



Editorial

In this issue we have further articles from ACC – Think Safety. Remember safety on the job site is everyone's concern.

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ACC – THINK SAFETY FIRST

The ACC recently gave a presentation to Council staff on the number of accidents and associated costs with these accidents.

Prior to the presentation I was of the opinion that the construction industry had improved over the years and we were all taking safety on the job site fairly seriously and accidents were reducing in number.

It appears that this is not the case.

The figures provided by Statistics New Zealand are a terrible story and figures do not reflect the devastating effect of injuries and death on family and friends.

We owe it to ourselves to ensure we are safe on the worksite and that we are able to front up to work the next day and the following days.

The following is only a summary of the statistics provided by Statistics New Zealand. Please take time to read them and reflect on how you might incorporate safer work practises in your workplace. Remember if you get injured, who will look after your loved ones.

- The construction industry has the highest number of ACC fatal injury claims (this includes falls, etc. and asbestos related illnesses)
- 24% of all workplace fatal claims are from the construction industry.
- ACC received 26,900 claims per annum from works in the construction industry in 2006 (equal to the population of the Southland District Council's area). This is 74 per claims made per day from construction workers!

Injury Statistics – Work Related Claims: 2007, released October 2008

The message here is clearly we need to ensure we are all undertaking safe working practises. Accidents will happen but we need to minimise the accidents in the workplace as much as possible.



STAY SAFE WHEN WORKING SOLO

What would happen if you got injured while working alone on a building site? Could you raise the alarm and get help quickly enough? And are you confident your staff are safe when working along?

It's a question all builders need to ask themselves. This is because there will be no doubt be times when either you or your employees are required to work alone – whether it's as the only person onsite, or when working on a part of the site that's isolated from other workers.

The risk to builders of working alone is compounded when using potentially dangerous equipment, such as saws, nail guns, etc. or working in potentially dangerous situations, e.g. at heights.

To offset these risks, you should take sensible precautions. There's a lot you can do to ensure help can be summoned if things go wrong. Even better, there are steps you can take to prevent you or your staff getting into a dangerous situation in the first place.

Assess the Risks Involved

A good way to start is by assessing the risks involved in any task that you or your staff may have to do along. Ask yourself "Is it really safe for one person to carry out this task on their own?"

Here are some key risk factors you should consider:

- *Plant and equipment* – is there anything that needs to be used that will require more than one person to operate safely?
- *Access* – is temporary access equipment, such as ladders or trestles, required to enter and exit the site? If so, can it be handled safely by one person?
- *Heavy loads* – are there any heavy objects that need to be moved or lifted? If one person tries to move a load that ideally should be handled by two or more workers, there's a risk of a serious strain, back injury or worse.
- *Security* – is the site secure, or a safe place to be working alone? This is especially important to consider if either you or your works are female.

Use Safety Equipment

Safety equipment can help prevent injury for anyone working on a building site, but is even more crucial for those working alone.

A wide range of safety equipment and protective clothing is available on the market these days, so get whatever gear is appropriate for the task you or your employees will be doing – and make sure it gets used.

Know Your Legal Responsibilities

As an employer, you have certain legal responsibilities when it comes to ensuring the safety of employees who work alone.

The Health and Safety in Employment Act says employees who work alone should be at no greater risk than they would be if working with others. It's your job to take whatever steps are necessary to ensure this is the case.

The law also says you need to talk to employees about the hazards they face at work.

A hazard is defined as any thing, process or situation that has the potential to cause harm. Under this definition, working alone is a hazard in its own right, so you need to discuss this with any employee you ask to work unsupervised.

Good Training is Important

One of the best things you can do to ensure staff working alone are as safe as possible is given them appropriate training.

In fact, good training is critical for those who have to work solo – this is because there'll be no one around to supervise them, or take control in an emergency.

Ensure all staff are well informed about what hazards they face in the workplace. They should also know how to avoid or reduce the risks posed by those hazards.

It's essential works know what to do in an emergency, too. If they have a clear emergency plan to follow, they'll be less likely to panic if faced with a challenging situation.

Keep in Touch

Another way to enhance the safety of anyone working alone is to keep in regular contact with them.

Make sure you have a clear idea of where they're working and at what time. That way, if they don't turn up where or when they're meant to, you can send someone to check that they're OK.

It's not unheard of for people who've been injured when working alone to go for hours or even days before getting help – simply because no one knew exactly where they were. If you're injured, prompt medical attention can spell the difference between life and death, so its important to act quickly if someone is unaccounted for.

Another good idea is to make sure anyone working alone has some way of communicating with others in the event of an emergency. Consider providing staff with a cellphone, or some type of alarm.

You can get alarms that 'go off' when they're manually activated, others are triggered when a particular activity isn't performed.

If In Doubt, Wait Until Support Is Available

It's not possible to eliminate all risk from working alone. But by taking precautions, you can reduce the risks significantly.

If, however, after careful consideration a situation simply looks too risky for one person to handle on their own, don't chance it. Get someone else to help, or put the job on hold until extra hands are available.

For more information on workplace safety, visit www.acc.co.nz.

CLEARING THE AIR

The lungs are one of our most sensitive and easily damaged organs, as well as being a primary route of entry to the body for a range of potentially harmful substances.

Sanding, spray-painting, concreting and welding are all common tasks carried out in the construction workspace – and all have the potential to create harmful dust and fumes.

To keep your lungs in good shape, therefore, it's a good idea to be clear about what some of the risks are – and how you can counter them.

What Are The Risks?

Wood Dust

Wood's a natural product, so there can't be too much risk in breathing it in, right? Wrong.

Wood dust has been linked to various medical conditions, including asthma, lung cancer and dermatitis (skin rash or irritation). Hardwoods are thought to carry the highest risk but any type of work dust can cause harm.

