



FOREWORD VIEW FROM THE GM OPERATIONS & MARKETING

The total LBP package



To ensure none of our readers miss these articles, and to provide a hard copy for those who prefer it, we've decided to incorporate Codewords articles and their associated questions in Under Construction going forward

answered online.

To ensure none of our readers miss these articles, and to provide a hard copy for those who prefer it, we've decided to incorporate them and their associated questions in Under Construction going forward - that way, if you answer all the questions in the magazine, you've killed two birds with one stone by fulfilling your elective and mandatory obligations. Check out this month's Codewords articles on pages 4, 5 and 6.

Just as we're always looking for ways to make your learning more efficient, we are also looking to improve our own processes. This month we're proud to feature our recently refurbished Waikato Frame and Truss plant, which has boosted staff morale and production - the latter by up to 100%! Find out more on page 8.

Last but not least, the final stage of the Construction Contracts Amendments Act 2015, which relates to retention money, is now in force. Read more about how retentions must now be handled on page 10, and how some of our customers use them in Builders' Business on page 15.

Gary Woodhouse



Under Construction incorporates Codewords articles and questions to provide readers with both elective and mandatory skills maintenance points

Over the past few years, government, industry bodies and trade merchants have been doing their best to help NZ builders stay up to speed with skills maintenance. Here at PlaceMakers, those efforts have included hosting skills maintenance seminars and producing Under Construction. Combined, these activities provided enough skills maintenance points for all licence classes.

When the new LBP scheme was introduced in November 2015, it dubbed both these activities as elective, and introduced mandatory activities that account for 50% of skills maintenance requirements. The two mandatory activities - for all licence classes - include on-the-job learning (featured on page 4) and reading Codewords.

Codewords, published by MBIE six times per year, includes the latest regulatory and related information from the building and construction industry. It is emailed directly to all LBPs with questions that can be

General Manager Operations & Marketing

CONTENTS



NEWS

16

LBP	On-the-job learning; Why LBPs mustn't carry out prescribed electrical work; Carpentry LBP disciplined for serious negligence and incompetence		
COMMUNITY NEWS	Take a look at PlaceMakers recently refurbished Hamilton F&T plant!		
INDUSTRY NEWS	Site Safe scholarship for women in construction;		

Skills shortage forecast to be an ongoing challenge; <<stats>>

FEATURES

12	BUILDING & HOUSING GROUP	All Construction Contracts Amendments Act phases now in force, including recently added amendment
14	BRANZ	Ensure your clients sing your praises in the shower with this waterproofing guide – continued next month
15	BUILDERS' BUSINESS	Business practices of your fellow builders
18	SITE SAFE	Are you up to date with the latest asbestos removal rules?
20	SUCCESSFUL BUILDER	Tips to minimise the damage of jobs that look likely to run at a loss
22	BUILTIN	Builtin offers insight on now new and pre-existing retention options

OTHER STUFF

24 SKILLS MAINTENANCE Record your LBP skills maintenance - you've earned it!

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SKILLS MAINTENANCE

Exploring on-the-job learning

Using a new method of construction counts as on-the-job learning

As promised, Under Construction will be including all compulsory Codewords articles to help LBPs earn their required points and stay up to speed with changes. This month's article is required for all LBP licence holders – and focuses on another compulsory aspect of the scheme

nder the new skills maintenance scheme, reading Codewords articles relevant to your licence and answering the corresponding questions is a mandatory part of skills maintenance (for those who have renewed their licence since 2 November 2015).

Once you've read the article, answer the questions below or online at underconstruction.placemakers. co.nz.

TWO IN ONE

As more LBPs transition into the new skills maintenance system, LBP Registrar Paul Hobbs and his team are receiving increasing queries about the on-the-job learning component of the LBP scheme.

In response, they've put together two compulsory parts of the LBP scheme - a Codewords article and questions

about on-the-job learning

WHY INCLUDE ON-THE-JOB **LEARNING?**

On-the-job learning was introduced as a simple method of recording naturally occurring learning that has taken place during everyday work onsite or in the design office. Many LBPs are practical people and learn by doing, rather than by sitting in a classroom.

The LBP licence class competencies have been written to reflect this, requiring action and the application of a skill in order to demonstrate understanding. For example, requiring LBPs to construct, install, fabricate, prepare, fix, set out or erect by way of 'performance indicators'.

WHERE DO I START?

The following table provides some useful pointers and questions to help recognise and harness on-the-job-learnings.

HOW DO I KEEP TRACK OF MY **LEARNING?**

On-the-job-learning is not about creating more administrative work, rather it is about harvesting learning opportunities that arise during everyday work.

Here are some handy ways of keeping track of what you've learned:

- Go to www.lbp.govt.nz and either:
- Download, complete and submit the Record of Learning form.
- Submit your learning activity through the LBP portal.
- Provide a relevant Record of Work or Certificate of Design as evidence.
- Take a photo (this is an easy way to create a record to file later).

QUESTION	GUIDANCE	EXAMPLES
Have I done anything lately that extended my knowledge base or tested my thinking in relation to my work?	If you have come up against a new and/or complex task that caused you to take stock and read the plans several times before launching into a particular task, then this might be a good example of on-the-job learning.	 Prepare, set out and construct a complex engineered foundation system. Design or construct a fire-rated, sound-rated and diaphragm ceiling. Design or construct a house in an extra-high or specific engineering design wind zone. Fix a new drained and ventilated wall cladding system. Install a new roofing profile.
Have I used a new product, material or method of construction lately?	Often new products require you to review plans, specifications or product literature. You may even contact the manufacturer for guidance on how to install the product. This is a valid example of learning that can be used to meet this requirement. This could be in the design office or onsite.	 Install a new bracing system (eg, wall, ceiling, floor). Prepare deck framing for a new proprietary balustrade system (eg, new fixings, strapping blocking and joist layout to accommodate balustrade). Fit a new insulation product.
Have I attended a trade talk or 'builders' breakfast' where a new product, material or regulatory requirement has been presented?	If you have attended a trade talk and later used the product or practice in question this is an example of on-the-job-learning.	 Install a new window and flashing system. Fix 'Grade E mesh' in a raft slab. Fit a new generation 'internal vapour management' or 'airtightness system'. Comply with a new health and safety requirement onsite.
Have I had an RFI or failed a council building inspection that caused me to revisit a piece of work?	A failed inspection or request for information (RFI) can lead to a legitimate learning.	 Remove and replace non-complaint flashings. Answer an RFI (eg, design a junction detail between two dissimilar cladding types).

