff have ever approached me with any issues where they felt unsafe, but I believe the culture is such that if they wanted to they would be comfortable doing so.

Firm: Oriel
Principal: Dave Sidaway
Location: Wellington
Staff: 3

With the introduction of the new health and safety legislation, we went through a review of all our safety plans and updated them where appropriate. I think in general it's also made us a lot more safety conscious.

We came up with a different programme for our site-specific safety plans and set up more generic templates to help us get set up for future jobs.

> **We hold open-table discussions, so if anyone has any concerns with anything we can discuss them as a group**

At the start of every day, we also have a chat about what we're going to be doing and what the potential hazards are. If anything has changed on site, we'll discuss how those changes might affect the job as well. They're open-table discussions, so if anyone has any concerns with anything they're able to raise them and we can discuss them as a group.

Firm: Derek Direen Building Ltd
Principal: Derek Direen
Location: Wanaka
Staff: 5

Many changes have been made in our business regarding health and safety recently, including the introduction of site-specific safety plan documents.

However, the biggest change has been educating everyone working on our sites and making them aware of the immediate hazards that surround us on a day-to-day basis.

More importantly, we've put procedures in place to minimise any risk that could potentially lead to accidents.

We also openly discuss health and safety issues on our jobs; this keeps everyone actively thinking about the potential risks as we go about our daily tasks.

I believe the new regulations regarding falling from height, including handrails, edge protection, and fall nets, has been well received by pretty much everyone involved in our industry. The regulations have made all our jobs not only safer, but easier.

Now have your say...

WIN!

WHAT IS THE BEST PIECE OF ADVICE YOU'VE BEEN GIVEN AND HOW IT HAS HELPED YOUR BUSINESS?

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@pmunderconstruction.co.nz**. All responses must be submitted by 25 September 2016. The answers to this question will be published in *Under Construction* November 2016.

COMMUNITY

Face your fear this Blue September!

The human body is pretty incredible and capable of performing some amazing feats – and, like any tool or piece of machinery you value to get the job done, it needs to be regularly checked and kept in good working order.

While you'll no doubt be happy enough replacing some worn out nuts or washers, when it comes to your own body – especially 'embarrassing' bits in hard to reach places, like the prostate gland – most blokes shy away from the subject.

Again, like any working part, the prostate gland plays an important role. Given its importance – both to men's sex lives and overall health – it's surprising that it's usually only when problems arise that men tend to take it seriously. Unfortunately, waiting until there's a problem can have serious consequences, which is why PlaceMakers is encouraging men around the country to 'Face Your Fear' and get checked now!

"As men age, the prostate gland can cause a number of issues," says Prostate Cancer Foundation CEO Graeme Woodside. "It can become enlarged, get infected and cause urinary problems.

"The most serious issue, however, is prostate cancer, which is the number one cancer among New Zealand men. There are around 3,000 diagnoses each year, and about 1 in 10 men will get prostate cancer in their lifetime, which is why regular checks are important."

The risk increases as men age. Men over 50 should consider having a regular check, using both the blood test and DRE examination. Because of the limitations of the blood test, and the difficulty of physically examining the whole of the gland, having a combination of both tests gives the health professional the best indicator of the possibility of disease.

> **About 1 in 10 men will get prostate cancer in their lifetime, which is why regular checks are important**

This year, PlaceMakers is the principal sponsor for the 'Face Your Fear' campaign – a new approach to Blue September.

"Men throughout New Zealand are being challenged to face their fear – because we all have fears, but a prostate check should not be one of them," says Mr Woodside.

During September, PlaceMakers stores throughout the country will be hosting a variety of events to raise awareness and funds for a great cause.

Watch the video of Buck Shelford, PlaceMakers Blue September Ambassador, facing his fear at **www.faceyourfear.org.nz**.

Support the cause. Head to **www.faceyourfear.org.nz**, share your fear and challenge a mate and PlaceMakers will donate $6 to the Prostate Cancer Foundation.

Construction Contracts update

Ministry of Business, Innovation & Employment

Changes to the Construction Contracts Amendment Act mean that the people who do the bulk of the physical work on commercial building projects will be properly paid their retention money

Design, engineering and quantity surveying work now included under scope of the Act

The Construction Contracts Act 2002, which covers both commercial and residential construction contracts, provides a process for dealing with payments and disputes under a construction contract.

In December last year, the Construction Contracts Amendment Act 2015 was passed, amending the Act in three areas in a staged process:

- Removing the differences between residential and commercial contracts (changed 1 Dec 2015).
- Design, engineering and quantity surveying work to be included in the Act (from 1 September 2016).
- Retention money withheld under commercial construction contracts must be held on trust (from 31 March 2017).

1) Removing the differences between residential and commercial contracts

From 1 December 2015, parties to residential construction contracts have full access to the Act's dispute resolution and payment regimes. This builds on the changes to the Building Act 2004 that came into effect on 1 January 2015, requiring residential building work over $30,000 in value to be covered by written contracts. Contractors continue to be unable to obtain charging orders against residential occupiers.

2) Design, engineering and quantity surveying work included in the Act

From 1 September 2016, the scope of the Construction Contracts Act 2002 is widened to include construction-related services, such as work done by architects, engineers and quantity surveyors. These professions will now be able to access the payment and dispute resolution processes in the Act. Meanwhile, their clients will have greater means to hold architects, engineers and quantity surveyors to account for their work.

> **Under the old law, retention payments were often not held on trust and were put at risk by being used as working capital. In the event of a company going bust, subcontractors lost the retention money owed to them**

Before the Act was introduced in 2002, professional organisations for engineers and architects successfully lobbied to be excluded on the basis that the relationship between clients and consultants differed from the relationship between clients and contractors.

However, MBIE has decided that the difference no longer justifies excluding consultants from the scope of the Act, despite receiving opposing submissions from organisations such as the New Zealand Institute of Architects (NZIA) and the Institution of Professional Engineers New Zealand. Previously, consultancy contracts governed relationships between consultants and clients.

Including construction-related services in CCA will be beneficial for consumers who have a dispute involving building contractors and designers, engineers or quantity surveyors, as they will not need to initiate different dispute resolution processes against each party. This should reduce costs and increase consistency of outcomes.

3) Retention money withheld under commercial construction contracts must be held on trust

The new law requires that retention money for commercial contracts be held on trust, protecting it in the event of a business failure.

Under the old law, retention payments were often not held on trust and were put at risk by being used as working capital. In the event of a company going bust, subcontractors lost the retention owed to them.

From 31 March 2017, this trust obligation will apply to all retention money over a yet-to-be-determined minimum amount that will be prescribed in regulations. This will drive better business practices without excessive compliance costs.

Retention money is an amount withheld by a party to a construction contract (the payer) from an amount payable to another of the contract's parties (the payee) as performance security, which can be used to pay for any remedial action that may need to be done as a result of faulty work. They are used regularly in commercial construction contracts and, while allowable, seldom in residential construction contracts.

The Amendment Act makes the trust requirement clear for parties to commercial construction contracts – the payer will be required to hold retention money on trust in the form of cash or other liquid assets, such as accounts receivable.

Payers will have to ensure they pay the full amount of retentions when they are due under the contract, or else they could be found in breach of the trust.