One of the most important things to realise when it comes to wood dust is that what you see is only part of the story. Sawing or sanding wood produces many tiny particles that are only visible under a microscope. It's these microscopic particles that pose the greatest health risk, because they float in the air and can easily enter and lodge in the lungs.

Paints and Solvents

Wood dust isn't the only substance that can bypass our sensory alerts. Many solvents (such as paints and glues) contain potentially harmful chemicals that become airborne when the lid is taken off the containers. This is because the fumes emitted are either odourless or not noticeable until they've already exceeded safe levels. Note that smell is no indication as to whether a chemical is harmful or otherwise.

The nose can quickly become desensitised to strong smells, too, so even if you can smell a solvent at first, after a short while using it you may no longer notice it.

Concrete

You may have laid tonnes of concrete in your time with no apparent side effects. But that doesn't mean its risk free.

Breathing in cement dust when emptying bags or cutting concrete may expose you to silica and other contaminants, which can irritate the nose and throat, and at worst, lead to nodules and scarring in the lungs. Again, the large particles are obvious but it may be the particles that you cannot see that present the risk of long term injury.

Welding

All metals give off fumes when heated as part of the welding process. The risk is different depending on the particular metal being welded, but it always pays to exercise caution. In addition, the flux either present in the welding rod or added during the welding process may be emitting chemicals that present significant health risks.

Toxic fumes can also be released by solvents used to clean metal before welding starts.

How To Manage The Risks

There are a number of things you can do to protect your lungs against harmful dust and fumes.

There are some simple guidelines that will help you clear the air in your shed, or at least reduce the risk presented by any harmful particles that may be floating around in there.

Apply the three step hazard management rule

A good general tip is to treat airborne irritants as you would any other hazard in the workplace, and apply the 'eliminate, isolate, minimise' rule:

- Eliminate altogether as many respiratory hazards as you can. For example, use ready mixed concrete, and non toxic products instead of products that contain solvents that have a known health risk.
- If you can't eliminate the hazard, isolate it. For example, use dust catching devices on power equipment such as saws and sanders. Ideally, use HEPA (High Efficiency Particulate Air) filters, and check dust catching devices regularly to make sure they're working properly.
- Take steps to minimise the effect of any unavoidable hazards you're exposed to. For example, ventilate your workspace and wear protective equipment such as a respirator – be very careful to select the right equipment and filters.

Maintain An 'Open Air' Policy

The more enclosed your working area, the greater the hazard posed by airborne contaminants. If possible, therefore, it's a good idea to shift tasks such as applying chemical strippers, wood finish, adhesive, spray paint or other solvents outside. Try to position yourself upwind so any fumes produced are blown away from you.

If you have to work inside, be sure to provide good cross ventilation. Set your workbench halfway between two windows or a window and exterior door. Place a box fan in one window and be sure that it's blowing out. Then open the other window or door to create a through draught.

If you are creating dust regularly as part of your work, consider an extraction system fitted with HEPA filter of some type. These can be inexpensive and will also make the working conditions more pleasant.

Use Appropriate Protective Equipment

Wearing a face mask can be a nuisance, especially in hot weather, but it's a small price to pay compared to the harmful effects of breathing in airborne contaminants. As a final line of defence, therefore, you should wear appropriate protective equipment when carrying out any task that may generate harmful dust or fumes.

Respirators fall into two main categories:

- Disposable respirators. These have a foam cut filter, held in place by one or two elastic head bands, and are generally designed for low risk situations.
- Respirators with more sophisticated face masks and filters, including negative pressure reusable respirators, PAPP (Power Assisted Air Purifying) respirators and FPBR (Fan supplied Positive Breath Responsive) respirators.

Although they're cheap and used widely, disposable respirators do not offer significant protection. For a start, they're not completely airtight, so irritants may still enter the lungs through the gap between the filter cup and face. In addition, the material used in the filter may not trap the smallest particles, which can do the most damage. Also, unless specifically stated a disposable respirator won't provide significant protection against fumes and vapours. So it may be safer to opt for something more robust, depending on the tasks you are doing.

Ideally, get advice on what type of respirator is best for you by consulting a health professional or member of the Occupational Hygiene Society. And when using a respirator, remember to keep it on at all times – just ten minutes exposure to fumes during eight hours of spraying will reduce your protection by 80 percent!

For more information on how to protect yourself from dust and fumes, visit www.acc.co.nz/injury-prevention.

SLEEPING ON THE JOB

Sure, everyone gets tired – especially after a long week at work. But is there a difference between being a bit weary after a hard day's work and being fatigued?

The answer is yes – absolutely. Fatigue is common amongst Kiwi builders – most of whom are self employed and are working hard all day on the job, only to spend the evenings on the paperwork, like quoting and doing the accounts.



So, the question we really should be asking is whether working while fatigued is safe, and if it isn't, what can we do to prevent it?

Plenty. In this article, we look at what fatigue is, and show you how to recognise it in yourself and those working around you. We'll also give you some useful tips on how to manage fatigue and make your workplace safer for everyone.

What is fatigue?

Think of it this way: your body is a bit like the petrol tank in your ute. In order to run properly, you need a full tank of gas – which is about seven to eight hours continuous sleep each night. If you get less than this, your 'tank' can start to empty. Sure, you can keep on going for a while – a day or two, maybe, but eventually you'll need to have a couple of good nights sleep again to fill it up again.

This type of sleep loss slows down your reaction time, affects memory and makes you more likely to make mistakes. Fatigue greatly increases the dangers of having a workplace accident or being involved in an incident while driving that could lead to a crash. Which is why it's important to recognise the signs of fatigue before it can get you into trouble.

When you are fatigued:

- Your reactions are much slower
- Your ability to perform mental or physical tasks is impaired
- Your ability to concentrate is reduced
- It takes longer to work out and understand what is happening around you are the worksite or on the road
- You may feel some discomfort or pain, which can lead to injury.

