straight up

THE MAGAZINE OF THE BUILDING OFFICIALS INSTITUTE OF NEW ZEALAND

MARCH 2017

In this month's issue:

BUMPER ISSUE!

Earthquake Focus

First of our "Past Perspectives" Series

BOINZ working closely with StandardsNZ

Building Officials Institute of NZ

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straight up

IN THIS ISSUE

From the President 2

PrefabNZ Top 5 4

Earthquake Focus 6

Industry News 15

Spotlight on a Member 16

Industry News 19

Regulation 20

Past Perspectives 22

Training 31

Accreditation 34

Writing Reports 36

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Building Officials Institute of NZ

From the President

Welcome to 2017 our 50th Anniversary year, a year I hope will be both visionary and celebratory. It is, after all, a national election year and there is no reason to believe our politicians won't look at the design and build sector with a sharp focus on the need to increase productivity.

You may recall our Chief Executive Nick Hill in the last edition of Straight-Up indicated "construction has had a long legacy of failing to deliver a customer service and quality expectation". Harsh but true I'm afraid.

Well, we don't just talk the talk…

Your Institute has a vision to "Improve the quality and performance of the built environment", and in our terms to do this by striving to raise and advance the status and interests of the building surveying professions. This vision was established in 2013 following a strategic review of our direction and has held the test of time. I can recall numerous occasions where as a Board, one called for a consistent and unified approach to education and training. In the best interests of not only you our members, but also for your employees and the public of large.

Everyone can grow when you provide standardised training to employees in every location. This requires innovative solutions and enjoyable learning experiences as well as empowering consistent quality based decision making across geographic locations.

In pulling together our 23 module core learning essentials suite of course programmes to support the Diplomas in Building Control Surveying of small, medium and large buildings, the Institute invested both heavily in your futures and the viability and compliance of BCAs. With the development of the new New Zealand Certificate in Regulatory Environment – Building and New Zealand Diploma in Building Surveying the investment continues. With the establishment of these new refined and updated qualifications we aim with our parties - The Skills Organisation, Otago Polytechnic and Future Skills - to deliver learning pathways that will facilitate both full-time and part-time learning candidates. This formal education pathway will deliver qualifications for building surveyors that we haven't had in the past. Gone will be the days of council inconsistencies, to be replaced with core learning objectives, learning essentials and easy integration into the workforce.

People and performance are vital to our roles along with and the product and process outcomes we expect from the wider build community. Your Institute believes that education and training in all sectors of building surveying (building control, pre-property purchase inspection and specialist inspection) is too important for the national economy and building outcomes to be left to individual employers. Our workforce is small and tremendously vital to the economy. Education and training in our sector should not be dumbed down — it must be valued and undertaken if we are to change the culture of the wider design and construction field. Hence the Institute is embarking on a co operative part time educational pathway for the new diploma in Building Surveying.

This national cadetship approach is designed to fulfil two objectives, namely a consistent approach to education within employment (ie gaining your qualification) and to open a career pipeline to overcome the skill shortages that effect our profession. Let's face it we have an ageing demographic and invisibility as a career option. When positions go unfilled organisations and the community are exposed. We cannot afford to have a dearth of building surveyors, and individual councils haven't shown they have a national perspective to providing vocations and educational solutions. BCAs aren't equipped to tackle their current workloads and skill needs or the threats that need addressing, whether it be budget-wise or management-wise. The solution is collaborative and one that delivers economies of scale, not a go it alone approach.

I mentioned at the start of this article that I hope 2017 would be visionary. The Institute's vision and approach to standardising investment in people and performance is just that: visionary. We will be looking to work with our educational and sector partners to produce a unique and workable outcome. We will need support and commitment from all stakeholders including central and local government, supplies, and educationalists. The end result will be fantastic and is worth celebrating.

I look forward to seeing many of you over the coming year, our 50th - especially at our conference in May (of which early bird registrations close 30 March) where we will all be able to enjoy a memorabilia exhibition and look at what we have accomplished so far. Remember it's always worth celebrating the past, but it's more important to visualise and plan for the future. We plan to do both this year.

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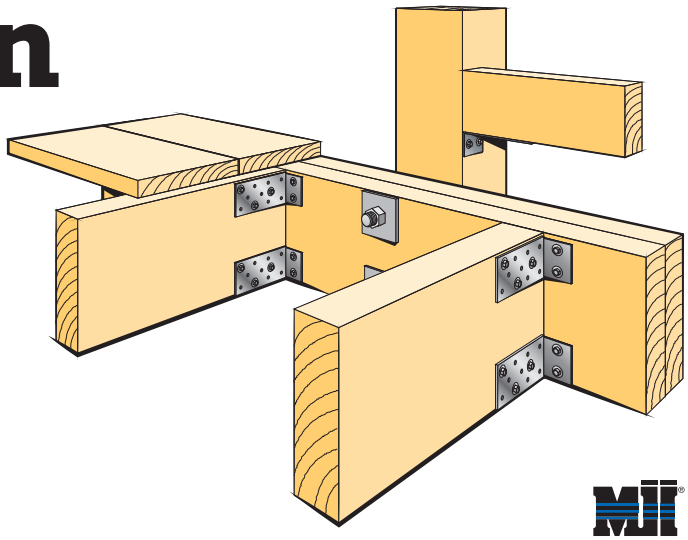