CODEWORDS QUIZ

(1)Why was on-the-job-learning introduced in 2015?

- So that legitimate learning occurring on the job can be a) easily captured.
- b) So your boss can keep tabs on you.
- To increase the administrative burden of being an LBP. c)
- (3) Where can you learn more?
- In the Builders' Omnibus 2017. a)
- On www.lbp.govt.nz or contact the MBIE service centre b) on 0800 24 22 43.
- In the Dominion Post or the New Zealand Herald. c)



- Install additional brick ties to comply with consented drawings.
- Adjust cavity construction to comply with the building • code.
- (2) Does on-the-job-learning only relate to technical competence?
- a) Yes.
- b) No. It can also relate to health and safety, regulatory knowledge and any other relevant part of performing your role.
- (**4**) Can you use a record or certificate of work as evidence of doing something new where you have learnt something?
- Yes, simply retain the record as evidence. a)
- b) No, neither can be used.
- Maybe, but it depends if you have a site licence or not.

SKILLS MAINTENANCE

Performing prescribed electrical work

Like restricted building work (RBW), prescribed electrical work (PEW) is governed by strict licensing regulations – here's what you and your customers need to know

n recent years, both LBPs and non-LBPs have been known to undertake prescribed electrical work. It's important to note that this is illegal - only licensed electrical workers are permitted to carry out prescribed electrical work.

The one exception to this rule is that owner-occupiers of residential premises may carry out some types of electrical work without a licence.

WHAT CAN HOMEOWNERS DO?

Work that can be done by the owner of the premises is listed in Regulation 57 of the Electricity (Safety) Regulations 2010 and includes:

- Removing and replacing fuse links.
- Connecting and disconnecting permanently wired appliances.
- Moving switches, sockets and lighting outlets if they are wired with tough, plastic-sheathed cables.
- Replacing switches, socket outlets, light fittings, ceiling roses, water heater switches, thermostats and elements.

CODEWORDS QUIZ

(5) What is the similarity between PEW and RBW?

- a) Both are required to be carried out by appropriately licensed practitioners.
- You would encounter them both on a new small to medium b) residential construction project.
- There are exemptions in both regulations for owners of c) properties to carry out work
- d) All of the above.

Before a homeowner does any work themselves, however, they need to familiarise themselves with the Electrical Code of Practice 51 (external link).

Other than these exempt tasks, having electrical work undertaken by unlicensed tradespeople is not only unsafe, but illegal and you could be fined (if convicted) up to \$10,000 if you:

- Do prescribed electrical work while not licensed to do so.
- Cause, intend to cause or may reasonably cause any other person to believe that you are licensed to do PEW.
- Hold yourself or your company out as being licensed to do PEW.

WHAT CAN YOU DO ON THE **BUILDING SITE?**

If you need to use an electrical worker, you should check that they are licensed. You can check the public register for electrical workers or ask to see the electrical worker's licence card before work begins. Having a current practising licence means that the electrical worker is up to date on current safety

> (6) What are the risks if an unlicensed person carried out prescribed electrical work?

- a) It is illegal and the work may be unsafe.
- They will be given a Certificate of Compliance.
- There are no problems if an LBP does prescribed electrical c) work
- $(\mathbf{7})$ When can an LBP carry out prescribed electrical work?
- When no one else is looking. a)
- Only if they are a licensed electrical worker or are 61 working under the exemption.
- Only if they provide a record of work for the prescribed electrical work

TRAINING **SKILLS MAINTENANCE**

Carpentry LBP disciplined

Building Practitioners Board cancels carpentry LBP's licence due to serious negligence and incompetence

ase number C2-01409 relates to Grant Tromp*, an LBP licensed in carpentry, who was contracted by a homeowner to carry out alterations and to build an extension on an existing house. Mr Tromp did not obtain a building consent for the work and failed to carry out the building work to an appropriate standard, resulting in him being disciplined and his licence cancelled.

The Board upheld two grounds for discipline:

- Negligence or incompetence failing to comply with building consent requirements, and building work.
- Working outside one's competence.

NEGLIGENCE OR INCOMPETENCE - FAILING TO COMPLY WITH BUILDING CONSENT REQUIREMENTS

Mr Tromp was initially engaged under a 'design and build' contract to carry out renovations to a kitchen area. According to Mr Tromp, he thought Schedule 1 of the Building Act 2004 (building work that does not require a building consent) applied to the work, so did not think a building consent was required. Mr Tromp subsequently provided the homeowner with other concept plans and was then also engaged to extend and enclose an existing porch into a new room.

However, a building consent was required for the kitchen renovation, because the hot water cylinder and associated plumbing work was not exempt under Schedule 1 (see page 89 of the 'Building work that does not require a building consent' guidance). The extension and porch enclosure also required a building consent, because it was also not covered by any of the exemptions in Schedule 1 (see page 50 of the guidance).

The Board found that Mr Tromp was negligent in that he did not obtain a building consent for this work as required under the Building Act 2004.

NEGLIGENCE OR INCOMPETENCE -**BUILDING WORK**

In addition to the lack of building consent, the Board found that Mr Tromp had also been negligent with respect to the work he carried out and that Mr Tromp failed to comply with both the Building Code and NZS 3604:2011 (the relevant standard).

There were significant shortcomings with the flashing and joinery installation, which was not weathertight. Sill flashings had been left out and only sealant had been used to waterproof cladding junctions. The roof framing and subfloor framing construction were not within the scope of NZS 3604:2011, because the spans used were too large for the framing members installed. An engineer should have been engaged, or different construction methods should have been used.