Cause of fatigue:

Mostly, the causes of fatigue are commonsense, but when you are suffering from fatigue, even the most obvious causes may not occur to you.

It is good to remember that fatigue is different to tiredness. Being tired is a normal part of our day. An individual's performance level only slightly drops due to tiredness but the body can quickly recover if required. Fatigue is an increased state of tiredness where performance is severely degraded with no guarantee that it can be improved quickly when required.

Here are some of the common causes of fatigue for those who work in construction:

- Long hours, difficult or strenuous work
- Physical requirements of the job
- Irregular and unpredictable working hours (on call)
- Continuous exposure to noise
- Poor work ventilation, lighting and design
- Constant concentration of a fixed or moving point
- Shift work and excessive work schedules
- Working more than one job

- The home environment

Fatigue affects your ability to do your job

Fatigue affects the way you carry out your work. If you go without sleep for long enough it eventually becomes impossible to stop 'nodding off' (micro sleeps), and you will be completely unaware you're doing it.

Safe to say, this can be very dangerous for builders and others working in construction. Everyday aspects of your job, like driving the truck to the hardware store, using power tools and operating heavy machinery, such as a digger or a backhoe, can suddenly be a source of real danger to you and those working around you when you are suffering from a prolonged lack of sleep.

Common myths about fatigue

Everyone has a 'cure' for fatigue up their sleeve – like knocking back energy drinks, winding down the window or playing loud music, but the reality is, the only real cure for fatigue is sleep.

Banking on these unreliable methods to manage your fatigue is dangerous and may actually make the situation worse. The message is simple – get some sleep!

Avoiding fatigue

As the old saying goes, prevention is always better than the cure. The same is true of fatigue.

Here's some simple advice on how to manage fatigue:

- Get a good night's sleep, as often as possible.
- Once your body is overtired, the only solution is sleep. If you have built up a sleep debt, try to get at least one, preferable two, uninterrupted sleeps of at least eight hours.
- 'Resting' or 'putting your feet up' does not restore your body in the same way that true sleep does.
- Our bodies are programmed to sleep at night and in the early morning. Even after working night shift regularly, your body won't ever truly adjust to sleeping during the day, it's important for shift workers to put plans in place to get some quality night time sleep as regularly as possible.
- If you're eating just before you go to sleep, it is best to have a light, easily digested meal. A big meal is hard to digest and stops your body shutting down for sleep.
- Exercise and a good diet can help to keep you fit, with a healthy weight and increased blood flow. This will help reduce the effects of fatigue.
- Napping is useful to help manage fatigue, but it is important to remember that power naps can't replace a good night's sleep.
- Alcohol may help you fall asleep, but it won't be good quality sleep.
- Caffeine is a stimulant, which may help keep you awake in the short term, but it can disturb your sleep patterns when you do get to go to bed, making you more tired in the long run.

BUILDING CONSENT PROCESSING

Council's role is to ensure the plans and specifications provided with a building consent application comply with the Building Code.

Then during the construction process, Council check that what is constructed meets the plans and specifications and of course the Building Code.

The purpose of this article is to inform all persons that are involved in the design stage of the building consent process.

Council have a three stage process for dealing with building consents when they are received.

1. Application Form Check
This process involves checking the basic information is provided as per the application form.
2. Vetting Stage
Building consent applications are checked against a standard vetting information checklist to ensure the minimum of information / documentation is provided to allow the application to be processed in detail.

The application is then lodged into the system or rejected (all information is posted back to the applicant).

Issues Council staff are finding at the vetting stage are as follows:

- Only 1 copy of information provided.
- Truss plans not provided at all.
- No assessment of risk matrix for weathertightness.
- Cross sections not provided.
- No detail of H1 compliance.
- Plans not up to readable standard.

The building consent application after being lodged is passed to Council's Roding and Planning sections to undertake their checks. File is then processed by the Plumbing / Drainage and Building inspectors using a standard processing checklist.

In 2008, 96% of all dwelling applications were placed on hold (i.e. Council had to request additional information).

If you are a designer, please ensure that you are familiar with Council's checklists and have answered the questions. Treat the checklists like a series of questions that are required to be answered.

Bear in mind that the Building Code and acceptable solutions change on a fairly frequent basis and the checklists are subject to change.

For your information, both the dwelling vetting and processing checklists are included.

Other types of building work have different checklists, e.g. garage. This is because they have different levels of detail and requirements.