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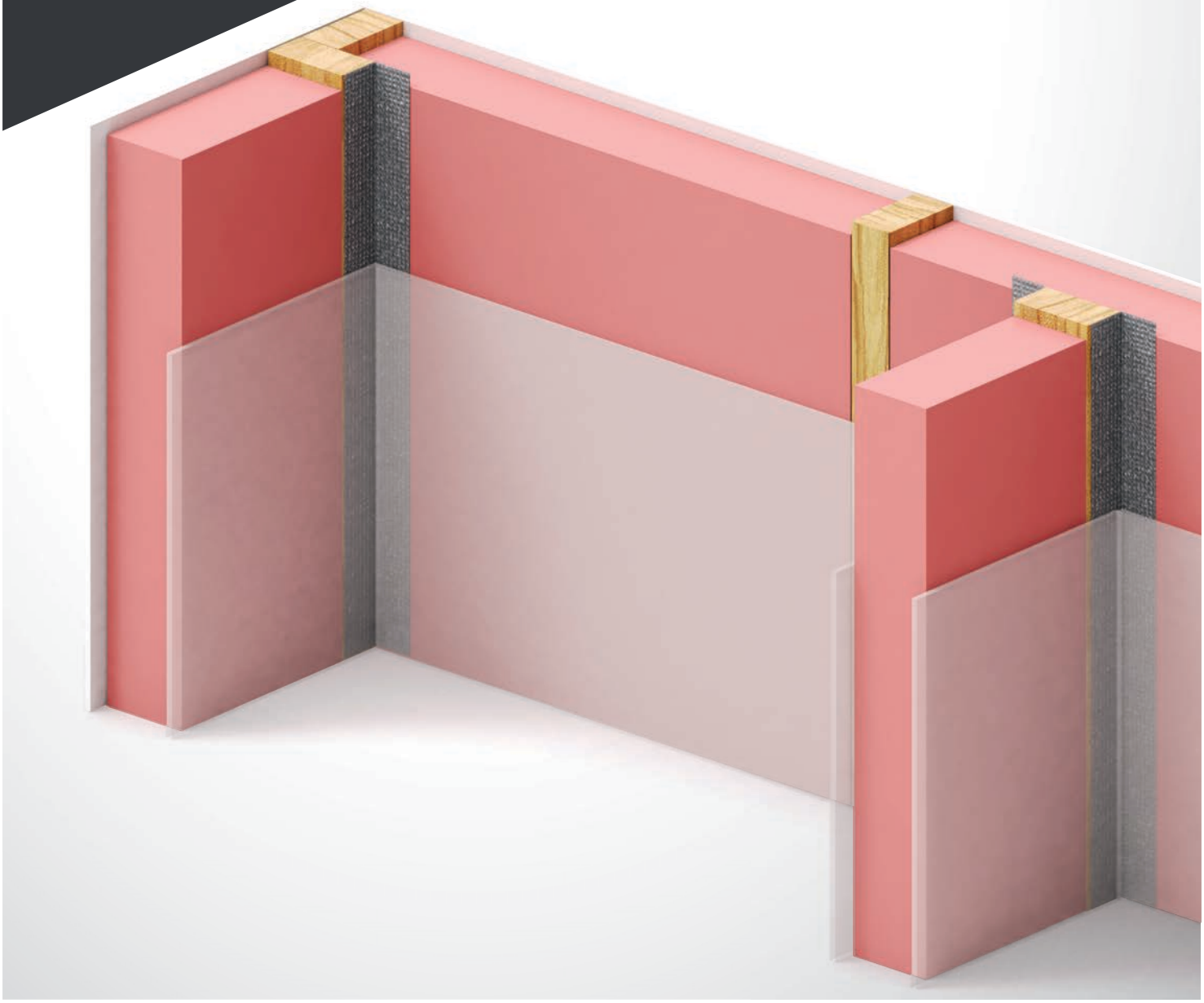


PrefabNZ Top 5

1.COLAB 2017 – STAYING AHEAD WITH INNOVATIVE CONSTRUCTION

The annual PrefabNZ CoLab conference 21 – 22 March at AUT, Auckland is a fun, interactive and thought provoking construction innovation event. BOINZ members are invited at PrefabNZ Member rates! Just $395 for two days.

Join construction industry innovators and key influencers at the CoLab 2017 March. The conference includes site visits, a look behind the scenes at manufacturing operations and local and international experts on innovation in offsite construction projects.
Day one offers an impressive line-up: Prof. Helena Lidelow from Lindbacks and Luleå University of Technology, Sweden. Dr Don Elder, CEO and Chair of Spanbuild, Melissa Clark-Reynolds ONZM with Dr Ant Pelosi, VUW divulging on disruption in construction and John Lucchetti, Wood & Grieve Engineers discussing the Australian Modular Construction Codes

For more information and to register go to www.prefabnz.com

John Luccetti

Helena Lidelow

2.WORLD FIRST MODULAR CONSTRUCTION CODE LAUNCHED IN AUSTRALIA

The Victorian Government is working on future-proofing the construction industry by collaborating with three tier 1 contractors, Brookfield Multiplex, Laing O'Rourke and Lend Lease, Monash University and other industry players to develop a new code focused on modular construction. The code is an informative guideline for building using off-site construction techniques - whether they be component, panel or volumetric.
A New Zealand guideline is being developed for Manufactured Building and your input is sought. John Lucchetti, will be at CoLab to discuss this. View the draft code and more information at:

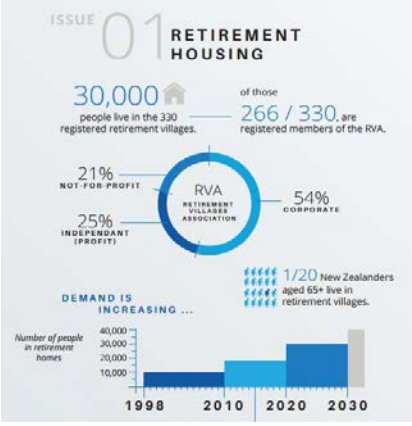
http://www.prefabaus.org.au/mccb/

MCCB

3. AGING POPULATION – CRISIS OR OPPORTUNITY?

By 2030, New Zealand's social + built environment will change in dramatic ways. Our population is increasing and aging, an additional 75,000 social + retirement housing units will be needed, there is a projected shortfall of 18,000 homes. Whilst this is a problem for our nation, it also presents an opportunity: for prefabrication to come to the forefront and deliver affordable, high-quality housing utilizing innovative technology. The Retirement Village Association and Metrapanel are working together to raise skills and knowledge of prefabrication benefits for the sector - running a series of forums. For further details

memberadmin@retirementvillages.org.nz



4. THE FUTURE OF CONSTRUCTION IS GOING TO BE DIGITALLY ENHANCED

Technology is changing the construction industry, with new survey methodologies and building techniques as well as innovations around BIM data and 3D models making the construction site safer, more efficient and even remotely accessible. VR and AR take computer screen images and integrates them into real-word environments for a life-like view and feel of buildings. Drones map site hazards and construction progress; Smart Helmets can provide real time information whilst keeping the wearer safe. Building Information Modelling (BIM) is being utilized for sharing across people and process roles in the industry. See more at https://sourceable.net/the-future-of-digital-construction/

5. JOIN PREFABNZ TODAY AND GET ONE MONTH'S MEMBERSHIP FREE

PrefabNZ Members span the design and construction sector, from builders to engineers, manufacturers to researchers. The organisation delivers strategy, policies and outputs/outcomes on behalf of the prefabricated building industry. Make sure you're up-to-date with everything to do with offsite construction and innovative technology – join PrefabNZ today and get membership in March free. Visit www.prefabnz.com.

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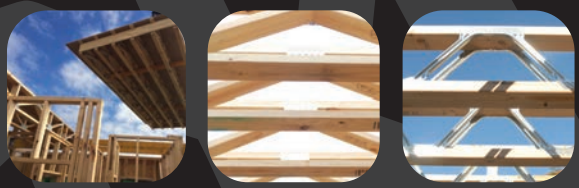

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Re-Bracing Walls Following an Earthquake

Article contributed by Hans Gerlich and Dr Richard Hunt of Winstone Wallboards Ltd.

Hans Gerlich is a Chartered Professional Engineer who has worked in the plasterboard industry across consulting, research and development, product appraisal and local authority building control for the last 20+ years.

Richard is a structural engineer with a degree in Civil Engineering and a PhD in Engineering. Richard also spent 15 years as a Research Fellow and Senior Lecturer at the University of Auckland. He has had a major involvement in the development of many structural timber codes such as NZS3603 and NZS3622.

In the wake of a seismic event it is important to complete a thorough assessment of the damage that has been incurred. There may be visible signs that indicate an issue, however not all damage will cause cosmetic or noticeable faults. When assessing the extent of damage, the focus should not only be on the cosmetic fault, but the underlying cause for that damage.

As damage to gypsum plasterboard linings is often the first visible sign of damage this article will focus on the repair of the lining. The extent of damage to gypsum plasterboard linings needs to be ascertained before an appropriate repair technique is selected.

Damage around fasteners can be clearly visible or hardly detectable, but signs of fastener stress or sheet 'slotting' around fasteners indicate degradation of the stiffness of a bracing element that must be repaired.

Cracking of joints can occur within or at the sides of bracing elements. Consider negative details or cover trims, particularly when cracks have occurred in joints aligning with opening jambs.

Cracks within the field of the lining usually extend diagonally from the corners of openings such as doors and windows. Cracked sheets must be replaced or overlaid with a new lining.

DAMAGE TO BOTTOM PLATE TO FLOOR CONNECTION

Movement may have resulted in lifting of bottom plates and connections being compromised. Sometimes walls have returned to their original position, but stiffness will have been lost. Floor coverings should be pulled back to allow inspection. A steel ruler or similar can be pushed under the bottom plate to determine the extent of separation. Replacing bottom plate fixings will inevitably mean that linings require replacement.

(a) Crack of Joint above Door

DAMAGE TO FRAMING AND HOLD-DOWN CONNECTION

Damage to framing and panel hold-down connections is often not apparent. Skirting boards will need to be removed to inspect damage around fasteners attaching linings to the bottom plate. Further investigation is necessary if signs of significant movement are detected. Damaged framing and panel hold-down connections must be repaired.
Note: Partial lining replacement can result in unsightly sheet butt joints. Replace entire sheets or use best practice back-blocking techniques to reinstate the linings in the case of local repairs.

REFASTENING OF EXISTING LININGS

Refastening existing linings can be undertaken where no or insignificant damage to framing connections has been found. Refastening along studs alone is not effective. Trims need to be removed to ensure fixing around the entire bracing element perimeter by inserting fasteners in between existing ones. This method is expected to re-instate the performance of bracing elements to about 80% of original stiffness and strength.

REPLACEMENT OF EXISTING LININGS

Replacement of linings is required where extensive damage to sheets or fasteners has occurred. It is essential that framing repairs are carried out prior to installing new linings. Offset new lining fasteners from existing fastener holes. This repair method will re-establish the original stiffness and strength of the bracing element. Over-lining is often carried out in preference because it is a cleaner process and eliminates the need to remove and dispose of the damaged linings.