WORKING OUTSIDE ONE'S **COMPETENCE**

Mr Tromp was an LBP licensed in carpentry. He did not think the work required a building consent and, as such, he thought it was not restricted building work. He therefore undertook the design as well. He said he purposely designed the extension and enclosure of the porch to fit within Schedule 1. Mr Tromp did not draw his construction details from Acceptable Solutions or other tried and tested construction methods and the design and construction details he used did not comply with the Building Code.



procedures and has access to electrical

When work is finished, ask for

a Certificate of Compliance and

Electrical Safety Certificate. Electrical

workers are required by law to certify

particular work. The certification is

been carried out by an authorised

person and that it complies with the

You can find out if an electrical worker

Workers Registration Board website.

is registered or licensed on the Electrical

safety requirements.

a public assurance that the work has

standards.





As this decision clearly indicates, carpenters and other trades should not take on the role of designer, which is a specialist field with its own licence class

Ultimately, the Board found that he worked outside his competence when he carried out the design work. A competent designer would have ensured better construction design and elements were used in the extension and would have identified that building consent was required for the work undertaken.

WHAT CAN LBPS LEARN FROM **THIS DECISION?**

Failure to correctly interpret Schedule was identified as an issue in the annual Building Practitioners Board report, and it was a major part of the process breakdown in this circumstance. If a building consent had been obtained, the compliance process would have identified the design deficiencies and they would have been corrected. As this decision clearly illustrates, carpenters and other trades should not take on the role of designer.

MBIE has produced guidance on Schedule 1 of the Building Act 2004 that is worth reading, if you are considering undertaking exempt building work. Remember - if you are in doubt as to whether the intended building work will come within Schedule 1 or not, it is best to seek advice from an authoritative source.

*Due to the seriousness of the matter, the Board has chosen to name the LBP

COMMUNITY NEWS

PlaceMakers nails factory upgrade



One of Steve's 70-strong team tacking trusses on the new truss bed

PlaceMakers investment in the recently refurbished Waikato frame and truss plant has been a huge win for both the plant's employees and its customers, with productivity gains in excess of 50% and climbing

he plant's refurbishment was staged over a period of around 12 months and was completed recently following the installation of a new air extraction system.

Steve Johnston, Manufacturing Manager at Frame and Truss Waikato and Bay of Plenty, says that production has increased up to 100%.

Steve says that most of the productivity gain is a direct result of new machinery.

"We installed two pre-nail Spida speed lines. Previously, we had to manually build all the frames on the line as it moved down the conveyor belt, whereas now we have a component table

working alongside the speed lines," he says.

"Where there needs to be a door or window, we create that as a component on the table and then drop it into the frame on the speed line where it is being built. It's a lot safer, guicker and achieves a better finish; we've calculated it's around 35% faster than the old method."

The speed lines also came with an automated nog nailer, which fixes the nogs to the studs during the preassembly phase.

PRESSING THE PACE

Steve says that in addition to the speed lines, they also installed two new truss

presses just before Christmas.

"Our new main multinail press has the capacity to build a 14x4m truss, so we're actually able to produce two smaller ones simultaneously, which we couldn't do before," he says. "We can now make a standard truss in three minutes, down from an average time of 10-12 minutes."

He says they also added a jack truss press, which has allowed them to automate a lot of the joining process when producing smaller trusses.

Other changes include improving the plant's layout and expanding the number of safety walkways.

FRESH APPROACH

Steve says that because of the new machinery and increased productivity, a new extraction system was required to remove excess dust.

"It wasn't dangerous as such, but obviously we just want to reduce the amount of dust our staff is exposed to as much as possible. The air is as clear as it is outside now."

The air wasn't the only part of the plant to be refreshed, with new training systems put in place to help keep staff motivated and encourage their individual growth.

"With new guys on the line, they're not allowed to touch a nail gun for the first two weeks, and until their trainer is happy, they're not allowed to work unsupervised," says Steve. "I think the biggest change we've introduced, though, is cross-training."

TRAINING SUCCESS

"For example, there are three pre-nail stations and it used to be that someone in the pre-nail team only knew how to work their station.

Now if someone is away or needs a hand, they can just jump in and start working, so we've got a more flexible workforce."

The plant upgrade also involved the introduction of two other training initiatives - Step Up, an internal Fletcher Building training initiative, and Whaka Tupu, a Maori leadership course.

"We have a lot of guys working here who have faced some challenges growing up. I see them working hard and pulling together. These courses are aimed at not just upskilling our staff but helping them grow, develop leadership skills and work as a team," says Steve, who has noticed a big difference in staff attitudes.

"They're trying to beat all their records and morale has just gone through the roof! Everyone is really taking pride in their work now, because of the quality product we're able to produce."





The new machinery and staff processes have helped increase productivity by up to 100%

MBIE BUSINESS.GOVT.NZ

CCAA 2015 final stage in force



Retentions are more common in commercial construction projects, but the changes can also apply to residential contracts

Retention money withheld under commercial construction contracts can be held in two ways

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

In December 2015, the Construction Contracts Amendment Act 2015 (CCAA) was passed, amending the Act in three areas in a staged process:

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

In February 2017, shortly before the third stage was due to come into force, Parliament's commerce committee proposed two additional amendments:

1) That the retention money provisions will only apply to contracts entered into, or renewed, on or after 31 March 2017.

2) That the CCAA include an alternative option for protecting money. The option

proposed was obtaining a financial instrument, such as insurance or a payment bond, to provide third-party protection of retention money. There would be strict requirements on the financial instruments to ensure repayment of retention money.

In March, both amendments were passed. The CCAA 2015 and the Regulatory Systems (Commercial Matters) Amendment Act 2017 amended the CCA to state that retention money withheld under commercial construction contracts must be held on trust or via a complying instrument from 31 March 2017. This requirement only applies to contracts entered into, or renewed, on or after 31 March 2017.

The new retention money provisions provide greater protection of payment for contractors and sub-contractors owed retention money for work done and ensure the money held in retention is responsibly managed.