AMENDMENTS EXPLAINED

The changes are the result of a comprehensive review of the Construction Contracts Act 2002.

The amendments ensure the Act provides:

- A fair, balanced and appropriate payment regime.
- Access to fast and cost-effective dispute resolution.
- Cost-effective and timely enforcement of rights and obligations.
- Better certainty of payment of retention money held under construction contracts.

Further information on the Amendment Act and retentions is available on the MBIE website ***www.business.govt.nz***

PROVE YOUR KNOWLEDGE!

Tick the correct answers below and record what you've learnt in the record of learning on the back page! Evidence of actual learning rather than just 'participation' is a key requirement of the LBP renewal process.

1) Why was the law changed to require retention payments to be held on trust?

a) *To better protect main contractors from unscrupulous subbies.*

b) *To prevent retention payments being put at risk by being used as working capital.*

c) *As a result of the leaky building crisis.*

2) On what basis were architects and engineers excluded from the CCA when it was introduced in 2002?

a) *The relationship between clients and consultants differed from the relationship between clients and contractors.*

b) *There were fewer consultants.*

c) *The work was different.*

3) What will construction-related professions, such as engineers and architects, now have access to?

a) *Retentions held on trust.*

b) *The payment and dispute resolution processes in the Act.*

c) *More work.*

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.

Collecting drinking water from roofs

Roofs to be used for collecting drinking water for human consumption must meet the requirements of *AS/NZS 4020:2005*

Collecting rainwater for drinking can be practical, money-saving and sometimes simply necessary. If a customer approaches you about including this facility in a new build or renovation, it's important for safety's sake that systems are correctly set up and maintained

An estimated 10% of New Zealanders obtain their drinking water from rainwater collected from the roof. If roof-collected water is clear and has little taste or smell, it's generally safe to drink.

To ensure it's safe and does not become contaminated, some precautions are necessary. It's also important to remind homeowners to regularly check, clean and maintain the system and storage tank.

TAKE PRECAUTIONS TO AVOID CONTAMINATION

To minimise the risk of rainwater contamination:

- Ensure the roof surface is suitable for collecting potable water (water safe enough for drinking and food preparation).
- Keep the roof clean and free of debris.
- Keep the roof catchment area clear of overhanging branches (away from birds, rodents, possums).
- Avoid installing a television aerial or any other fixtures that may provide roosting for birds.
- Install mesh leaf guards over gutters (Figure 1).
- Install leaf screens to downpipes (Figure 2).
- Install a first-flush diverter to divert the first water from the gutter away from the storage tank (Figure 3 overleaf).
- Install a finer filtration system to remove smaller particles that are not removed by the leaf guard and screening systems.
- If spray drift is anticipated, disconnect the pipes and do not reconnect them until the roof has been well washed by rain.

STORAGE TANKS

To reduce contamination in the storage tank:

- Install a calmed water inlet system to reduce sediment disturbance during heavy rainfall.
- Install the water intake near the water surface (where the water is likely to be cleanest) using a floating intake (Figure 4 overleaf).
- Attach insect-proof screens or flap valves to the end of all pipes to keep insects out and ensure the tank is properly vented.
- Install an air gap to the overflow outlet to prevent storm water backflow into the tank.
- Keep access covers closed to prevent access into the tank by insects, pests or debris.
- If the storage tank is below ground, ensure that surface run-off from areas other than the roof catchment cannot get into the tank.
- Leave a new roof for at least one good rainfall before connecting downpipe to the storage tank.

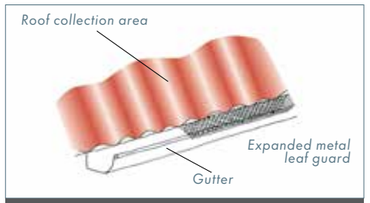


Figure 1 – Leaf guard for gutters

A FEW DO NOTS

Collected water cannot be used for drinking if it has been in contact with:

- Uncoated lead flashings – lead flashings on existing roofs should be coated with suitable paint (coated lead paint is available for new roofs).
- Treated timber – chemicals leaching out might contaminate the water.
- Asbestos – although asbestos is no longer used in new building work, existing asbestos roofs should not be used for collecting rainwater.
- Bitumen, lead-based and other paints that do not meet required water quality standards.

WATER CATCHMENT SYSTEM

The water catchment system comprises the roof, gutters, downpipes, water storage tank and the pipework connecting the two.

Downpipes may be open – ie, they can easily be disconnected if required (such as for roof cleaning or if contamination of water occurs) – or sealed if the pipework remains full of water and cannot be easily disconnected.

ROOFING MATERIALS

Roofs suitable for water collection for human consumption must meet the requirements of *AS/NZS 4020:2005* Testing of products for use in contact with drinking water and may include:

- Unpainted zinc/aluminium alloy-coated or galvanised (zinc) steel.
- Factory-coated or painted zinc/aluminium alloy-coated or galvanised steel.
- Zinc.
- Stainless steel.
- Aluminium.
- Concrete or clay tiles.
- Untreated timber shingles – usually imported western red cedar.
- Butyl rubber.
- Asphalt shingles.
- Bitumen membranes.

Always check with the manufacturer.

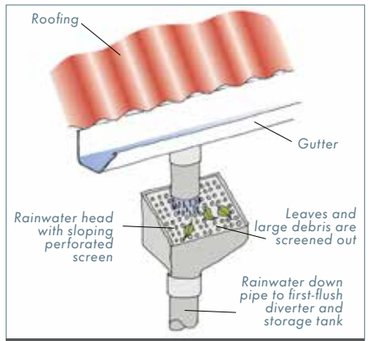


Figure 2 – Leaf screen for down pipes

TANK MATERIALS

Tanks and pipework used for storing drinking water, even if only in an emergency, must be made from materials complying with *AS/NZS 4020:2005*.

Water tanks can be made of galvanised steel, zincalume (only if not in ground contact), fibreglass, plastic and concrete. When new, they may sometimes affect the taste of water.

A galvanised tank, for example, may initially cause a metallic taste, or a new concrete tank may release lime that increases the pH of the water and cause a slightly bitter taste.

The taste generally diminishes over time, and if the tank and pipework materials meet the requirements of *AS/NZS 4020:2005*, they do not present a health hazard.

CONTAMINATION SOURCES

There two main types of contamination hazard:

Microbial contamination

- Birds, animals and insect faeces.
- Decaying brids, animals and organic matter.
- Underground storage tanks that are not sealed or protected from ground run-off.

Chemical contamination

- Pesticides and spray drift.
- Flue or chimney emissions.
- Paint or other roof coatings.
- Roofing materials such as lead flashings.
- Traffic and industrial emissions.

Sediment that accumulates at the bottom of the tank may contain high concentrations of chemicals, which is another potential source of chemical accumulation.

FILTRATION SYSTEMS

Filtration systems can be either:

- A point-of-use system, where the filter is attached to the inlet supply, a tap or plumbed in with a dedicated faucet.
- A point-of-entry system, which is a centrally installed system to treat all water.

A range of filters are available, including:

- Mesh filters, including polyester, of various sizes to remove different types of particles.
- Carbon filters.

Roof water (continued)

- Reverse osmosis filters.
- UV sterilisers to kill bacteria.