OVERLAYING OF EXISTING LININGS

Overlaying will restore stiffness and enhance strength of bracing elements. Undertake repairs to framing connections prior to installing the overlay by removing sections of the existing lining to gain access. These sections are patched before a new lining is overlaid. New lining fasteners are increased in length by the thickness of the original lining and installed in a bracing pattern, offset from the existing fasteners. This repair technique is attractive in buildings with rebated jambs when the new lining is placed up against existing window and door reveals and new architraves are fitted. For buildings with existing architraves, these can be removed,

the opening frames packed, and the new linings installed before architraves are re-positioned or replaced.

DAMAGED 'HIDDEN' BRACING ELEMENTS

Sometimes bracing elements, placed behind claddings, have sustained damage and cannot be readily accessed, repaired or replaced. To restore the structure's stiffness and strength, alternative bracing elements or new high performance linings need to be provided to make up for the shortfall. This again requires careful assessment of the building's bracing plan.

SUMMARY

Houses in Christchurch, Wellington and the north of the South Island have performed well but a number lost stiffness and strength following the earthquakes. Determining the most suitable repair method requires careful investigation of damage sustained as well as assessment of the building's bracing plans and calculations. Carrying out repairs, such as plaster stopping of cracks, without restoring stiffness and strength can result in repeated damage at relatively low serviceability events, triggering the need for ongoing repairs.

REFERENCE

Hunt, R.D. 2011. Post-Earthquake Performance of Plasterboard Bracing Systems. Winstone Wallboards Ltd., Penrose, Auckland.

For further information call the GIB® Technical Helpline on 0800 100 442

(b) Diagonal Crack at Corner of Window

Damage to Panel Hold-Down and Stud Lift

BOINZ 50th ANNUAL CONFERENCE 2017

EXCELLENCE AWARDS

If you think there is someone out there (other than yourself!) who deserves the recognition and a prestigious award at our 50th Annual Conference & Expo Gala Dinner, then please let us know by submitting your nomination to www.boinz.org.nz.

50 YEARS 1967-2017 Building Officials Institute of NZ

Available Awards:

Contribution to Technical and Legislative Improvements Award - This award is given to the individual who has excelled in contributing to advancing the technical and/or legislative understanding of members.

Emerging Leader Award - Each Branch is to nominate an individual who has shown exceptional leadership skills at a local and/or national level, whose actions have grown the value of BOINZ among members.

Contribution to BOINZ Award - The individual or organisation who have made a significant impact to the advancement of BOINZS in the market place.

Outstanding Commitment to Information, Skills Development and Education of Building Officials Award - The individual or organisation who demonstrated outstanding commitment to providing information, developing skills and advancing the education of Building Officials within the industry.

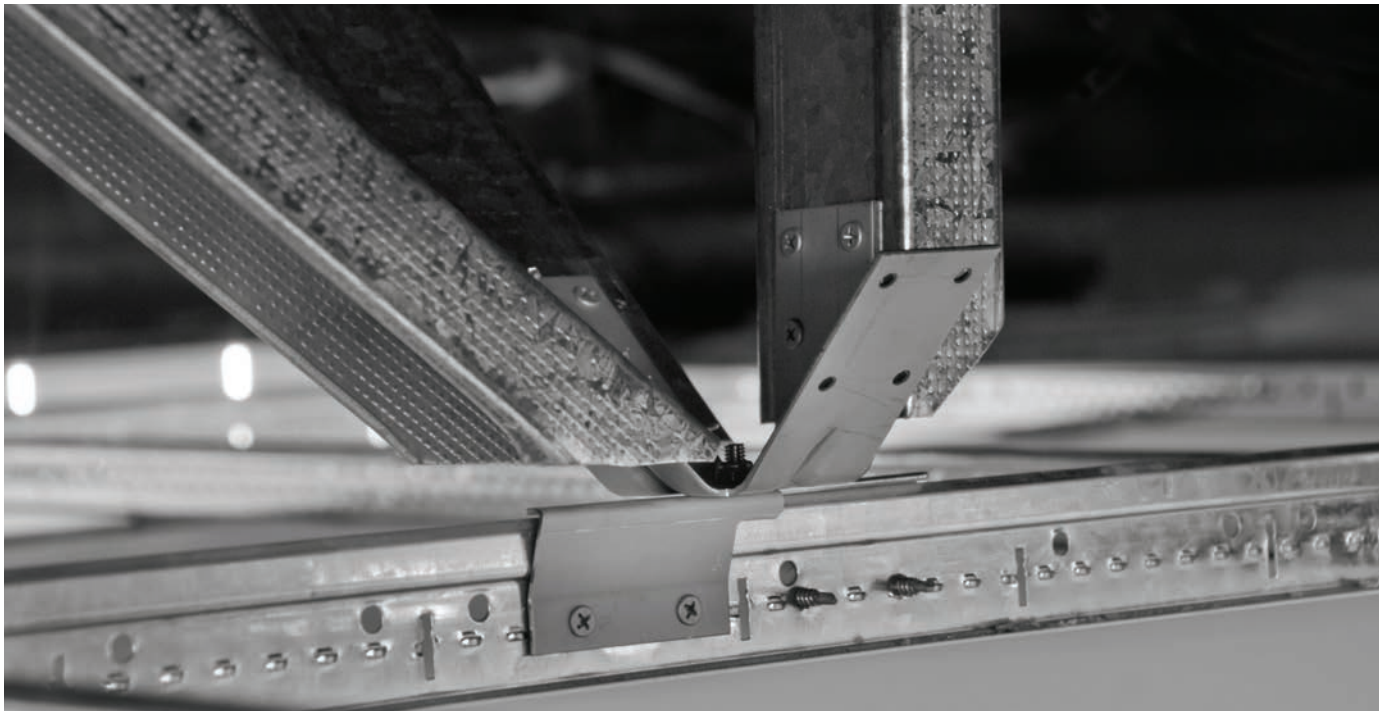
The Young* Building Control Professional of the Year Award - Young* defined as under the age of 35 as at 31st December 2016. This Award goes to an individual that reflects strong professional growth and has dedicated their time to enhancing the Building Control profession.