HOW DOES IT WORK?

Where payers withhold retention money under a commercial construction contract, the payers must either: .

1) Hold retention money on trust in the form of cash or other liquid assets readily converted into cash - the default option.

2) Obtain a financial instrument (a 'complying instrument'), such as insurance or a payment bond, to provide third party protection of payment of retention money.

Ministry of Business

1) Retention money held on trust

When payers choose to hold retention money on trust, the payer becomes a trustee and the payee becomes the beneficiary.

The obligations of the payer holding retention money on trust end when:

- Retention money is paid;
- The payee to whom the money is payable agrees to give up their claim; or
- The money ceases to be payable by law, ie, the money ceases to be payable under the construction contract.

Retention money:

- Does not need to be held in a separate trust account
- May be mixed with other money, ie, it can be held in the same bank account as other money
- May be held in the form of cash or

other liquid assets

May be invested and interest earned can be kept provided the investment is in accordance with the trustee act 1956.

2) Obtaining a complying instrument

This option allows payers to obtain a complying instrument as an alternative to holding retention money on trust. If a financial instrument is purchased that does not meet the requirements set out in the CCA, then it will not be considered a complying instrument and retention money must be held on trust.

For a financial instrument to be a 'complying instrument' for the purposes of the CCA, it must:

- Be issued by a licensed insurer or registered bank;
- Be issued in favour of the payee or endorsed with the payee's interest;
- Require the issuer to pay the retention money to the payee if the payer fails to make payment when it is payable under the construction contract; and
- Enable the payer to enforce the promise to pay against the issuer.

The payer is also responsible for ensuring the premium or other money that is payable for the instrument is fully paid and all terms and conditions are satisfied so that the instrument remains in effect.

record:

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) What can retention money held on 2) What is a financial instrument? trust be used for? a) An instrument used to generate a) No purpose other than remedying income a payee's breach of their obligations
 - b) A means of providing third party protection to retention money, such as a payment bond.
 - c) A calculator.
- Supplementing budget overruns.

Covering wages when you have

under the contract.

a cash shortfall

b)





PROVISIONS

provisions).

force in 2003.

under the contract.

fixing defective work.

You cannot include in a contract any terms designed to delay payment of retention money. Any such terms in a contract will be void.

Similarly you cannot include any conditional payment provisions for retention money in a construction contract (known as pay-when-paid

Conditional payment provisions have been banned since the Act came into

The amendments make it clear that this ban also applies to provisions for payment of retention money.

NOTE: Payment of retention money, including the promise to pay set out in complying instruments, cannot be conditional on anything other than the performance of the payee's obligations

Retention money that is held on trust cannot be used for any purpose other than to remedy a payee's breach of their obligations under the contract, such as

WHAT RECORDS MUST BE KEPT?

Parties holding retention money must keep proper accounts that correctly

All retention money held on trust;

- All amounts of retention money protected by complying instruments; and
- All dealings and transactions in relation to the retention money or complying instruments.

In relation to complying instruments payers must keep records of:

- Each payer's interest in each instrument;
- The liability limit of each instrument;
- Evidence that the premium or other money that is payable has been paid;
- Any failure to comply with the terms and conditions of the instrument.

All records that relate to a payee must be made readily available without charge to those parties owed retention money.

LATE PAYMENTS, INTEREST AND FEES IN RELATION TO RETENTION MONEY

Interest must now be paid on late payments of retentions at the rate agreed under the contract.

In the event of a payer's insolvency, retention money will be protected. Retention money is not available for the payment of debts of any creditor of a payer and cannot be taken by a court order at the insistence of any creditor of a payer.

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



- 3) When can conditional 'pay-when-paid' provisions be included for retention money in a construction contract?
- a) When retention money is in the form of liquid assets
- When the payee agrees to those terms. b)
- c) Conditional payment provisions have been banned since 2003.

BRANZ

Waterproofing tiled showers



Past media reports have drawn attention to damage from leaking showers. Although tiles may be impervious to water, cement-based grout is not, so the waterproofing in tiled showers is crucial

leak in a tiled shower can be difficult to discover and may result in severe damage and costly repairs. The key to a tiled shower that won't leak is in the substrate and waterproofing installation.

PERFORMANCE REQUIREMENTS

New Zealand Building Code clause E3 Internal Moisture requires that surfaces likely to be splashed must be impervious to water, easily cleaned and prevent water from penetrating behind linings or into concealed spaces.

Acceptable Solution E3/AS1 provides a range of options for linings and finishes in showers that meet the performance requirements of clause E3. These include that ceramic or stone tiles have 6% maximum water absorption, have waterproof grouted joints and are bedded with an adhesive suitable for the tiles, substrate and wet area environment.

It also states that ceramic or stone tiles must be laid over a continuous impervious substrate or membrane (see Figure 1).

Information on installing tiled showers can be found in BRANZ's Good Practice Guide Tiling: 3rd edition. AS 3740-2010 Waterproofing of domestic wet areas also provides useful advice.

WATERPROOFING REQUIREMENTS

For enclosed showers, impervious linings and finishes such as walls must:

- Be continuous.
- Be at least 1,800mm high from the floor or top of an upstand.
- Extend at least 300mm above the shower head.

When the shower is not enclosed,







BRANZ

Waterproofing tiled showers (continued)

impervious linings and finishes must extend in a horizontal radius of 1,500mm from the showerhead (see Figure 2).

An enclosed shower with upstands must have a minimum 1:60 fall towards the floor waste. For a shower with a level access, the fall must be at least 1:50 towards the floor waste.

This must extend over a radius of 1,500mm from a point measured vertically below the showerhead or from any wall within the radius (see Figure 3).

For a bathroom or other wet area room with a tiled floor, laying a waterproof membrane across the entire floor and extending it up all walls for at least 150mm is recommended.

A waterstop (see Figure 4) should be provided where the membrane terminates at adjacent spaces such as doorways.

If the substrate is a sand or cement mortar or screed, the waterproof membrane should be laid over this. Cable entry points for under tile floor heating laid under the waterproof membrane must be above the flood level of the wet area.