Ideally, a filtration system should include several different types of filters.

FIRST-FLUSH DIVERTER

First-flush diverters prevent the first rainfall – containing dirt, debris and contaminants from the roof – from entering the storage tank by diverting it into a separate chamber (see Figure 3).

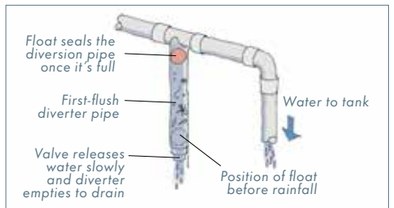


Figure 3 – First-flush diverter

Once this chamber is full, the water feeds into the storage tank. There are different size chambers: the larger the roof area, the more rainwater initially has to be flushed away from the storage tank, so the larger the chamber must be.

First-flush diverters are designed to empty themselves, but they should be checked regularly and emptied if necessary.

INSPECT REGULARLY AND MAINTAIN

It is very important that system inspections and maintenance are carried out regularly. BRANZ recommends the following timetable:

Every 3-6 months

Inspect and clean gutters.

Before cleaning, disconnect pipes that feed the storage tank if possible.

At least every 12 months

- Check the roof, remove debris and prune overhanging branches.
- Check tank inlets, mesh covers and leaf filters, and clean and repair as necessary.
- Check the exterior of the tank and pipes for structural integrity, leaks and seepage.
- Check for evidence of access by animals or insects, the presence of algal growth and accumulated sediment.

TANK CLEANING

If the tank needs cleaning, it should be emptied, sediment removed, scrubbed and rinsed with clean water. Ideally, professional tank cleaners should be engaged.

Sediment should be removed when required. This can be done without emptying the tank by siphoning, pumping, using a scour valve (if the tank has one) or by using a swimming pool vacuum cleaner.

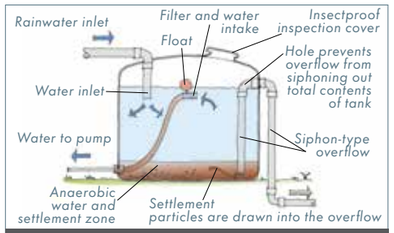


Figure 4 – Storage tanks

DISINFECTING STORAGE TANKS AND PIPELINES

Tanks and pipework should be disinfected every 18-24 months to reduce algal growth, using hydrogen peroxide or a household bleach containing sodium hypochlorite or calcium hypochlorite. Another method of treating water is with UV light.

ROOF MAINTENANCE AND PAINTING

Roofs used as water catchments must not be painted with lead or chromium-based paints.

Most modern roof paints are labelled for their suitability if the roof is to be used as a water catchment, but always ask the manufacturer if you're unsure.

The roof should be cleaned annually. Pipes to the water storage tank must be disconnected beforehand, so the water can be flushed away.

PROVE YOUR KNOWLEDGE!

Tick the correct answers below and record what you've learnt in the record of learning on the back page! Evidence of actual learning rather than just 'participation' is a key requirement of the LBP renewal process.

4) What is NOT an appropriate material for a water tank?

a) Lead.

b) Galvanised steel.

c) Fibreglass.

5) What is a first-flush diverter?

a) Something that diverts grey water to a filtration system.

b) Something that prevents containments in the first rainfall from entering the storage tank.

c) Something that transfers rainfall directly to a storage tank.

6) How often should tank inlets, mesh covers and leaf filters be checked?

a) At least once every 24 months.

b) At least once every 12 months.

c) At least once every 18 months.

Construction Pipeline Report 2016

Ministry of Business, Innovation & Employment

$200 billion worth of building activity forecast nationally over the next six years

BRANZ and Pacifecon – a construction industry data analysis specialist – produce the National Construction Pipeline Report annually based on current and forecast data. The report is commissioned by MBIE and was originally conceived in 2013 by the Productivity Partnership.

Data is collected in four regions, Auckland, Canterbury, Waikato/Bay of Plenty and Wellington, with aggregated data provided for the rest of New Zealand. This year, a first-time companion report – Future Demand for Construction Workers – forecasts the numbers of employees in construction-related occupations that New Zealand will need until the end of 2021 to meet projected levels in the pipeline report.

Additionally, an interactive web tool, which uses information from both reports, enables anyone to search the projections for construction investment and occupations to the end of 2021.

TARGET AUDIENCE

Sector participants across all types of construction, product manufacturers and aligned suppliers, as well as Industry Training Organisations (ITO's) will be interested. The aim is to provide everyone with a clear pipeline of building and construction work and occupations to help inform decisions around investment in new materials, equipment, recruitment and training and to improve the sector's ability to respond to the cyclical nature of the construction sector, while improving productivity.

STAND-OUT FINDINGS

There are three standouts in the report; a $200bn injection into the economy over the next six years, the growth in residential housing in Auckland, and two new accelerating regions of Waikato and BoP.

Forecasts are also showing the move towards multi-unit type consents such as apartments and townhouses. In 2013, the outlook for these types of consents was around 16%, but by 2022 we expect them to represent 40% of all consents nationally.

STRONGEST REGIONS

Residential building growth in Auckland accounts for more than half of New Zealand's construction growth and the expansion is spreading to other regions. Auckland will add 94,200 new dwellings by the end of 2021 but Waikato/BoP are experiencing their own construction booms with 30,300 new dwellings expected in the same period.

Both regions have emerged as places to watch, with a 26% growth in consents during 2015 for Waikato and 35% for the BoP. This combined region will take over as the second-largest area after the Canterbury residential rebuild tails off.

National construction activity has sustained growth averaging 7% per year since 2011, and is forecast to grow at this rate to a peak of $37bn in 2017, remaining above 2015 levels until 2021.

STAND-OUT POINTS FOR OCCUPATION

Building and construction was the largest contributor to annual employment growth last year, with 27,500 more people employed nationally.

Employment in construction-related occupations is much greater than in the construction industry, because many other industries employ people with construction skills. Total employment in construction-related occupations is projected to grow by around 49,000 between 2015 and 2021.

OCCUPATION GROWTH

Examples of construction-related occupations that are expected to experience the largest growth to 2021 are electricians (14%), plumbers (13%) and civil engineering professionals (11%).

Go to **www.mbie.govt.nz** to download the full report and access the interactive web tool.

For more details on the report, see page 15.

It's time to talk about consents

Submitting better consent applications will lead to a faster, more efficient consenting process, which will enable projects to be completed more quickly

Local government bodies are an easy target when things start to go awry and the building consent process is no exception – so we decided to get their side of the story

Every day, staff at New Zealand's 72 accredited building consent authorities (BCAs) work hard issuing consents for all sorts of building projects, ranging from multi-storey bespoke homes to retaining walls and carports.

Legislation requires that these consents be processed within 20 working days. *Under Construction* canvassed a selection of BCAs to find out how many consents they're processing within that statutory period and to provide a snapshot of how well authorities are performing nationwide.

The legislation allows for BCAs to 'stop the clock' when they need to request more information from the applicant, which means that a consent classified as processed within the 20-day statutory period may actually have taken longer than that to process.

Eight BCAs provided figures of how many consents they processed within the 20-day limit for the year to June 2016. Of those, seven consistently processed more than 90% of all building consents within the limit.