Vetting Officer: _____

Date Vetted: _____

Property Address: _____

**NEW DWELLING BUILDING CONSENT
INFORMATION CHECKLIST**

***Application details required before a building consent
can be processed by Council staff***

- Two (2) full copies of all plans and specifications are required (one (1) for Council files and one (1) will be returned, **and also** one (1) copy of site plan and floor plans with full dimensions (for valuation purposes). _____
- Vehicle Crossing form completed (regardless of whether or not a vehicle crossing is there). _____
- Copy of CT or Solicitor's letter confirming purchase of land. _____
- Site plan showing location of proposed dwelling and vehicle crossing and dimension from all boundaries. _____
- Dimensioned floor plans and elevations showing all cladding systems, construction and floor height above ground level. (Show saw cuts in slabs or specify why they are not required). _____
- Cross sections and construction details. Cross sections to include foundations, floor slab, wall framing, exterior and interior cladding and roofing. _____
- Lintel sizes and spans. _____
- Full specification covering all the trades involved in the proposed building work and scope of work. _____
- Roof truss layout from a registered manufacturer or rafter layout stipulating sizes, spans and load points. Include elevations of all main trusses and truss manufacturers design for lintels. _____
- Wall, subfloor and roof bracing schedule and layout. _____
- Risk matrix (NZBC E2/AS1) Cladding details including all flashing details. _____
- Details of what construction is complying with NZBC acceptable solutions or if any alternative solutions. If alternative solution, provide full details for Council's consideration. _____
- Drainage plan - sewer and stormwater including sizes, gradients, access points, venting of drains and downpipes and calculations of areas and sizes as per E1 and G13 and/or an effluent disposal design and plans.
 - Where wastewater / effluent designs / systems are included in the Building consent Application, Please provide three copies of Wastewater / Effluent Design Plans and Specifications. _____
- Plumbing layout and specification – provide schematic / elevation of soil stack for floors above ground floor complete with structure shown. _____
- Hot water system details – type of storage capacity and location on plan and details of valve venting, type of seismic restraint (if applicable). _____
- Producer statements for any steel work, timber beams outside chapter 15 NZS 3604:1999. _____
- Solid fuel burner installation details if applicable. _____
- Purlin sizes and fixings, top plate fixings and lintel fixings. _____
- Water Service application form completed. _____
- Please provide all workings showing compliance with H1 Energy Efficiency _____

NB: Unsatisfactory site plans which fail to show distances to legal boundaries, inadequate specifications covering all trades, and a lack of elevations may cause delays in issuing of consents.

Processing Check Sheet New Dwelling / Alterations / Extensions / Residential Units

Building Consent No: _____ Septic Solar Hot Water Water Tank

Address of Work: _____

Description: _____

Key: or means 'not applicable' means actioned / approved / complies with Building Code

BUILDING CATEGORY	•	
Building category assessed against Form B28		
VETTING		
Application vetted as per checklist.		<input type="checkbox"/>
Refer B22 letter vetted but consider more information may be required		<input type="checkbox"/> Yes <input type="checkbox"/> No

Comments		
Vetting Officer: _____		Date: _____
Time Cost: _____		
PLANNING		
GIS		<input type="checkbox"/>
Hazard Information / CT		<input type="checkbox"/>
Resource Consent Required		<input type="checkbox"/> Yes <input type="checkbox"/> No
Resource Consent Granted Number: _____		<input type="checkbox"/>
Section 75(2) – Building over boundaries		<input type="checkbox"/> Yes <input type="checkbox"/> No
Section 72 – Floor filled / erosion		<input type="checkbox"/> Yes <input type="checkbox"/> No
Bond Required		<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, amount \$ _____		
RMA Officer: _____		Date: _____

Further Information Requested for Planning:		Date Received	Date Approved
	Name Printed		
1.			

Further Information Requested / Phone Call / Counter for Building and Plumbing and Drainage:						
	Date	Name	Reference	Time	Date Provided	Date Approved
1.						
2.						
3.						
4.						
5.						

Granting of Building Consent

Plumbing and Drainage _____ Date _____
 on
 Building _____ Date _____

I (name above) am competent to undertake processing on this building consent and I am satisfied on reasonable grounds that the provisions of the building code will be met if the building work is completed in accordance with the plans and specifications contained in this building consent (as per section 49 of the Building Act 2004).

Senior Audit Review (BC1.18)

I have undertaken an audit on the following items and am satisfied on reasonable grounds that the processing inspector has undertaken a competent check in accordance with the following forms:

- | | |
|--|---|
| <input type="checkbox"/> Application and Vetting Forms | <input type="checkbox"/> Building Audit |
| <input type="checkbox"/> Plumbing and Drainage Audit | <input type="checkbox"/> No audit undertake |

Signed: _____ Date: _____

NOTE: Audit sheet only to quality advisor.

Time Cost (in minutes)

Plumbing and Drainage	Building	Senior

CSO to add all time up and ensure all time costs are charged with consent in addition to the following costs (inspector to tick if applicable):

	Applicable
DIC	
Certificate against Title	
Peer Review	
MWH (Effluent)	
Other (specify)	

General Information – to be filled out by persons noted against each item.

B.I	Snow Zone	0.5kpa					
	Wind Zone	L	M	H	VH	SD	
	Corrosion Zone	<input type="checkbox"/> Outer	<input type="checkbox"/>	<100m estuary	<input type="checkbox"/>	Sea zone	
	Building Act Considerations						
	Section 72 – Flood Filled Erosion (check under planning to see if these sections affected)		<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> N/A
	Section 75 – Building Over Boundaries		<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> N/A
P&D	DIC		<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> N/A
	Easement		<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> N/A
B.I	Section 67 – Waiver requested for. Refer waiver flow chart		<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> N/A
	Section 20-21 – Banned Building Products or Methods (check if any products banned as per section 20-21)		<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> N/A
Vet	NZFS – Fire Design to NZFS for Comment (separate tracking form)		<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> N/A
	Sewerage Onsite Design to MWH for Comment (separate tracking form)		<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> N/A
B.I	New Building		<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> N/A
	Section 112 – Alteration to building		<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> N/A
	Section 115 – Change of Use of building		<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> N/A
	Section 116 – Subdivision		<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> N/A

B / P&D	Producer Statements for:	Author	Accepted			
	Engineering	<input type="checkbox"/> Yes	<input type="checkbox"/> No			<input type="checkbox"/> N/A
	Cladding	<input type="checkbox"/> Yes	<input type="checkbox"/> No			<input type="checkbox"/> N/A
	Effluent	<input type="checkbox"/> Yes	<input type="checkbox"/> No			<input type="checkbox"/> N/A
	Other	<input type="checkbox"/> Yes	<input type="checkbox"/> No			<input type="checkbox"/> N/A