Select a tile adhesive that is compatible with the waterproof membrane and ensure that tiles and grout are compatible

This article will be continued in the next issue of Under Construction.

BRANZ CONTINUES TO IMPROVE ITS MAINTENANCE SCHEDULE SERVICE

BRANZ's new maintenance schedule workspace is designed to save builders time, thanks to features that make it easier and auicker to use.

Users can now manage volumes of schedules and save, sort and share them within their own personal workspace. The enhanced, easy-to-use features include the ability to:

- Sort and save schedules alphabetically by schedule name or client name.
- Add notes to each schedule.
- Include a practical completion date.
- Send and share your schedules to other users within the tool.
- Save schedules as a favourite when building spec homes and produce copies of favourites for future builds.

For more information, see here: www.maintenanceschedules.co.nz

PROVE YOUR KNOWLE



- 4) Where should cable entry points under 5) What is recommended for wet area the membrane be located for underfloor heating?
- Below the flood level of the wet area.
- b) Above the flood level of the wet area.
- c) Never install cabling in shower areas.
- rooms that will have tiled floors?
- a) Laying a waterproof membrane across the entire a) floor and extending it 150mm up all walls. showerhead
- b) Laying a waterproof membrane across floor areas likely to be exposed to water.
- Laying a waterproof membrane across the c) entire surface area of the room.



- 1.500mm in a horizontal radius from the
- b) 1,500mm in a vertical radius from the showerhead
- c) 1,500mm in a 360° radius from the showerhead.

BUILDERS' BUSINESS

Retentions in the residential sector

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

When, if ever, do or would you use retentions for subcontractors? If not, what do you do to ensure the quality and speed of your subbies' work?

Firm: Spectrum Construction **Principal:** Isaac Driver Location: Auckland Staff: 9

Firm: Kainui Builders **Principal:** Stu Burman Location: Thames Valley/Waikato Staff: 3

We do some light commercial work and for those jobs, I use retentions. For I might on a big job. residential work, I don't normally, as I've built up a working relationship over time with all of my subcontractors.

If I don't know someone, I might make use of retentions because I can't be sure about the quality of their work.

I also use them on larger jobs, because it helps give the client confidence that if something goes wrong, they're not going to be left holding the can once their final payment clears.

If I do use retentions, it'll only ever be a small amount such as 1% or 2%. If during an inspection we find something that has gone wrong, I'll have a discussion with the subcontractor concerned to figure out what went wrong and whether it's their fault or was beyond their control.

Generally, though, because we have such a good relationship we can sort it out pretty easily and, because we've worked together for so long, we all understand what we expect from one another.

renovations; we only tend to build one or two homes a year. I've also worked with most of my sub trades for years.

I trust them and they trust me. I still inspect their work regularly on each job, but there's never many issues they know I'm a fussy bugger and work accordingly!

I haven't sat down yet and had a good read through what the incoming changes entail, but generally I think they'll be good for the industry.

One advantage of a retention is that it does provide subbies with another incentive to do a good job, but because of the relationship I have with my people, they're not really necessary for us.

Now have your say...

WHAT DO YOU THINK ARE THE BIGGEST CHALLENGES FACING THE INDUSTRY IN THE NEXT 10 YEARS? 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. All responses must be submitted by 25 May 2017. The answers to this question will be published in Under Construction July 2017.



I don't really use retentions, but

Most of our work is alterations and

Firm: Todd Grey Building Ltd **Principal:** Todd Grey **Location:** Mount Maunganui Staff: 6

No, I don't use retentions because I've used my sub trades for so long that we know what we're going to get from them.

I do quality checks before they file their invoices and that gives me the opportunity to raise any concerns before making payment and, because of the strength of our relationship, they always sort any issues that do come up in a timely manner.

The only time I'd ever use a retention would probably be if I was taking on a new subcontractor, or the client wanted to withhold money from me - as the main contractor, I'd want to spread that load across the sub trades. That's never happened yet, though.

We generally only have one or two large jobs on at a time, which makes staying on top of inspections easier than if we were a larger business. For bigger companies, I think retentions would be useful as it makes your subbies more accountable when you're not in a position to be making regular inspections.

INDUSTRY NEWS

Consents rebound in February

Seasonally adjusted, the number of new dwellings consented increased by more than 10% for the first time since April last year

tatistics New Zealand's latest figures show that 2,418 new dwellings were consented in February - up 1.6% compared to the previous corresponding period.

The total comprised 1,761 houses, 373 townhouses, flats and units, 225 apartments and 59 retirement village units.

Seasonally adjusted, the total number of new dwellings consented rose 14%, following a 2.1% increase in January. For houses only, the seasonally adjusted figure also rose 14%.

DEPRESSED TREND CONTINUES

The trend for the number of new dwellings consented has fallen 11% since reaching a 12-year-high in mid-2016 and is showing signs of easing or decreasing across all six regions.

However, Statistics New Zealand notes that regional trends are volatile and can be revised each month.

IN THE REGIONS

Compared to February 2016, the number of new dwellings consented in February this year increased in 13 out of the 16 regions, led by Northland (up 51 to 131; +64%), Manawatu-Wanganui (up 43 to 92; +88%) and Bay of Plenty (up 26 to 226; +13%).

Auckland, Gisborne, Hawke's Bay, Marlborough, Nelson, Otago, Southland, Waikato, Wellington and West Coast were the other regions to record an increase.

Canterbury (down 164 to 361; -31%), Tasman (down 19 to 23; -45%) and Taranaki (down 13 to 42; -24%) were the only regions to consent less new dwellings in February 2017 compared to February 2016.

Perfect shake caused Stats House failure

An investigation has found that a combination of factors led to the partial collapse of two floors in Wellington's Statistics House during the November earthquake that devastated Kaikoura

ollowing the magnitude 7.8 quake, the Ministry of Business, Innovation and Employment commissioned an independent panel to investigate the performance of Statistics House to determine what led to partial floor collapses and assess if the regulatory system was up to scratch.