The top three performers were Upper Hutt City Council and New Plymouth District Council (both 100% within the limit) and Tasman District Council (98.6% within the limit).

WHAT CAUSES DELAYS?

Building control officers across the country cited incomplete documentation as the most common cause of delays in the consent process.

Tasman District Council building assurance manager Sharon Threadwell said that while her department was performing well, she estimated around 80% of all consent applications required 'stop the clock' information requests.

Sharon's advice for builders and designers submitting consent applications is to:

- Attach a covering letter outlining what's included in response to further information requests, to reduce time.
- Apply for a project information memorandum (PIM) before applying for a building consent, because the two don't need to be applied for together.
- Ensure that the plans and specifications in the application meet the minimum standards required by the building code.

"I think what often happens is that a client might get on a builder or designer's case, so they end up submitting incomplete forms to be able to say a project is under way – but a clean consent leads to a faster consenting process, which is better for everyone."

New Zealand's largest BCA, Auckland Council, processed more than 20,000 building consents between June 2015 and May 2016 and, on average, more than 96% were processed within the 20-day period.

Building control manager Ian McCormick said that around 68% of those required additional information requests.

"Every time we have to request additional information, it slows everything down because often we're waiting up to a week or longer for the information to be provided. Then the processing officer has to review all the information again to remind themselves of what they looked at previously," said Ian.

He listed common problems leading to further information requests as:

- Design plans submitted without enough information.
- A lack of coordination between experts, such as engineers and architects.
- Designs that don't take building site features into account.

"As general advice, I'd recommend that designers visit a site before submitting any plans to us and also that people approach us with any questions as early as possible.

"We're very open to having conversations to help smooth out the process."

QUALITY CONTROL

Head of building consents at Christchurch City Council (CCC), Leonie Rae, said that some builders and designers treat councils as their quality assurance provider.

"There seems to be a mindset among some people that they'll just put an application into council and let us determine what's missing, rather than actually submitting a complete application up front," said Leonie.

"So, with inspections for instance, we've started sending some of our group home builder customers reports highlighting their inspection failure rates and how much that costs them in dollar terms."

One of the CCC's customers had a failure rate of around 50%, which has since dropped to close to 20% because they introduced a quality assurance system. Leonie said she recommends all building companies put in place their own quality assurance systems.

"At the end of the day, we're talking about building houses. We want to work with the industry to make sure we have quality housing stock for the future and I think builders and designers with robust quality assurance systems play a part in that."

DON'T BE AFRAID TO PICK UP THE PHONE

New Plymouth District Council building lead Peter Scantlebury agrees with the sentiment that a number of people within the industry rely on councils as their quality control.

Peter – and the others quoted in this article – said that hosting good conversations with the building industry was a positive way of addressing the issue.

"We send out a newsletter every two months to designers and builders, and every three months we hold a group meeting with industry practitioners and the professional groups (RMB, CBA etc), so we can address any issues.

"I find that by having a working relationship with our stakeholders, you tend to get more willing compliance rather than if you're seen as a monster on the other side of a desk."

Peter said that while they couldn't force people to attend the meetings, they were always open to answering any questions builders may have about a consent or building legislation in general.

AN AGEING WORKFORCE

While there are a number of things that those in the construction industry can do better to speed up the consenting process, it's widely acknowledged by council building managers that one of the biggest challenges they face is attracting quality inspectors and processors to their departments.

Upper Hutt City Council's director of planning and regulatory services, Richard Harbord, said as demand has increased on councils, recruiting has become more difficult.

"There is a shortage of qualified building officers, so it's quite hard to recruit," said Richard.

"The job requires a high level of industry knowledge and a wide range of skills, so attracting and training new people isn't simple."

The average age of workers in New Zealand's local government building departments was estimated at around 55, which Richard said put more pressure on councils as older workers would need replacing as they retire.

Ian McCormick said that one of the ways Auckland Council is encouraging people to join its building department is by offering staff the opportunity to upskill.

"We're trying to position ourselves as a place where you can become an expert in the building industry and we're beginning to attract younger, more ambitious applicants, because people are beginning to recognise the investment we're making in them," he said.

"We also run a fast-track school, which is a six-week intensive training course for processors and inspectors that we run every two months or so.

"We're putting a lot of resource into making the industry more professional, because there is actually a lot relying on our practitioners' expertise."

Next month we'll look at some of the programmes and initiatives councils are working on to make the building consent and inspection process more efficient.

New dwelling consents hit 12-year high

June spike reaches highest point in a decade

Statistics New Zealand's latest data shows that more than 29,000 new dwellings were consented in the 12 months to June, the most in more than in ten years.

"The annual total of 29,097 is the highest for a June year since 2004, when it was more than 33,000," said business indicators manager Clara Eatherley. "Auckland and the surrounding regions were the main contributors to this growth."

For the month, a total of 2,752 new dwellings were consented compared to 2,042 in June 2015 – an increase of 35%. Seasonally adjusted, the number of new dwellings rose 16% following a 0.1% increase in May. For houses only, the seasonally adjusted number rose 4.9% following a 4.6% fall in May.

IN THE REGIONS

In June 2016 compared to June 2015, new dwelling consents increased in 12 of the 16 regions, led by Auckland (up 217 to 921; +31%), Wellington (up 187 to 275; +213%), Waikato (up 128 to 335; +62%) and Bay of Plenty (up 101 to 246; +70%).

The high Wellington increase is attributed to the one-off consenting of 159 retirement village units.

Hawke's Bay, Manawatu-Wanganui, Marlborough, Nelson, Northland, Otago, Southland and Tasman were the other regions to record an increase.

Canterbury (down 77 to 467; -14%), Taranaki (down seven to 35; -17%), West Coast (down five to six; -45%) and Gisborne (down two to five; -40%) all consented less new dwelling compared to June 2015.

The value of non-residential building consents in June was $739m (up $285m; +63% from June 2015), taking the 12-month total $6.1bn.

CONSENTS FOR ALL BUILDINGS TOTAL $1.8BN IN JUNE

The total value of building work consented in June 2016 was $1.8bn, comprising $1.1bn of residential work and $739m of non-residential.

For the year ended June 2016, compared with the year ended June 2015, the value of buildings consented increased for:

- All buildings – up $2.7bn (18%) to $18bn.
- Residential buildings – up $1.9bn (19%) to $12bn.
- Non-residential buildings – up $779m (15%) to $6.1bn.

Loopy rules straightened out

The government is addressing construction-related issues raised by the 'Loopy Rules Report'

The Rules Reduction Taskforce was established in 2014 to address rules and regulations deemed not fit for purpose. It released its first report late last year and, since then, the government has been working on a number of recommendations aimed at improving the building industry.

CONSENTS UNDER THE SPOTLIGHT

Making the building consent process more efficient was a prominent theme in the report. Government initiatives to achieve that goal include:

- The promotion of staged building consents, so that structural work can begin before non-structural work is approved.
- Providing councils with guidance about exercising their discretion under Schedule 1 exemptions.
- Streamlining the Ministry for Business, Innovation and Employment's disputes process.
- Reviewing building consent levies in conjunction with BRANZ, councils and the treasury.