Training Commitment Award - The Individual or Organisation that has committed to significantly improving the position of training in their field.

Branch of the Year Award - The Branch award is considered by the BOINZ Board each year based on participation, innovation and member value at a local level.

Building Control Innovator of the Year - This award recognises a building control professional or team engaged in building control activities, who has demonstrated commitment to innovation in engineering.

Organisational Commitment to Customer Service & Excellence - Awarded to an organisation who demonstrates dedication to exceptional customer service and excellence.



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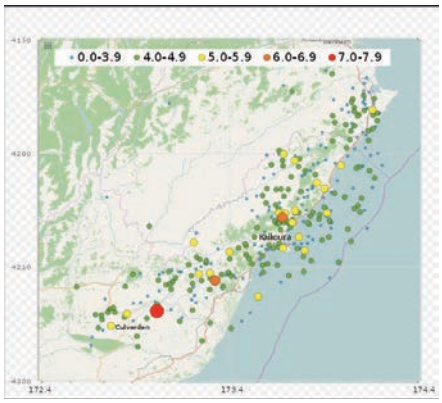
The 2016 Culverden Earthquake

Building operations Post disaster – How to get it wrong!
A personal story By Kerry Walsh, BOINZ President…..so that you can get it right should you find yourself in a similar situation.

WHAT ACTUALLY HAPPENED?

A 7.8 Magnitude earthquake occurred at 12.02am on 14th November 2016 at a depth of 15km and about 15 km north east of Culverden with damage mainly spreading to the north east. The earthquake lasted 2mins. Two people lost their lives due to the earthquake. The main earthquake was followed by many aftershocks.



THE HURUNUI BUILDING TEAMS INVOLVEMENT.

I was woken at 12:02am on the 14th of November after getting to bed at 11pm the night before and waited for about an hour to ensure that all was well at home and found out the details of the quake before heading into Amberley Library to our Emergency Operations Centre (EOC).

On arrival at about 1am there were a few people already on deck, our Civil Defence officer, our IT manager and 1 or two others plus our CEO. Everyone was trying to ascertain the extent of the damage and risks to our community. Then at 1:32am a tsunami warning was issued which meant immediate evacuation of our beach suburbs including Amberley and Leithfield beach communities. We then had to immediately check our welfare centre so that is was safe/ undamaged and ready to take up to a few hundred people. Our Building inspector Mark Milnes arrived around 1:45am to assist with evacuations etc. Our EOC started receiving calls about damage in the northern part of our district shortly after 2am.

At about 2:15am our CEO advises me that I needed to get ready to inspect some buildings - this troubled me as I knew that we had received no training in building operations set up nor were we an approved assessor. This meant that I had to start reading the MBIE manual for carrying out our building assessment post disaster from about 2:30am to 3:30am - an hour-long lesson! After about 3:30am I started copying thousands of placards and other info required to carry out these assessments.

At about 7am our building team started arriving at work wanting to help so they went straight out on a quick assessment of the districts' damage (our district is one of the largest in NZ so this was not as quick as you may think!)

During the day, I started receiving calls from building control mangers throughout the South Island wanting to help – of which I said "Yes, send your people"!

After day one of the operation we determined a "red zone" (see image) of damage which contained about 500 properties in the north east of our district.

Inspectors started arriving from throughout the South Island. And we sent them out in a semi-organised way. We finished up late that evening after a 20 hour day and 1 hour of sleep!

THE INSPECTORS

The next day we started teaming up non-BCO with BCOs in teams of two and had about 7 teams on the road heading to our target of the 500 properties within the week. Each team was completing between 15 and 25 rapid inspections per day. This was a lot less than in the Christchurch response. Because of our rural location - driving between each property and damage to the roads, getting between places was difficult. We also chose not to have welfare people with our inspector teams to speed up the process.
I was advised at this point that all inspector resource requests must be made through "Group". At this point I had no idea who "Group" was but I had an email address for them and started requesting resources through them via our EOC.

The Teams & set up.

The Teams & set up.

The Teams & set up.

THE EXTENDED ZONE

About 5 days into the building operation response the local controller advised me at a briefing that the "red zone" was to be extended to include an area that contained an additional 3000 properties including the larger towns of Culverden and Hanmer Springs. (This extension was requested in response to community requests for an inspector visit not necessarily to cover damaged areas.) The controller also requested that it be done as soon as possible.

At that point we were only carrying out about 154 placard inspections per day so I knew that we needed to supersize the operation!

This is when it started to get tricky.

WHERE HAVE ALL THE INSPECTORS GONE?

I immediately requested 40 additional inspectors through Group via our EOC with the required 2-day notice. This request sadly appeared to go un-noticed. I received no communication from the request - whether it could be achieved or when they would be arriving etc. We planned for an additional 20 teams to start in 2 days but no inspectors arrived and I still hadn't heard anything re the request.

I did receive a few calls from council team members throughout New Zealand asking for information, so I know a few people had received the request from Group. Some inspectors just arrived out of the blue with no notification and others arrived without the tools for the job. For example a vehicle which meant we had to run around finding 10 vehicles. Hurunui District Council only has 3 pool vehicles, so this was an added challenge.