General	Reason:	Comment	Code Compliant	NA	Further Info
SITING					
North <input type="checkbox"/> East <input type="checkbox"/> South <input type="checkbox"/> West <input type="checkbox"/> Is the building within 1m from the boundary? If yes, then a fire wall is required. Have fire rating details including fixings and stability been provided? Is any part of the eave construction within 650mm to the relevant boundary? If yes, fire rating required. See Part 7, 7.8.5.	NZBC Fire Safety clauses Part 7 7.8.4				
CONCRETE FLOOR					
Clearing of top soil	3604 3-7				
Floor height	3604 7-21				
Footing width / depth	3604 6-30				
Footing reinforcing	3604 6-30				
Slab thickening	3604 7-32				
Slab fill depth	3604 7-24				
Vapour barrier	3604 7-25				
Slab reinforcing	3604 7-30				
Reinforcing cover	3604 4-10				
Concrete grade	3604 4-10				
Alternative Solution and Basis of Approval					
TIMBER FLOOR					
Footing width / depth	3604 6-30				
Found reinforcing	3604 6-30				
Concrete grade	3604 4-10				
Pile height / diameter	3604 6-5				
Bracing lines	3604 5-16				
Piles connected to perimeter found OR	3604 6-34				
Anchor piles used OR	3604 6-23				
Braced piles used	3604 6-16				
Sub-floor ventilation	3604 6-41				
Bearers	3604 6-38				
Floor joists	3604 7-3				
Solid blocking	3604 7-6				
Species / treatment	3604 27>				
Flooring	3604 7-15				
Fixings	3604 7-34				
Sizilation	4218				
Alternative Solution and Basis of Approval					
WALL FRAMING					
Species / treatment	3602 27>				
Timber grading	3631				
DPC timber / concrete	3604 2-4				
Bottom plate fixing	3604 6-35				
Stud height / spacing	3604 8-7>				
Top plate size	3604 8-28				
Dwangs	3604 8-37				
Bracing lines	3604 5-19				
Top plate fixings	3604 8-37				
Lintels and other support beams	3604 15>				
Sill trimmer spans	3604 8-27				
Building paper / wrap	3604 11-3				
Alternative Solution and Basis of Approval					
TRUSS ROOF					
Roof loadings	L <input type="checkbox"/> H <input type="checkbox"/>				
Wind area design	Fabricator				
Snow zone design	Fabricator				
P Statement signed	Fabricator				

General	Reason:	Comment	Code Compliant	NA	Further Info
Girder / hip truss load paths frames / lintels	Fabricator				
Lintel outside scope	Fabricator				
Fixings specified	Fabricator				
Veranda beam / rafter	3604 15>				
Purlin sizing	3604 10-36				
Purlin anchorage	3604 10-37				
Roof bracing	3604 10-48				
Alternative Solution and Basis of Approval					
PITCHED ROOF					
Species / treatment	3602 27>				
Roof loadings	L <input type="checkbox"/> H <input type="checkbox"/>				
Rafter span / spacing	3604 15>				
Ridge beam skillion	3604 15>				
Rafter / beam anchor	3604 15>				
Underpurlins	3604 15>				
Strutting beams	3604 15>				
Ceiling joists	3603 10-18				
Ceiling runners	3604 10-19				
Veranda beam / rafter	3604 15>				
Purlin sizing	3604 10-36				
Purlin anchorage	3604 10-37				
Roof bracing	3604 10-48				
Alternative Solution and Basis of Approval					
ROOF CLADDING					
Roof cladding	L <input type="checkbox"/> H <input type="checkbox"/>				
Corrosion zone	3604 4-7				
Roof pitch	E2 55-89				
Flashing laps / profile	E2 55-89				
Underlay	3604 11-3				
Support	E2 55				
Alternative Solution and Basis of Approval					
BRICK VENEER					
Risk mat score <20	E2 30				
Brick tie / lintel bar corrosion zone	3604 4-10				
Cavity width	3604 11-13				
Cavity vent / drainage	3604 11-13				
Cavity step-down	3604 11-13				
Lintel bar sizing	3604 11-16				
Veneer height	3604 11-10				
Alternative Solution and Basis of Approval					
STUCCO PLASTER					
Risk matrix score	E2 30				
Min 20mm drained and vented cavity	E2 102				
Species / treatment	3602 27>				
Slip layer rigid back	E2 103				
Flashing system	E2 105				
Paint seal exterior	E2 103				
Construction review to be provided	Policy				
Alternative Solution and Basis of Approval					
WEATHERBOARD					
Risk matrix score	E2 30				
Species / treatment	3602 27>				
Wind area non-rigid or rigid backing	3604 11-4				
Sill trays direct fixed	E2 111				
Flashing to corners	E2 108				
Flashings to opening	E2 111				
Alternative Solution and Basis of Approval					

General	Reason:	Comment	Code Compliant	NA	Further Info
PROFILED METAL					
Risk matrix score	E2 30				
Corrosion zone					
Min 20mm drained and vented cavity	E2 102				
Species / treatment	3602 27>				
Cladding / batten sep	E2 128				
Sill trays direct fixed	E2 127				
Vermin proofing vert-hori cladding	E2 125				
Flashings to corners	E2 126				
Flashings to opening	E2 127				
Alternative Solution and Basis of Approval					
FIBRE CEMENT					
Risk matrix score	E2 30				
Joint dictates min Sheet thickness used	E2 133				
Sill trays direct fixed	E2 141				
Flush finish control joints provided	E2 133				
Flashings to corners	E2 139				
Flashings to opening	E2 141				
Construction review to be provided	Policy				
Alternative Solution and Basis of Approval					
PLY CLADDING					
Risk matrix score	E2 30				
Treated to H3.2	3602 27>				
Mini 12mm 3 ply	E2 145				
Sill trays direct fixed	E2 141				
Flashings to corners	E2 139				
Flashings to opening	E2 141				
Alternative Solution and Basis of Approval					
POLYSTYRENE EIFS					
Risk matrix score	E2 30				
Designed / tested total cladding system	E2 149				
Approved applicator specified as installer	E2 149				
Sill trays direct fixed	E2 154				
Control joints	E2 150				
Flashings to opening	E2 154				
Construction review to be provided	Policy				
Flashings to opening					
PLUMBING / DRAINAGE					
Name and licence details of plumbers / drainlayers	NZBA				
Scope of work					
Site and drainage plan					
Are Council mains available to property boundary and are invert levels supplied?					
Ensure no Council mains are to be under or in close proximity of new building,					
Fixture locations and underfloor waste layout plan					
Plumbing and drainage specification					
Job specific					
Water supply pipework to be used for both hot and cold water	G12				
Does pipework comply if fire hose reels are connected to the same supply?					
Is water supply adequately protected from potential cross					