TRAINING PLAN

To make access to information cheaper and easier, the government has commissioned MBIE to create an online portal to hold all building and construction information in one place.

To raise the skill level within the sector, the 2016 Budget included funding for an additional 5,500 apprentices across all industries.

With incomplete or poorly completed consent applications identified by councils as being a major reason for processing delays, MBIE now provides training for designers, engineers and builders in completing these applications.

SELF-CERTIFYING A NO-GO

One of the taskforce's recommendations was to make builders certifying their own work a long-term goal as a way of reducing liability placed on councils.

In its response, the government notes that "a great deal of work" is required in the areas of occupational regulation and liability before this could happen.

Construction boom set to continue

The 2016 National Construction Pipeline report forecasts the current construction boom will last for another five years, with Auckland the dominant player

The latest report predicts that the annual value of all construction is forecast to remain above 2015 levels for the next six years, reaching a peak of $37bn in 2017 – a 20% increase on the value of all construction at the end of last year.

Nationally, the value of residential construction increased 6% in 2015 and is forecast to increase a further 22% to a $21bn peak in 2017. After that, activity is expected to decrease slightly, but remain above 2015 levels throughout the forecast period.

The report also predicts an increase in higher density housing, with multi-unit dwellings representing 30% of consented dwellings in 2015. This figure is expected to increase to 40% by the end of the forecast period.

The value of all non-residential construction is forecast to increase by 20% during the 2016 - 2018 period to a peak of $16.8bn. The value is projected to remain at around $16bn per year for the duration of the forecast period.

AUCKLAND ACCOUNTS FOR HALF OF EXPECTED GROWTH

Residential construction in Auckland is expected to account for more than half of the national growth, increasing by $3.3b (or 53% of total national growth) to 2017.

It's predicted that 94,200 new dwellings will be consented in Auckland between January 2014 and December 2021.

Auckland was the region with the highest ratio (44%) of multi-unit dwelling consented in 2015, with half of all consents forecast to be multi-unit by 2020.

Non-residential construction grew 4% over 2015 in Auckland and is projected to steadily increase by 49% to $7.3bn in 2018, due to a number of major projects planned for the region.

SOUTH OF THE BOMBAYS

Waikato/Bay of Plenty

The two regions experienced a year of intense growth in 2015, with residential building increasing 24% by value. Activity is expected to peak in 2017 at $6.1bn and remain above 2015 levels until the end of 2020.

Non-residential construction in both regions is forecast to continue at a steady rate of around $2.5bn per year throughout the forecast period.

Wellington

Total construction activity in Wellington is expected to grow to peak in 2017 at around $2.8bn, remaining above 2015 levels for the remainder of the forecast. Residential building is expected to peak at around $1.2bn in the same year, while non-residential construction is expected to increase 10% to a peak of $1.6bn.

Wellington is the only reported region with non-residential construction by value at a higher level compared to residential building. This trend is expected to continue throughout the forecast period.

Canterbury

Building and construction activity levels in Canterbury have fluctuated a little after peaking in the final quarter of 2014. This is a result of residential consent levels dropping sharply in the first half of 2015, before rising again in the latter half of the year.

Non-residential construction is forecast to increase to $2.9bn per year in 2016/2017 and remain above $2.4bn until 2019, before steadily reducing to around $1.7b in 2021.

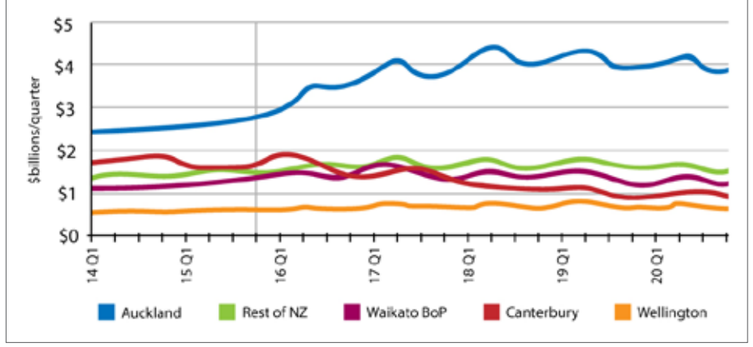
The Rest of New Zealand

Combined, the annual value of all building and construction in the other regions is forecast to rise to a gentle peak around 2019.

Non-residential construction activity is expected to slowly grow throughout the forecast period, with residential building forecast to rise by $0.5bn from 2015 levels to a gentle plateau of around $3.6bn from 2016-2019, before falling off slightly.

Otago has grown considerably; it is the largest single region in the 'Rest of New Zealand' region, and is gradually approaching Wellington's level of activity.

VALUE OF ALL BUILDING CONSTRUCTION BY REGION



SITE SAFE

Stopping the workplace bully

Personal attacks (direct) typically focus on one person and can range from making belittling remarks through to physical attacks

Bullying or intimidating behaviour on a worksite may stem from poor planning, and can lead to workers taking unnecessary risks

Most employers have policies in place to deal with workplace bullying. Construction is one industry with a culture that can give rise to bullying behaviour.

This can come in the form of the saying 'harden up', which can force workers to step out of their comfort zones and perform unsafe acts.

Not only does bullying affect people physically and mentally, it can disrupt workplaces, reduce profits and reduce productivity through:

- Increased time off.
- Unhappy staff.
- More mistakes and accidents.
- Resignations.
- Bad reputation.
- Difficulty recruiting.
- Poor quality and customer service.

TYPES OF BULLYING

Bullying falls into two categories:

- Personal attacks (direct) – the most common and easily recognised.
- Task-related attacks (indirect) – often goes unnoticed.

Personal attacks (direct) typically focus on one person. Examples include making belittling remarks, insults, threats, excluding staff and physical attacks.

Task-related attacks (indirect) are linked to the victim's actual work. Examples include giving unachievable tasks, not giving the appropriate training or tools for the job and supplying incorrect information.

You need to keep your eyes peeled for the many ways that bullying can take place. Bullies can target an individual or a group of workers using a range of methods to get to their victim(s), including through text, email, social media and before or after work.

> **Construction projects can be stressful as budgets and deadlines are often tight. Site Safe has identified that workers knowingly violate safety rules because of pressure from their boss or their peers to take shortcuts**

WHAT CREATES THE ONSITE BULLY?

Construction projects can be stressful, as budgets and deadlines are often tight. Site Safe has identified that workers knowingly violate safety rules because of pressure from their boss or their peers to take shortcuts.

It's easy to tell workers to 'be safe', but when they and their employers are under pressure to meet a deadline, workers understand the unwritten rules that say 'just get the job done'. It's at that point that unsafe behaviour arises, as there is often a view that safety slows you down.

QUALITY PLANNING IS THE ANSWER

A well thought-out plan that incorporates health and safety from the beginning will improve a company's safety performance by generating:

- Good contractor and employee relationships.
- Effective communication.
- Better problem solving.
- Improved project planning and productivity.
- Staff empowered to make decisions.
- Monitored accountabilities.

Safe workers have a higher morale and are more productive. They can make huge improvements to the business by helping to identify and solve problems, contribute to planning and communications efforts and through overall better effort.

By expecting and understanding the hazards and risks involved in a job, then planning for them, safety and productivity naturally follow.