Eventually after muddling along with the inspectors that did kindly arrive, I received a call from Group stating that "the inspector resource has been exhausted" and that private contractors/consultants were being looked at. Being intrinsically involved with Building Control in New Zealand, I knew there were at least 1000 BCOs in New Zealand and that there were 400 trained assessors out there, but we only had 15 of them. I was also advised that BCO managers in other councils were waiting for the go ahead to send inspectors. So the exhausted BCO resource statement from Group did not make a lot of sense to me. It was clear that the right people were not being contacted for resources, like building control managers in each council. At this point I knew I had to make a formal request to BOINZ CEO Nick Hill and MBIE's Peter Sparrow to track down some BCO resources as I knew these teams worked exceptionally well during the Christchurch earthquakes.

The input of MBIE and BOINZ was approved by Group and things started to change as from that point I would receive a report with the list of inspectors that was coming the next day, what they were coming with and where they were going to stay etc. This enabled us to plan for the next day's work and we were eventually able to complete all 3500 rapid inspections in a three-and-a-half-week period.

BURNT OUT AND ADMIN HELP

With 15 teams completing about 22 assessments per day generating between 300 to 400 reports there was a lot of paperwork. This paperwork had information that many parties wanted as soon as possible. This meant that I had to request 7 additional admin helpers, and the majority were provided by Group without any issues. These helpers worked a night shift from 5pm to midnight to input the results into a simple spreadsheet, scan the documents and pinpoint the placard colour on our GIS map.

Having worked 16 days straight and 90 hour weeks the building operations and admin managers were burning out. It wasn't just your normal type of busy, it was the type of busy were the grey starts to descend in front to your eyes. Building Control Manager Grant Hyde from Timaru City Council offered help by stepping up to assist with building operations management so that some rest could be had, but then BOINZ provided a 3rd permanent Building Operation Manager, Kevin Duthie from the South Waikato District Council. This helped enormously.

The building operation team from left (Kerry Walsh, Liz Ashwin, Andrea Taylor and Kevin Duthie)

THE FINAL RESULTS AND THE AFTERMATH

Red placards 74, Yellow placards 250 and White Placards 3257.

For three and half weeks we hadn't processed one consent or carried out one normal inspection so we ended up with a large backlog of work and all the help had gone. This along with the requests for re-checks on placards which kept pouring in, enquires to the team have doubled and this continues now almost 3 months later.

We did offer a free chimney check service to our community which added to the work load but we considered this important to address, as chimneys are an extreme hazard and after earthquakes are often just sitting there waiting to be tipped over in the next wind or earthquake event.

WHAT DID WE GET WRONG?

- We did not have any training in rapid assessments or building operations set up, which led to a system that was made up as we went along which led onto a system that was not easy to hand over to the next shift.
- No rostering for building operations managers and admin mangers so burn out occurred.
- Non-BCOs were used to carry out rapid assessments.
- Didn't get BOINZ and MBIE involved early enough.

WHAT WE DID RIGHT

- We looked after our inspectors pretty well, we planned their day so it was pretty clear. We had everything ready to go for them and we briefed them well at the start of the day.

- We kept pretty good records even though they are all paper records.
- We organised the daily runs fairly carefully so they were able to be achieved.
- We provided good communications to our ECO.
- We were still able to achieve a really good result considering the circumstances.
- All the team stepped up and got involved and helped out where required.
- We asked for and had been approved for an extension to our CAR clearance from our IANZ assessment a month before the earthquakes!

THE LEARNINGS

- Create a procedure for setting up and running a building operations team.
- Get trained in placard inspections and building operations.
- Get prepared to do it all again (aftershocks will mean that you may have to start again!)
- Have a roster
- Reduce hours for building operations managers (at least 3 were needed for this sized operation).
- Involve BOINZ and MBIE early on.
- Don't call your whole team in at once.
- No usable data comes out of the rapid assessments to help with planning for the volumes of work for future consenting.
- You need to convert your placards to s124 at some stage – this takes time and you will need resources for this.

Please ensure that your council has a system ready to go, has the gear and is able to handle a massive change in their work. We normally only carry out 1700 inspections per year in total so to have to complete 3500 in three weeks will have a dramatic effect on everything!

In conclusion, Hurunui District Council sends out a massive thank you to all the inspectors, administration staff, their managers and councils that helped us out over the 3 week period and beyond.

Kerry Walsh
Team Leader Building
Hurunui District Council

Earthquakes:

What Are They, How We Design For Them and What Happens to 'Non-Structural' Items

By D. Scheibmair – Technical and Education Manager, BOINZ

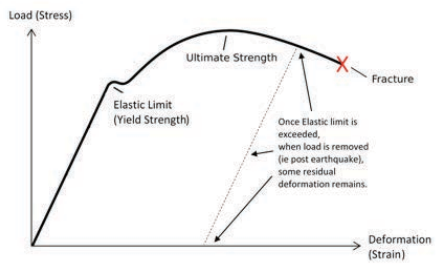
Following on from the information published in the previous Straight Up edition on what Earthquakes are, in this edition we take a closer look at how we design for the movement and induced loads Earthquakes exert on our man-made infrastructure.

Earthquake Engineering encompasses a broad range of activities that seek to minimise the damage and disruption communities suffer when hit by an Earthquake. In this article we're focusing more specifically on structural design of the buildings we live and work in. Having an understanding of the tectonic and fault mechanisms that generate earthquakes, and how this causes energy to transmit through the ground, we can now attempt to quantify the likely ground surface responses at a specific site that impose loads on our structures, throughout their lifespan. While the ground surface response is specific to a site, designs do differ between structures on the same site depending on the importance of the building and its occupancy; post disaster buildings (police, fire, ambulance, hospitals, community halls) are all designed with greater conservatism than office, commercial and industrial buildings and even more so than our residential housing stock. Similar principles are applied to infrastructure (electricity, gas, transport, water and wastewater) in urban versus smaller community or rural areas.