General	Reason:	Comment	Code Compliant	NA	Further Info
connections?					
Test procedure for water supply pipeworks.					
Water supply pipework insulation					
Hot water system details, i.e. type, size, pressure rating, tempered supply to personal hygiene fixtures					
Circulating hot water temperature					
Are sprinklers to be installed? If so a PS1 is required as well as plans, calculations and details of backflow prevention device to be supplied					
Type of soil stack system to be installed	G13				
Are all features or soil stack shown? i.e. expansion joints, cleaning access, venting, restricted zones?					
Elevation and plan drawings of soil stack showing joist or timber layout proving that stack can be installed as per design.					
Does the underfloor wastepipe layout comply?					
Gradients, sizes and materials to be used for underfloor wastepipes.					
Sleeving material to be used on pipes passing through concrete					
Does FS drainage plan comply?					
Are drains clear of building foundations, i.e. outside the 45° separation?					
Gradient, size and material to be used for FS drain.					
Test procedure for FS drain					
FS drain venting requirements, i.e. correct TV location and size, venting of soil fixtures and branch drains					
FS drain cleaning access and manhole locations correctly shown on plans					
Interceptor trap or grease trap drawings and details provided					
Do discharge units for FS drain comply?					
Is a trade waste agreement required?					
Roof plan showing pitch, catchment areas and downpipe sizes					
Does the SW drainage plan comply with E1 and the acceptable solutions listed?					
Gradient, size and material to be used for SW drain					
Surface water sump sizing and detail of sump type to be used					
Elevations of internal gutters / downpipes showing sizes and overflow points					
Calculation or method of sizing SW drain provided					
SW drain cleaning access and manhole locations correctly shown on plans					
Is a Drain in Common agreement					

General	Reason:	Comment	Code Compliant	NA	Further Info
or Easement for drains required?					
Do sanitary fixtures numbers comply with G1 and the acceptable solutions listed?					
Do sanitary fixtures comply for line of sight, privacy and separation from food or work area?					
Are additional bedrooms being constructed resulting in an analysis of the septic tank and outfall?					
Full design, PS1, plans and specifications to be provided for onsite effluent disposal.					
Specifications and installation requirements for septic tank and / or treatment plant.					
Does onsite disposal design comply with G13/14, AS/NZS 1547, 2000, SRC plan and the ICC Technical Memorandum?					
Does the designer guarantee the durability of the system for no less than 15 years? Is a PS4 required?					
Alternative Solution and Basis of Approval					
HEATING					
Multi <input type="checkbox"/> Wood <input type="checkbox"/> Diesel <input type="checkbox"/> Gas <input type="checkbox"/> Electric <input type="checkbox"/> Other <input type="checkbox"/> Method of Heating					
Wood-burner <2 ha site omissions / effic					
Diesel supply filter, cut off & isolating	AS 1691 7				
Diesel tank location to window / boundary	AS 1691 7				
Diesel room venting for combustion	AS 1691				
Wetback cylinder open vented or close circulating heat exchanger used	G12 36				
Wetback cylinder tempering valve (except replacing existing)	G12 36				
Pumic-concrete-masonry chimney	B1-C1				
Energy certificate for gas	Policy NZBA 92				
Alternative Solution and Basis of Approval					
ACCESS / BARRIERS					
Stair rise / going	D1 27				
Handrails for other than isolated steps	D1 40				
Balustrade where fall height >1.0m	F3 13				
Sill >0.76m where fall height >1.0m	F4 15				
Exterior swimming – spa pool barriers					
Alternative Solution and Basis of Approval					
INTERNAL / EXTERNAL DECKS					
Species / treatment	3602 27>				
Framing size / spans for 2.0kPa loadings	3604 7-4				
Enclosed deck 100mm min step down	E2 48				
Enclosed deck drainage and overflow	E2 85				
Slatted deck flashed building /	E2 49				

General	Reason:	Comment	Code Compliant	NA	Further Info
12mm gap					
Balustrade where fall height >1.0m	F4 13				
Alternative Solution and Basis of Approval					
OTHER CONSIDERATIONS					
Laundering	G2				
Tub <input type="checkbox"/> Machine <input type="checkbox"/>					
If both, tick both.					
Tub size 400 x 200 depth					
Water supply – can be cold only					
Floor space 800mm Note, check Table 1 for number of laundering facilities. Note, energy supply must be provided.		Advisory note 128			
Food Prep	G3				
Sink – 300 x 125 depth					
Food prep surface – min size 500 x 600					
Hot and cold water					
Cooker / oven					
Floor space – 800mm clear space past open cupboards					
Perishable food store or fridge					
Linings impervious and easily cleaned					
Note, energy supply must be provided		Advisory note 128			
Ventilation	G4 13				
Window / door / head / jamb / sill flashings	E2				
Glazing area <30%	4218 15				
Insulation values for wall cladding option	4218				
Insulation values for roof framing option	4218				
Safety glass	F2 4223				
Electric / gas energy certificate	NZBA 92				
Alternative Solution and Basis of Approval					
FIRE SPREAD / EGRESS					
Boundary separation	C4 Pt 7				
Other household unit separation if on the same property	C3 Pt 4,5,6				
Dead end lengths	C2 Pt 3 93				
Open path lengths	C2 Pt 3 93				
Smoke alarms	F7				

BCA officer to determine information received satisfies each item on this checklist and either requests further information or signs off each item.