Site Safe provides free templates to assist your health and safety planning, available from **sitesafe.org.nz/sssp**.

WorkSafe NZ provides a free guide, *Preventing and responding to workplace bullying*, which includes support, examples and guidance for businesses and individuals about a widespread workplace hazard.

WHAT TO DO

If you think you or someone at work is being bullied, keep records of what is happening and try to sort it immediately.

Use someone you trust as a sounding board to explore ways of responding– maybe your boss, HR team (if you have one), family or friends.

Bullying can have extremely negative effects on both your employee's mental health and workplace efficiency

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! Evidence of actual learning rather than just 'participation' is a key requirement of the LBP renewal process.

7) What is an example of 'indirect' bullying?

a) *Spreading lies about somebody.*
b) *Getting an employee to bully someone you don't like.*
c) *Assigning somebody an unachievable task.*

8) What should you do if you think you or someone at work is being bullied?

a) *Keep records of what is happening and try to sort it immediately.*
b) *Wait to see if the behaviour changes.*
c) *Harden up and get on with your job.*

9) How does the article suggest you prevent bullying?

a) *Set up a Fight Club to release negative energy.*
b) *Arrange weekly counselling sessions.*
c) *Create a well thought-out H&S plan.*

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.

THE SUCCESSFUL BUILDER

Join the health and safety club!

A tidy site is not only a safe site, it's also often a good advertisement that can lead to more work

Since the Health and Safety at Work Act 2015 came into effect, many builders have expressed frustration at how much they have to do to comply – but it doesn't have to be so hard

A company's culture is at the heart of health and safety. You can put in place the required documents and processes, but if you don't achieve culture change, it's going to be a long and hard road to compliance. It is as much about creating a culture change as it is about implementing new processes and paperwork.

Company culture is more than just 'it's the way we do things'. It may be documented, but probably isn't. Getting long-term culture change means getting to some of the underlying factors.

THE CIRCLE OF THOUGHT

Put simply, the Circle of Thought states that:

- Results come from Actions taken.
- Actions come from Choices made.
- Choices come from Thoughts.

Consider this example. Berny runs a small building business with a team of three. One of his builders, Jimmy, hasn't followed new procedures and a workplace incident has occurred. This is the second time (since April) that someone hasn't followed procedures, even though Berny told everybody about them.

Berny could tell his staff again (and again), but this time he decides to take a different approach. He draws the Circle of Thought on an offcut of plasterboard and explains the following:

1. Whether good or bad, results come from actions – the result in this case was the incident.

2. The action of not following procedure led to the incident.

Berny's diagram for his staff about the process that affects results

3. Berny asked, "What choices did Jimmy make that led to the action?" "Every action is the result of a choice and where there is choice, there are options."

4. The choices Jimmy made came from some thoughts Jimmy had. Maybe he thought he would save time? Or maybe he thought he had a better way? Or maybe he just didn't think!

Thinking about choices gives us options and can prevent someone from simply repeating the same things over and over.

Berny sits down with Jimmy and the team to work with them, so they can re-think their choices.

Hopefully, when a similar situation arises again, they will consider their options and make better choices, leading to better actions and, ultimately, to better results.

ADDRESS THE THREE PIVOTAL QUESTIONS

There are many questions that will be asked when you are trying to change a culture; unless they are answered, it is unlikely there will be any long-term change. You can reduce the core questions to just three and, if you can come up with good answers to these, you should be able to overcome resistance to change.

WHY DO WE NEED TO CHANGE?

Simply telling your team that change is a requirement may produce compliance, but it may be grudgingly given. It's much more effective if your team wants to change. Before beginning any major change in culture, address the 'why' first.

For example, help you team understand that the law now puts more responsibility on individuals to comply with health and safety requirements. Everyone is responsible for site safety and not simply the company alone. Not changing could have significant consequences for them as individuals, and you want to ensure this doesn't happen to your team.

WHERE IS THIS CHANGE TAKING US?

Create a vision of a better future. Outline how the changes will make for a better environment. People need a rough idea of what the new health and safety culture will look like before they can buy into it.

For example, help your team understand that a safe site is also a tidy and more efficient site. It can also be a good advertisement to your client's neighbours, leading to more enquiries and more work.

HOW WILL WE GET THERE?

It's good to understand the reasons and great to have the vision but, without the plan, nothing will change. Let your team know how you will arrive at the new culture.

It may be that you can work on developing the plan together. However you achieve it, you must end up with a workable plan that is owned by your team.

Producing a safe, tidy and effective site may require a change in your team culture, but when that change becomes entrenched the results are beneficial to everyone.

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**

PROVE YOUR KNOWLEDGE!

Tick the correct answers below and record what you've learnt in the record of learning on the back page! Evidence of actual learning rather than just 'participation' is a key requirement of the LBP renewal process.

10) What is the Circle of Thought?

a) *An unpublished work by Aristotle.*
b) *Results lead to actions, actions lead to choices, and choices come from thoughts.*
c) *When your team huddles together and thinks about the day ahead.*

11) Why is it important to communicate the importance of change?

a) *Culture changes are more effective if your team is on board.*
b) *It is not important.*
c) *It's a legal requirement under the Health and Safety at Work Act 2015.*

12) What is the value of going through the Circle of Thought?

a) *It helps your team rethink their options and can prevent repeat mistakes.*
b) *It's a chance to sit down for a breather.*
c) *There isn't any.*

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How to avoid costly disputes

SRB Saunders Robinson Brown Lawyers

A common cause of problems is where the design is incomplete or defective, which is not usually discovered until work has commenced

This month we look at some of the common causes of disputes within the construction industry, how to avoid them, and how to minimise the effect they have on a project should they become a problem

The majority of disputes are resolved without the need to trigger a formal resolution process, but early resolution or not, disputes can dramatically increase the emotional and financial costs on the parties involved in a project.

INADEQUATE DESIGN

A common cause of problems is where the design is incomplete or defective. This is not usually discovered until work has commenced. Design problems can lead to expensive additional work required to fix the problems and in some cases may even require completed work to be removed and replaced.

All parties involved in the project should – together if possible – conduct a thorough review of the designs and plans to anticipate any problems. This should be done before the project is priced and certainly before any contracts are signed.

POOR CONTRACTS

Many contracts are signed with deficient or inappropriate clauses. Alternatively, a contract may not be appropriate for the particular project or may not address some of the key items.

Another issue could be that one or both parties do not fully understand the terms. Any party presented with a contract to sign should take a step back and consider their risks on each project.

The golden rule is that a contract prepared by one party will usually attempt to place an unfair amount of risk on the other party. All parties to a project should assess how the contract addresses their main risks and request changes if need be.

Taking legal advice is important, especially where tight margins are involved. Costs involved with a dispute could easily wipe out those margins.

CONTENTIOUS CLAUSES

Delays in completing the works on time are a common ground for dispute. Contractors must be realistic if they are asked to agree to finish a project by a specified date – contracts must provide for extensions of time in certain circumstances, such as where the project is affected by bad weather.

Another common cause for dispute relates to the contractor's rights to adjust the price during the project. Contractors should make sure they are able to claim extra expenses where unforeseen matters result in additional works being necessary. Principals will want to narrow down the contractor's opportunities in the contract to increase the price.