With regard to structural engineering there has been a shift in approach over the decades:

WORKING STRESS DESIGN

Prior to 1960, seismic design in New Zealand relied on creating structures that were strong enough to withstand the design earthquake; designers applied a lateral (horizontal or sideways) seismic load that was taken as a fraction of the weight of the building. The structure was then designed so that the gravity load plus the seismic load was less than the total allowable load and the structure was assumed to behave elastically (moves but returns to essentially its original state/position) during a design-level earthquake. This design approach is known as the working stress method applied in seismic design. While the working stress design method is generally appropriate for lower loads if the building was subjected to a greater than design-level earthquake, it was uncertain how it would behave because the elastic limit was exceeded and the structure would not return to its original state (ie might be leaning or partially 'collapse'). In larger seismic events, it is recognised that deformations and damage in the building must be accepted, and in many situations, the damage is in fact necessary for a building to survive the event as it absorbs some of the earthquake energy.



LIMIT STATE DESIGN

An extension to working stress design was the introduction of limit state conditions of a building. The condition may refer to a degree of loading or other actions on the structure to deal with structural integrity, fitness for use, durability, serviceability or any other design requirements.
Two basic limit states are defined in the New Zealand Loadings Standard (AS/NZS1170); the serviceability limit state (SLS) and the ultimate limit state (ULS).
Design for the ULS represents a design process that is aimed at ensuring the probability of collapse of a building (and therefore the risk to human life) is at an acceptable level. Hence ULS is primarily associated with consideration of severe and relatively rare events. SLS design on the other hand deals more with consideration of effects at less severe loads and/or fit for purpose; limiting damage as far as is practical, ensuring movement is within commonly acceptable limits for occupants, and similar.

(1)

OVER-STRENGTH DESIGN

This concept evolved more recently where designed structures' primary design drivers are to more accurately predict different failure modes while continuing to avoid structural collapse and ensure a viable exit from any building after a seismic event. This approach includes what is called over-strength factors which are necessary to establish a strength hierarchy within a structure. Some ductile (can deform without breaking completely) or sacrificial elements are now permitted to deform beyond the elastic limit, but other 'protected' elements are designed not to. These protected elements are generally designed for the maximum (or over-strength) force which can be generated by the sacrificial elements. In other words the protected elements are designed based on the load of the sacrificial elements and therefore a more predictable design is achieved. However, if the over-strength value is too high, uneconomic structures will result. If it is too low, an undesirable failure mechanism may occur.

(3)

CURRENT ENGINEERING DESIGN

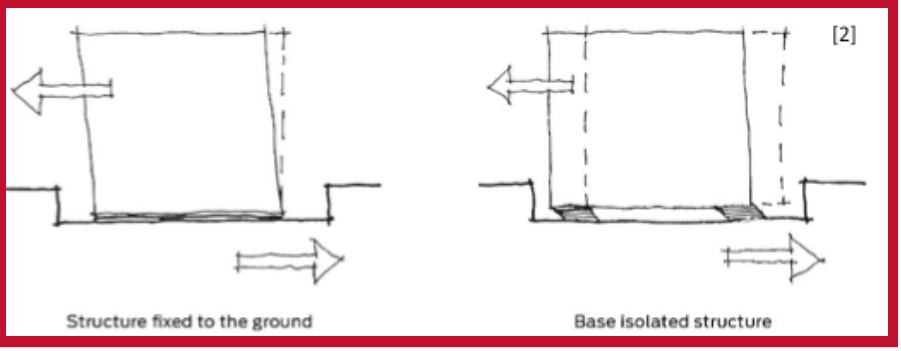
Most of the existing more recent buildings and current designs are based on the Limit State and over-strength design concept. Designing for earthquake loads therefore has three important distinctions when compared to other structural loads:

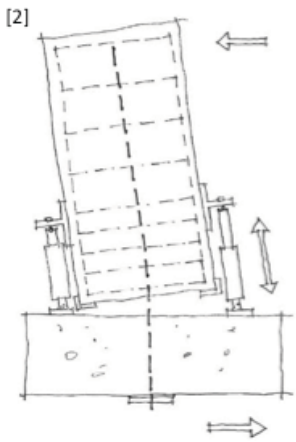
- It is generally accepted that some structural and non-structural building components will suffer damage, but collapse is avoided.
- Earthquakes are natural dynamic events whose loads are simplified into primarily horizontal or sideways loads applied to our structures.
- Earthquakes also have a high level of variability and uncertainty and hence building behaviour is far more difficult to predict.

So while the current design and analysis process is relatively robust there is still a degree of uncertainty and redundancy, particularly in the protected elements of the over-strength design which make up the majority of the structure. Following severe seismic events damage can also potentially render the building beyond economic repair.

BASE ISOLATION

One way to avoid potential severe damage is to 'separate' the structure from the supporting ground through base isolation. Developed in New Zealand during the 1970s, base isolation has proved successful elsewhere around the world. Designed to minimise damage during earthquakes, the systems utilise large lead-rubber bearings, or base isolators, which separate the building from the ground, offering controlled movement that absorbs displacement. Although not suitable for all types of structures and designed for hard soil, base isolation already protects many significant buildings in New Zealand, using various different methods that all provide some 'separation' of the structure from horizontal ground movement.