The panel found at the end of March that the following four factors were the main contributors to the six-storey building's failure:

- A highly flexible ductile frame with two bays of frame per precast floor span, which effectively doubled the impact of beam elongation due to the plastic hinging; and
- Shortening of the precast double-tee flooring units, as the ends spalled during the earthquake; and
- Amplification of ground shaking, primarily due to basin-edge effects in the Thorndon basin area; and

• The duration of the earthquake.

Specifically the panel concluded that the primary cause of the partial floor collapses was beam elongation in the transverse moment resisting frames that provide the building's seismic resistance, exacerbated by the multiple bay frame arrangement.

The panel found that the building was designed for the maximum level of ductility allowed under New Zealand's Building Code (NZBC), which means seismic energy would be dissipated mostly in the hinging of the beams that form part of the moment resisting frames.

Results from modeling and analysis found that there was a shortfall in the capacity of the transverse frames, which the panel says may have been a contributing factor to the partial floor collapses but was not a primary cause.

Otherwise, they found that the building was generally designed and constructed in accordance with NZBC requirements

at the time of its construction (2005).

The panel also found that the Kaikoura earthquake generated demands close to or above NZBC design levels, especially for medium-rise buildings in the Wellington region.

The quake's extended duration and multiple movement cycles were important features that influenced the structural performance of the building.

KEY RECOMMENDATIONS

The panel made a number of recommendations following its investigation and MBIE has contacted Standards NZ requesting that the committee reviewing Earthquake Actions Standard NZS1170 and Concrete Structures Standard NZS3101 meet to consider the investigation's findings.

Visit MBIE's website: Information and services > Building and construction > Safety and quality > Statistics House Investigation.

NEWS INDUSTRY NEWS

Construction firms struggling to fill vacancies

Statistics New Zealand's 2016 Business Operations Survey found that more than 2,500 construction businesses have 'hard-to-fill' vacancies

he 2016 Business Operations Survey (BOS) represented almost 40,000 NZ businesses, with 4,566 operating in the construction industry.

Compared to 2014 - when 4,017 construction businesses were included in the survey - the number reporting vacancies rose from 74% to 79%, with 58% reporting they had 'hard-to-fill' vacancies.

Overall, 76% of the businesses surveyed reported vacancies, with 47% reporting 'hard-to-fill' vacancies. Only businesses with more than six employees were included in the survey.

The BOS showed that only 5% of construction business had more than 50 employees. The vast majority (78%) reported they had between six and 19 employees, with the remainder having between 20 and 49.

30,000 JOBS TO FILL BY 2019

The construction industry's recruitment woes are unlikely to ease in the near future, with the latest MBIE Employment Growth Forecast finding that almost 30,000 new employees will be required in construction over the next three years.

That would take the total number of people employed in the industry to more

Safety scholarship for women in construction

Site Safe has announced a brand-new scholarship specifically for women in the construction industry

he scholarship was announced at the Women in Construction Forum in Christchurch and is designed to help women advance in the industry by fully funding their study towards the Certificate in Construction Site Safety.

Site Safe Chief Executive Alison Mollov said it was for women who want to "be the best that they can be" and become leaders who inspire others to see the benefit of a safe, healthy workplace.

Stephanie Cerpa received a general Site Safe scholarship in 2015 and is now working as a health and safety manager at Contract Construction in Christchurch. Stephanie said gaining the certificate had undoubtedly helped advance her career.

"It meant that I got where I wanted to be sooner rather than later. Getting the scholarship was so exciting, because it gave me a high-quality health and safety qualification, which means employers



she said.

"The courses I took for the certificate were relevant to the challenges that I face all the time and the trainers were



than 223,000 by 2019.

Canterbury (9,177) and Auckland (8,787) combined represent almost 62% of the total projected employment growth in the industry. Bay of Plenty, Otago, Waikato and Wellington were the only other regions where projected industry growth exceeded 1,000 employees.

ONLINE BUSINESS

Every construction business in the BOS uses the internet, with 4% reporting that internet sales now make up more than 50% of total sales (compared to 0% in 2014).

know that I've had that core training,"

really passionate about what they were teaching."

Applications open 1 July 2017 and close on 1 September 2017. For more information visit www.sitesafe.org.nz.

HEALTH & SAFETY SITE SAFE



A Class A licence is required to remove friable asbestos under WorkSafe's new licensing programme introduced in April last year

Asbestos is New Zealand's number one killer in the workplace and is responsible for approximately 170 fatalities a year. As part of the recent Health and Safety at Work Act, the regulations for working with asbestos changed – Site Safe has put together some guick tips on what you need to know

B reathing in airborne aspessos in is a serious health risk. Once the fibres enter a person's system, reathing in airborne asbestos fibres is a serious health risk. Once the they lodge in the lungs and may cause diseases like asbestosis, lung cancer and mesothelioma.

These hazardous fibres are released when asbestos-containing material (ACM) is disturbed and, if you don't take the right precautions to protect yourself, you could be risking your life and your livelihood.

TRADESPEOPLE AT HIGH RISK

WorkSafe New Zealand's 2013 report Asbestos and other Occupational Lung Diseases in New Zealand showed that

the National Asbestos Medical Panel was notified of 1,366 cases of Asbestosrelated illnesses between March 1992 and July 2013.

If you have any suspicions that asbestos is present, ask an asbestos surveyor to conduct a survey

The report also found that, by occupation, carpenters, electricians and plumbers combined to account for 67% of all cases. That's because, until the mid-

1980s, asbestos was often used as a fire retardant and for insulation. It can often be found in places such as:

- Sprayed-on fireproofing.
- Soundproofing.
- Thermal insulation.
- Decorative coatings.
- Floor coverings, such as vinyl.
- Cement products, roofing sheets.
- Lagging around pipes.

If you have any suspicions that asbestos is present, ask an asbestos surveyor

to conduct a survey. If asbestos is found, you should bring in a licensed professional.