Then sign off appropriate task in pathways. Further information or complete.

- Stamp each plan with standard stamp.
- Add any advisory / conditions as deemed necessary.
- Add in time cost in minutes.
- Add in inspections under pathways.
- Forward to CC for issue.

CC checks time cost and adds all time.

- Check levies / bonds.
- Print off paperwork and make up two files

BRANZ SEMINAR – WATER EFFICIENCY

1. Safety on the worksite is only the main contractors responsibility.

Water is precious

There are many demands on New Zealand's water resources including urban water supply competing with irrigation, the desire to have an untouched natural environment, and the expectation water will be available whenever we want it. For many, restrictions on water use are likely to be tighter in New Zealand in the future. This means water is becoming a precious resource that we must consider when we design and construct our buildings.

Do you want to know about:

- up-coming directions in legislation
- how we use water in our homes
- recent appliance developments
- building consent issues
- options for utilizing rainwater
- using greywater effectively
- how to make every drop count.

Attendees will come away with a better understanding of:

- water as a finite resource
- where we use water
- climate change influence on water supply
- current regulations
- local government consents
- management of the urban water cycle
- water demand management
- standards for water appliances
- using rainwater
- opportunities and risks of greywater usage
- options for wastewater treatment
- solutions for designers to moderate water use.

Presented by

Ben Thompson

Water Use Coordinator, Kapiti Coast District Council – working with local industry and the Kapiti Coast community to implement the Kapiti Coast District Council Sustainable Water Use Strategy.

Des Molloy

Building Consultant (BRANZ Builders Mate “Old Geezer”).

Audience

If you design, develop, or construct water systems, then this seminar is a must. It is especially suitable for Architects, Designers, Council Building Officials, Plumbers, Landscape Designers and Developers.

Venues and dates

- | | | |
|-----------------|--------------|------------------------|
| • Mon 16 March | Dunedin | Quality Hotel Cargills |
| • Tues 17 March | Christchurch | Holiday Inn on Avon |
| • Wed 18 March | Auckland | Alexandra Park |
| • Thur 19 March | Hamilton | Novotel Tainui |
| • Fri 20 March | Wellington | The Town Hall |

All seminars are 1.00pm – 4.00pm. Please be seated before the seminar commences at 1pm sharp.

Booking

Book online from early February at www.branz.co.nz – go to seminars.

Venues have limited capacity, please register early to secure your registration.

Investment

BRANZ is pleased to offer a special package deal for those who purchase the recently published “Water”, while registering for the seminar. All prices include GST and postage and packing.

	QTY	COST	TOTAL
Seminar only		\$85.00	
Seminar + ‘Water’ book (Incl P&P)		\$116.45	
‘Water’ book ONLY (Incl P&P)		\$47.95	
TOTAL			

Registrations to: BRANZ Seminars
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or Fax (04) 237 1171
or Register online at: www.branz.co.nz

Registration fees will not be refunded for non-attendance, or for cancellations made less than three days before the seminar.

For all seminar enquiries, please contact BRANZ Ltd,
Phone: (04) 237 1170 or
Email: SeminarRegistrations@branz.co.nz.

The contact details requested on the registration form will be used by BRANZ to tell you more about our products and services. In accordance with the Privacy Act 1993 you may ask at any time to be removed from our database or inspect the information we hold about you.

BARRIER FREE NEW ZEALAND – 2 DAY SEMINAR

The Barrier Free Training Pathways 2 day seminar series consists of four modules.

Overview details for these modules are given below – please view our upcoming seminar options; also be sure to review our assessment criteria.

You may register online now for any of our upcoming seminars. The cost of the 2 day seminar is \$500+GST. Assessments of the modules are optional and cost \$200+GST.

Please be aware that the 2 say seminar is not an introductory course to the building legislation. Participants need to have a basic understanding of the NZ Building Act 2004, Building code and Compliance documents.



Module 1: Experiencing the Accessible Journey

Module 1 is designed to give an understanding of the Accessible Journey and what it means for people with disabilities. This Module will help to raise awareness of how a barrier free and accessible environment could look like and what it means to be disabled by the physical environment.

Content:

- Personal experiences of the Accessible Journey
- Universal Design principles
- The Accessible Route
- Visible and hidden impairments
- Pictures of the built environment: good and bad examples
- Vision impaired guest speaker

Module 2: The Law, Access and the Accessible Journey

Module 2 is designed to inform about the building legislation and guidelines related to access and requirements in the built environment.

Entry Criteria

Participants must be familiar with the Building Act 2004, Building Code and Compliance Documents, Building Regulations and NZS 4121, 2001.

Content:

- Building Act 2004
- Building Code and Compliance Documents
- Building Regulations
- NZ Standard 4121, 2001

- Building Consent Process
- Compliance Schedules
- Definitions
- Key Players

Module 3: Designing the Accessible Journey

Module 3 is designed to give an understanding of what is required in the design process to ensure an accessible built environment that complies with the relevant documentation.

Content:

- Universal access design and the Accessible Journey
- Practical design principles
- Basic factors of accessibility
- Best practice: minimum, better, best
- Ergonomic information
- Resources
- Practical exercise: read and interpret plans for access, reporting back and discussion
- Guest presenter with physical impairment

Module 4: Accessing the Accessible Journey

Module 4 is designed to give an understanding of how to assess the Accessible Journey in the built environment using the Barrier Free Checklist and relevant documentation.