> **Taking legal advice is important, especially where tight margins are involved. Costs involved with a dispute could easily wipe out those margins**

CONTRACT ADMINISTRATION

Poor administration of the contract is another cause of construction disputes. If variations and other changes to the contract are not recorded accurately and in accordance with the contract, this can create problems later on.

Once you have agreed on the terms of the contract, it is important to work in accordance with it. Understand your rights and responsibilities and follow the procedures set out in the contract.

Often there is a lot of pressure during the construction phase to make changes at short notice, where variations – especially are agreed orally on site and not recorded in writing. There may be no agreement of the price to be paid for the variation at the time when the work is carried out.

If you do not agree the cost of a variation, or do not follow the correct procedure for dealing with variations, especially as set out in the Building Act for residential contracts over $30,000 – you may later end up in dispute.

It is also important that payment claims and payment schedules are issued on time and comply with the Construction Contracts Act. Specific information must go into those documents or they will be ineffective. If there is any dispute about any of the items in the payment claim, it needs to be recorded clearly on the payment schedule.

If an issue does arise on the site, it should be addressed as quickly as possible. If the issue is ignored or there is insufficient communication between the parties, it could result in a bigger dispute later. Communication is essential!

IF A DISPUTE ARISES:

- Check the contract to make sure that procedures are followed correctly.
- Make sure that payment claims and schedules are issued on time and in accordance with the Construction Contracts Act.
- Check what documentation is available relating to the dispute and make sure there is a good understanding of what occurred by speaking to staff or representatives on site.
- Get advice from a professional. This could save time and costs later.

MELISSA BORCOSKI

Melissa is a partner at Saunders Robinson Brown and is the leader of Saunders Robinson Brown's Litigation Team. Melissa specialises in commercial and civil litigation, and also has specialist expertise in insurance law. For more information regarding contract disputes, contact Melissa on **03 377 4470** *or* **melissa.borcoski@srblaw.co.nz**

The information in this article is intended as a general guide only and is not intended to be legal advice. Detailed advice should be obtained to cover a specific situation.

PROVE YOUR KNOWLEDGE!

Tick the correct answers below and record what you've learnt in the record of learning on the back page! Evidence of actual learning rather than just 'participation' is a key requirement of the LBP renewal process.

13) What should you do before signing a construction contract?

a) *Review the designs and plans to anticipate any problems, preferably with the other party.*

b) *Read up on contract law.*

c) *Consult with your staff to see if they want to take on the project.*

14) What should you NOT include in your contracts?

a) *Clauses that allow you to claim extra expenses for unforeseen problems.*

b) *Clauses that allow for time extensions.*

c) *Fixed start and finish dates.*

15) What is the golden rule of contracts?

a) *A contract prepared by one party will usually attempt to place an unfair amount of risk on the other party.*

b) *That all is fair in love and war.*

c) *People will usually deal in good faith with one another to avoid trouble.*

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.

Managing timber moisture

You don't need to read and record the moisture content percentage in every piece of timber, just the ones identified to be sampled

Bringing wood's moisture content into a workable range is key to preventing issues – Carter Holt Harvey offers tips on how to ensure your moisture content is at the right level before you start work

Laserframe® is a structural timber manufactured by Carter Holt Harvey® Woodproducts and used for residential and commercial building framing.

The kiln-dried product is manufactured from plantation-grown New Zealand radiata pine, which is lightweight and offers fast close-in.

It is machine-stress graded for structural assurance and features excellent nail holding, nail plating, gluing and screwing properties.

Laserframe® is kiln dried and verified in its dry state at the sawmill in accordance with *AS/NZS 1748* and *NZS 3622*. It is then treated with Boron H1.2 , or CCA H3.2, for use in construction. From the time it leaves CHH Woodproducts, until the time the frame is enclosed on the building site, there are many opportunities for the timber to be exposed to moisture. Moisture exposure can lead to high moisture readings and slow your job site down.

There are a number of things you can do to ensure you keep your frames and other timbers as dry as possible. This includes:

- Store Laserframe at least 100mm clear of the ground on bearers suited to keeping the timber straight.
- Lift packets off delivery trucks – don't tip them off.
- Keep your timber covered while stored on site to minimise exposure to wind and rain.
- Avoid ponding of water on your floors and around timber bottom plates.
- Enclose your frames as soon as possible.

Remember, it's important to keep timber dry to prevent moisture-related defects so, if the product does get wet – dry it out!

The boron preservative in Laserframe Boron H1.2 will affect the accuracy of moisture meter readings.

For wood that has been allowed to equilibrate with its surroundings (normally three to four weeks after treatment), the following corrections apply:

BORON CORRECTION TABLE

Meter Reading % MC	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
True Moisture Content % Conductivity Meter* or Resistance Meter*	13	14	15	16	16	17	18	18	19	20	21	21	22	23	23	24

HOW TO TAKE A MOISTURE READING:

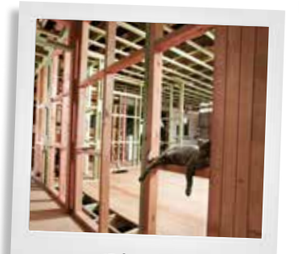
Step 1: The only appropriate moisture meter to be used on site is the 'sliding hammer' type, which is a resistance meter with insulated long prongs (30 mm). To use a capacitance meter or another type will almost certainly give false readings.

Tip: End grain will dry, or absorb moisture, faster than other areas and may not reflect the true state of the timber.

Step 5: Test the areas of framing to which internal linings are installed, such as wall framing, rafters, ceiling battens and floor joists.

Step 2: Use insulated electrodes only.

Tip: If the meter has not been used for some time, check it against the test card. Ensure that the meter is calibrated annually.



Step 6: Read and record the moisture content percentage of each individual piece of timber identified to be sampled with at least half the samples taken in areas of restricted drying. Increase sampling proportionally for larger buildings.

Step 3: Thoroughly check the meter and make sure that the batteries are charged and the electrodes are in good working order and correctly connected.

Step 7: Carefully remove the probes without bending them. Use the sliding hammer attached to the longer probes.

Step 4: Insert the insulated probes to approximately one-third the thickness of the timber, parallel to the grain, and at least 500 mm from an end of the timber.

Did you know:
Concrete dries at a slower rate than timber. Any timber in contact with it will also dry more slowly. This can be minimised by using a damp-proof course under all bottom plates.

Step 8: The meter reading must then be corrected by applying correction figures for treatment type.

Step 9: Record the result.

PROVE YOUR KNOWLEDGE!

Tick the correct answers below and record what you've learnt in the record of learning on the back page! Evidence of actual learning rather than just 'participation' is a key requirement of the LBP renewal process.

16) Which of these is NOT something you can do on site to ensure that your timber frames remain dry?

a) *Store them under your ute.*
b) *Keep your timber covered while stored on site.*
c) *Avoid ponding of water on your floors and around timber bottom plates.*

17) If the moisture reading is 19 the corrected moisture reading for timber treated with Boron H1.2 is?

a) *16.*
b) *17.*
c) 23.

18) How does Laserframe Boron H1.2 affect moisture readings?

a) *Moisture content will be approximately 5% higher than other timbers.*
b) *Moisture content will be approximately 5% lower than other timbers.*
c) *It doesn't.*

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.