If you don't take the right precautions to protect yourself, you could be risking your life and your livelihood

If you do uncover or damage materials that may contain asbestos:

- Stop the work immediately.
- Keep people away.
- Minimise the spread of contamination to other areas.
- Get advice on what to do next from a professional

NEW RULES

In April last year, a licensing system for the removal of asbestos was introduced by WorkSafe. There are two types of licences, Class A and B, which determine the type and amount of asbestos that you can remove.

Class A holders can remove:

- Friable asbestos or ACM (asbestos containing material).
- Asbestos-contaminated dust or debris (ACD).
- Non-friable asbestos or ACM.

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.

a licence remove?

a) Friable asbestos.

or ACM

Ь)

PROVE YOUR KNOWLEDGE

Tick the correct answers below and recordw 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 NOT a common application in which you'd expect to find asbestos?
- a) Thermal proofing.
- Sprayed-on fireproofing.
- c) Swimming pool linings.

- Non-friable asbestos or ACM.
- ACD associated with removing non friable asbestos or ACM.

However, a competent person without a licence can remove:

10m² or less of non-friable asbestos or ACM and the associated ACD cumulatively over a project's life.

Minor amounts of ACD, not associated with the removal of friable or non-friable asbestos.

SUPERVISION

Licence holders can nominate supervisors on their WorkSafe licence to supervise workers. A licence must have at least one nominated supervisor. There is no limit on the number of supervisors, provided they meet the criteria.

Supervisors must be aged 18 or over, have a level of experience relevant to the class of licence, be present at the removal area when Class A work is carried out, and in the vicinity and readily available whenever Class B work is being carried out, and be suitably gualified as per WorkSafe requirements.

However, supervisors must have completed the correct training by the end of the April 4, 2018 transition period.

From April 4, 2018, assessors will be required to provide air quality monitoring and clearance certificates for

www.sitesafe.ora.nz





Class A removals

Notifications of licensed asbestos removal should now be made to WorkSafe five days before work starts.

Current certificate holders can continue to operate until the certificate expires, or until April 4, 2018 - whichever is earlier. If you're removing friable asbestos or more than 10m² of non-friable, you must apply for a licence, which will be granted with conditions.

MORE INFO

Last November, WorkSafe introduced a new Approved Code of Practice for the Management and Removal of Asbestos.

To download the code, or to learn more about basic asbestos risks on Site Safe's Passport Plus - Worker Health course or Site Safe's Passport Plus - Flexi (Online + Classroom) course, go to www.sitesafe.org.nz.



Keeping people away from asbestos should be a priority during removal and/or if it is discovered during a job



8) What can a competent person without 10m² or less of non-friable asbestos

c) Large quantities of asbestos-contaminated dust or debris (ACD).

- 9) By when must supervisors have completed the appropriate training?
- a) April 1, 2017.
- b) January 1, 2018.
- c) April 1, 2018.

Class B holders can remove

THE SUCCESSFUL BUILDER

Fronting up to failure



If you think a job might run at a loss, have a confidential conversation with your trusted suppliers

How do you recover when you know a job is going to run at a loss? By acting quickly!

s a builder, it's likely you'll run into at least one job that starts to run at a loss. Even large companies have some jobs that just don't go well.

It may be because of an oversight in pricing, mistakes requiring re-work, or because no one kept an eye on the schedule and the man-hours just blew out.

Whatever the reason, there is less money coming in than planned and, as the business owner, you must shoulder the additional financial pressure.

I've had the privilege of working closely with owners of building companies over the past 12 years and this is what I've learnt from observing those who have survived this type of setback.

CALCULATE HOW MUCH INCOME **YOU HAVE LEFT**

At the first hint of a problem in a job, do an analysis of the associated costs. This can be as simple as adding up all the money already spent on materials, subbies and labour and subtracting that subtotal from the total amount the client will be paying. This will give you an indication of how much you have left to

spend before the job incurs a loss.

Make sure that you include any costs that you haven't been invoiced for yet.

ESTIMATE COST OF COMPLETION

Estimate the materials and subbies you will need to complete the job and talk with your team about the remaining time (cost) required. Compare this total with the amount you have left to spend.

This will give you an indication of the job's likely result.

Of course, this does not allow for the

job to pay its share of overheads, but it does give a simple indication of the likely gross profit or loss.

It also gives you a target to achieve in order to break even or minimise the loss to a manageable amount.

RECORD ANY LOSSES IMMEDIATELY

If you conclude that the job is going to run at a loss, then calculate the likely amount and build it into your financial accounts immediately.

Ultimately, the loss will be what it will be - but knowing its potential impact on your business in advance gives you options (see next section).

Don't procrastinate and simply work harder, hoping it will go away. This is just delaying the pain. If you need to panic, then get it over and done with early.

REVIEW ALL YOUR OPTIONS

Once you know the extent of the likely job loss, you can start identifying means . to reduce its impact. Call a 'Massive Action Meeting' with your team.

Tell them that you need to identify every possible way to save costs across the company. Set the expectation that you intend to get the company through this challenge.

If it's a labour overrun, then spend time brainstorming ways to become more efficient. It's a good idea to do this not

While it may not be an easy conversation, it's in everyone's best interest to keep work profitable all round.

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 recommended you do immediately when you realise a job may run at a loss?
- Panic. a)
- Calculate how much cash you have left to spend on the job.
- c) File for bankruptcy.

just for the immediate job, but for all the jobs you have running.

> Be careful about making large changes too quickly. Simply changing one strategy for another may compound the problem by replacing one ineffective activity with another

It may be that there are easy profits sitting in some of your other jobs that you can capture to offset the losses, examples include:

- Scheduling work more carefully, so scaffolding can be removed early.
- to reduce the cost and frequency of deliveries.
- Rearranging the mix of qualified builders and apprentices onsite to reduce labour costs.

Talk to your subbies and suppliers about ways you might be able to save costs with them and check prices carefully to ensure you are getting your best rates.



Planning material needs meticulously

AVOID KNEE-JERK REACTIONS

When our pet rabbit got frightened, he would react immediately by bouncing off the walls of his hutch! Heaps of activity, but nothing gained except bruises. Immediate reactions are not much better.