Content:

- Overview of the legal requirements for Access
- NZS 4121 – How this fits in
- How to assess accessibility feature during the construction process
- Issuing Code Compliance Certificate – does it comply?
- Format and use of the Barrier Free Checklist
- Practical exercise: Auditing a building, reporting back and discussion.

Cost for Module 1 – 4 = \$500+GST

Register now for the 2 day seminar!

Module 5: Becoming a Barrier Free Advisor

The Trust is giving an opportunity for people who have attended a 2 day Barrier Free Seminar to further their training to become a BFA.

Module 5 is now compulsory for people who wish to train as a BFA. The day will cover:

- Mission and Role of the Trust
- Role of a BFA
- Accreditation process
- Guidelines and exercises in report writing
- How to give access advice to clients
- Professionalism
- Promote yourself – its and tricks!
- Ways to keep in the access loop.

Cost for Module 5 = \$250+GST

Register now for the Module 5 seminar!

Where: Invercargill

Location: Civic Theatre Drawing Room

When: 30 – 31 March 2009

Register online at www.barrierfreenz.org.nz.

QUIZ ON ARTICLES IN THIS NEWS SHEET

1. Safety on the worksite is only the main contractors responsibility.
 - a. True
 - b. False

 2. Which industry in New Zealand has the highest number of ACC fatal injury claims?
 - a. Ford industry
 - b. Entertainment industry
 - c. Construction industry

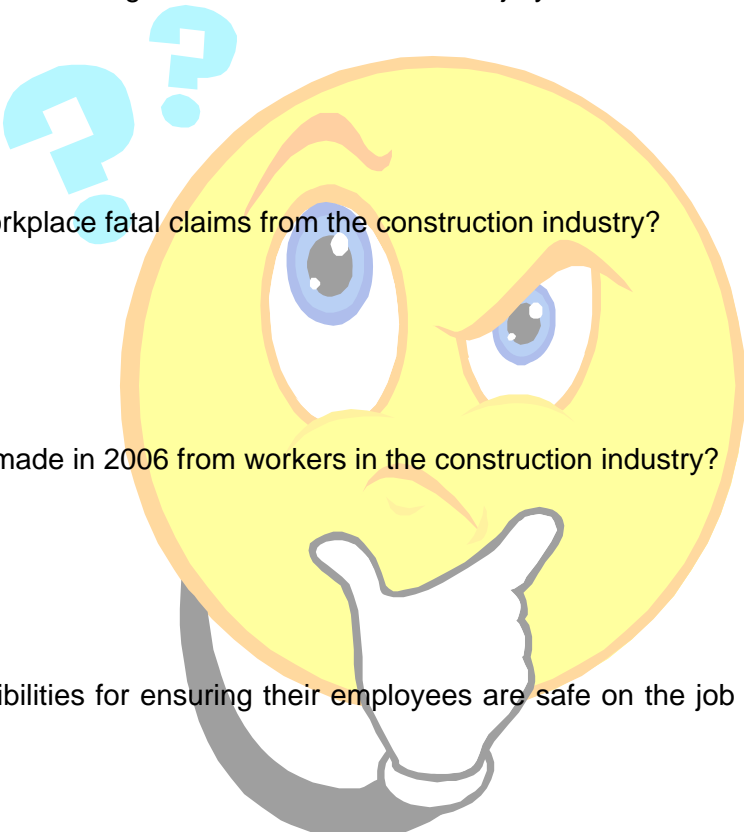
 3. What is the percentage of all workplace fatal claims from the construction industry?
 - a. 24%
 - b. 24%
 - c. 54%

 4. How many annual claims were made in 2006 from workers in the construction industry?
 - a. 260
 - b. 2,690
 - c. 26,900

 5. An employer has legal responsibilities for ensuring their employees are safe on the job site.
 - a. True
 - b. False

 6. Training staff in any task is critical to ensuring their safety while undertaking that task.
 - a. True
 - b. False

 7. All employers should know where their workers are on a job site.
 - a. True
 - b. False

 8. Wood dust is a hazard and breathing it into your lungs will cause you harm.
 - a. True
 - b. False
- 

9. Disposable respirators are the best form of protection to prevent a person breathing in any contaminant.
- a. True
 - b. False
10. Open air policy means undertaking tasks involving airborne contaminants outside where possible.
- a. True
 - b. False
11. If you have to work inside, be sure to provide good _____.
- a. Music
 - b. Food
 - c. Cross ventilation
12. Fatigue usually means your reactions are slower, your ability to concentrate is reduced and it takes longer to understand what is happening around you.
- a. True
 - b. False
13. The cure for fatigue is:
- a. Energy drinks
 - b. More air
 - c. Sleep
14. Council staff 'process' a building consent by filling in a checklist which consists of a series of items. Each item requires a comment beside it so that Council is satisfied the building work complies with the Building Code.
- a. True
 - b. False
15. A processing checklist is basically a list of queries that require an answer.
- a. True
 - b. False
16. In 2008 Council requested more information on _____% of all new dwelling building consent applications.
- a. 50%
 - b. 70%
 - c. 96%

17. Section 20 – 21 of the Building Act 2004 deals with:
- a. Determinations
 - b. Waivers
 - c. Banned products
18. If a dwelling soffit is within 650mm to a boundary, does that soffit and its supports require fire rating as per the C documents?
- a. Yes
 - b. No
19. A laundry can be supplied with cold water only.
- a. Yes
 - b. No
20. A laundry requires how much floor space in front of the tub / washing machine in accordance with G2 / AS1.
- a. 400mm
 - b. 600mm
 - c. 800mm

ANSWER TO QUIZ

1. b
2. c
3. a
4. c
5. a
6. a
7. a
8. a
9. b
10. a

11. c
12. a
13. c
14. a
15. a
16. c
17. c
18. a
19. a
20. c