PRODUCT NEWS

Fasten your deck!

There are a number of important points to consider when building a deck, not the least of which is what fastenings to use

Timber decks look great and are popular in both new builds and renovations. To ensure the deck's structural integrity and the safety of those enjoying it, you need to make sure your fastenings are up to scratch.

MiTek's BOWMAC brackets and LUMBERLOK fixings are specifically designed for use in New Zealand conditions.

BOWMAC brackets are structural fixings made to support the deck and are able to connect timber to timber, or timber to concrete.

LUMBERLOK fixings are used within the deck structure itself to tie and brace the deck. Both are available in either hot-dipped galvanised steel or stainless steel.

The durability table below will assist you in selecting the right fastening, depending on where you're building the deck.

To help you build your next deck, we've also included a handy step-by-step guide to calculate bracing demand courtesy of BRANZ:

1. Select the earthquake zone from *NZS 3604:2011* Figure 5.4 Earthquake zone maps.

2. Obtain the bracing demand from *NZS 3604:2011* Table 5.8. Using half the value for light cladding for wall, roof and subfloor and 0–25° roof pitch, this is 15 × 0.5 = 7.5 Bracing Units (BU)/m².

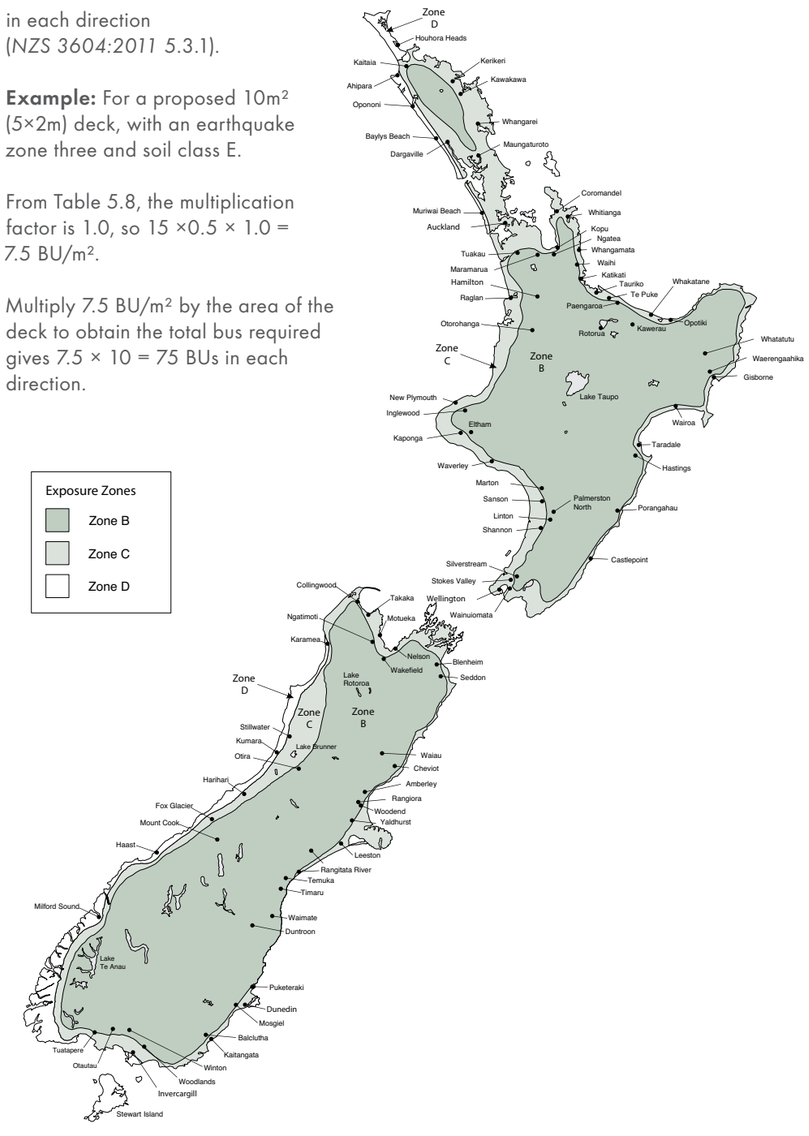
3. Multiply the bracing demand by a factor (given at the bottom of Table 5.8) for soil class and earthquake zone.

4. Multiply the resulting value by the area of the deck to calculate the total number of bracing units (bus) required in each direction (*NZS 3604:2011* 5.3.1).

Example: For a proposed 10m² (5×2m) deck, with an earthquake zone three and soil class E.

From Table 5.8, the multiplication factor is 1.0, so 15 ×0.5 × 1.0 = 7.5 BU/m².

Multiply 7.5 BU/m² by the area of the deck to obtain the total bus required gives 7.5 × 10 = 75 BUs in each direction.



Zones	Fixings	Environment	Product option
Zone D	Structural fixings	Exposed	LUMBERLOK: stainless steel 304 BOWMAC: stainless steel 304
Zones B and C	Structural fixings	Exposed	LUMBERLOK: stainless steel 304 BOWMAC: hot dip galvanised

SPORT NEWS

Wellington's Lion tamers

The Hurricanes celebrate their first-ever Super Rugby victory after defeating the Lions 20-3 on their home turf! Photo by: Dave Lintott / lintottphoto.co.nz

The Hurricanes blew away the Lions in a roaring defensive display to claim their first Super Rugby title – and now PlaceMakers is already looking forward to continuing its sponsorship of the nation's favourite competition into next season!

The Hurricanes' 20-3 title-winning victory at Westpac Stadium came 21 years after the team's debut against the Blues in the inaugural Super 12 match at The Showgrounds in Palmerston North.

The result capped a stellar year for the men in black and yellow, as their tough tackling proved the old cliché true that a solid defence will win you the championship.

That being said, Beauden Barrett's golden boot and the slick hands of local legend Cory Jane were crucial in setting the tone of the match. Barrett kicked two penalties and converted his own try, as well as Jane's, to finish as the season's top scorer with 223 points, ahead of the Chiefs' Damian McKenzie on 199.

The win also provided a memorable farewell for veteran number 8 and hometown hero Victor Vito, who donned the Hurricanes jersey for the 100th and final time.

While the Hurricanes have plenty to celebrate this coming off-season, they won't be able to rest on their laurels. The Lions, appearing in their first final, showed a determination and grit that will no doubt see them back next year as one of the competition's front runners.

They will be joined by 16 other teams, all nipping at the newly crowned champion's heels.

Among them, the Highlanders will be hungry to taste gold again after falling short of defending the title they won in 2015. The Chiefs and Crusaders will no doubt be contenders once again, while the Blues' fortunes appear to be shifting after they finished the season strongly with consecutive wins at their Eden Park fortress.

In the meantime, attention turns to the national side – in which Super Rugby's finest will come together and give their all to honour the black jersey.

PROVE YOUR KNOWLEDGE

1) 2) 3) 4) 5) 6)

7) 8) 9) 10) 11) 12)

13) 14) 15) 16) 17) 18)

September 2016

For ease of record keeping, use this coupon to collate your answers from within this issue of ***Under Construction*** and then sign and date it as proof of your own learning.

Signature

Date

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