Once you have finalised your list of options, arrange them in order of difficulty and start implementing the easiest first. A quick success will encourage you and your team - and help you execute the more difficult strategies.

However, be careful about making strategic changes too quickly. Simply changing one strategy for another could compound the problem by replacing one ineffective activity with another.

TALK TO YOUR FINANCIAL **ADVISORS**

If you suspect that the loss could affect the viability of your business, talk to your advisors early.

Your accountant may be able to offset expected losses against tax already paid, your bank manager may be able to extend your overdraft, and a business consultant can give you some specific strategies to help guide you through.

Crashing out on a job can be painful and even critical to a business' health, but it need not be the end - especially when you identify the problem and take action early.



ne LB	P renewal process.		THE ANTICIDIAN AND AND AND AND AND AND AND AND AND A
11)	What is NOT recommended when managing an unprofitable job?	12)	How could you manage other jobs to offset potential losses?
a) b)	Record any losses immediately. React in a kneejerk fashion	a)	Schedule work carefully, so scaffolding can be removed early.
c)	Talk to your business advisors	Ь)	Fire staff to cut labour costs.
cj		c)	Stop working on them until the loss-making

INSURANCE

BUILTIN



How changes to the Construction Contracts Act could affect your retentions

ew rules for protecting retention money came into effect on 31 March. These require developers and head contractors to hold 'on trust' any retention money they've withheld from their subcontractors.

This obligation, which only applies to commercial contracts, means the head contractor must hold that retention money in the form of cash or other readily convertible liquid assets, making it easier, in theory, for subbies to reclaim this money if the head contractor goes bust.

The problem with this model is that withholding retention money from subbies, but then having to account for it under trust obligations, is an inefficient use of capital in an industry that struggles with both equity and cashflow issues.

A NEW ALTERNATIVE - PAYMENT BONDS

On March 30, Parliament passed a further amendment to the Construction Contracts Amendment Act (CCAA) allowing developers and head contractors to obtain an insurancebacked bond to cover the retention money they hold.

So, if the head contractor failed to pay back retentions, the subcontractor could claim them directly from the insurer. This 'payment bond' would most likely be capped at a certain level, different for each head contractor, who will be responsible for ensuring the amount of retentions they hold does not exceed this cap (or requesting an increase in their bond limit if it does).

A payment bond benefits subcontractors

because they have a guarantee from a third party (the insurer or a bank) that they will get their money.

It also benefits the head contractors, because it means they don't need to hold the retention money on trust.

They can use it and account for it within their business however they wish, as long as their insurance bond is enough to cover all the outstanding retentions they hold at any given time.

ANOTHER OPTION – RETENTION BONDS

There is also another option, where the head contractor agrees to accept a bond in lieu of retentions (a retention bond) from the subcontractor instead of withholding retention money from each invoice.

This benefits the subcontractor because no retentions are withheld in the first place, so there is no danger of losing them and they get paid in full. However, a premium would be payable on each bond.

It also benefits the head contractor because they have no 'on trust' obligations.

The drawback for them is that they can't use retentions as a form of revenue to fund their business (although this is not necessarily good business practice in the first place and part of the reason

retentions are now being held 'on trust' or in a financial instrument). Retentions bonds are readily accepted under most major construction contracts.

> A payment bond benefits subcontractors because they have a guarantee from a third party (the insurer or a bank) that they will get their money

THE INSURER'S VIEW

Bonds are already common in large construction projects, where they protect the principal by guaranteeing that contractors will complete the project.

The basic principle of insurance is to transfer risk from one party to the other, in return for payment of a premium.

This frees up money, such as retentions, that the main contractor would otherwise have had to set aside to cover unforeseen costs.

This money can instead be invested in the contractor's or subcontractor's business, meaning that a bond-based model for retentions could lead to improvements in the overall financial health of the industry.

HOW DO I APPLY? The process for applying for an

Builtin New Zealand is a specialist in insurance & guarantees for builders & tradespeople. For more information visit www.builtin.co.nz, email Ben Rickard at ben@builtin.co.nz or call him on 0800 BUILTIN.

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)** According to Builtin, what is the problem with holding retention money in the form of cash or other readily convertible liquid assets?
- a) It's an inefficient use of capital in an industry that struggles with equity and cashflow issues.
- Ь) It could be stolen.
- Readily convertible liquid assets don't usually c) have high returns.

14) What does the new amendment, 15) According to Builtin, why could using passed on 30 March, allow developers and head contractors to use for retentions?

- a) A retention bond.
 - A payment bond A bank loan

b)

www.builtininsurance.co.nz

insurance-backed bond is simple The contractor completes an initial assessment, which covers details such as their financial solvency and management structure.

This is effectively the insurer's underwriting criteria, which they use to make sure they're taking on 'good risk'.

Once this is approved, the contractor simply applies for a bond each time they need one, in much the same way as they would for other insurance cover.

Premiums vary depending on the size and scale of the job, defects liability period and the amount of the bond required.

IN A NUTSHELL

If you're a subcontractor who has retentions withheld, for any new contracts from 31 March, your head contractor must hold these retentions on trust, which means they have to account for them in cash or other readily convertible form.

If proposed amendments come into law, head contractors could insure the retentions they hold instead of holding them on trust.

A subcontractor can provide a retention bond instead of having cash retentions withheld in the first place, so they get paid in full and there's no risk of losing their retentions.



- a bond-based model for retentions lead to improvements in the financial health of the industry?
- The would-be retention money could instead be invested in the contractor's or subcontractor's business.
- It's more secure than a payment bond. b)
- It will encourage customers to spend more on c) bigger builds.





TRAINING

SKILLS MAINTENANCE



PlaceMakers



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Airport transfers

Return flights for 2 adults to Auckland

Scenic helicopter Hight from Auckland to Waitseke Island

2 nights accommodation

staying at Marino Ridge. Waiheke Island

CHITH IN AND CUSTOMERS GO IN THE DRAW TO WIN A WEEKEND AT MARINO RIDGE, WAIHEKE ISLAND

Airport transfers



PlaceMakers

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