NEXT GENERATION BUILDINGS

Given recent seismic events in NZ, new best-practice requirements for the design, construction and maintenance of buildings are starting to gain traction. This new breed of structure is based on global research and development efforts, led largely by New Zealand Universities – and pre-Christchurch earthquake, look at establishing design methodologies often referred to as 'damage avoidance design principles'.
These systems provide cost-effective construction, while also delivering optimal seismic performance that minimises business interruption and reduced repair costs in the event of an earthquake. Un-bonded post-tensioning cables and rocking joints within shear walls as well as beam and column structures ensure the building returns to upright, without significant structural damage, even after a major seismic event. For larger seismic events, potential damage is concentrated towards replaceable energy dissipaters at the column/beam or sheer wall joints. Under small earthquakes movement is minimised through its high, pre-rocking stiffness. Damage resistant design systems therefore offer a means to design buildings that go beyond "life safety" to also allow for "building survivability".

The recent advances in damage avoidance design applied to concrete, steel and timber systems alike, as well as base isolation, will play an important role in making buildings more resilient to seismic loads imposed on them and offer an increasingly affordable option for structural engineers to create the next generation of New Zealand buildings.

Having now established what earthquakes are, the loads they impose on our built environment and how we design our structures to resist or absorb these forces, in the next edition of Straight Up we will take a closer look at the 'non-structural' components. This will cover the importance of considered design and careful detailing of 'non-structural' elements in and on our buildings to ensure they are not damaged as our buildings move during a seismic event, and/or remain in-situ to avoid endangering human life and rendering our buildings temporarily uninhabitable.

References and additional reading resources:
[1] www.civildefence.govt.nz
[2] www.seismicreslience.org.nz [© BRANZ]
www.nzsee.org.nz
[3]www.sciencelearn.org.nz/resources/331-seismic-engineering
www.stuff.co.nz/national/86639645/The-earthquake-from-an-engineers-perspective

MBIE Unreinforced Masonry (URM) Order In Council – A Kaikoura Earthquake Response

By D. Scheibmair – Technical and Education Manager, BOINZ

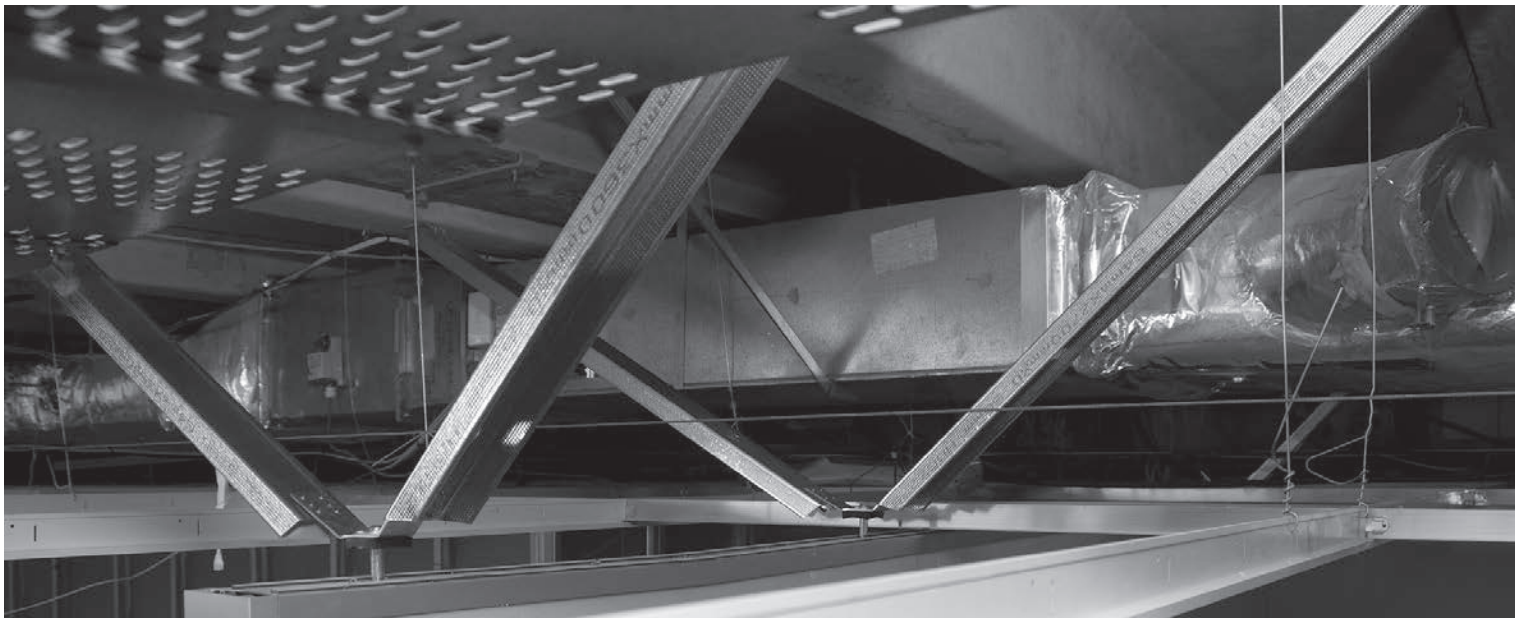
In late January, The Minister for Building and Construction, the Hon Dr Nick Smith, announced that the government is proposing owners of certain unreinforced masonry buildings be required to secure street-facing parapets and facades, so that they no longer pose a risk of falling.

The Government has made an Order in Council under the Hurunui/Kaikōura Earthquakes Recovery Act 2016 (the Recovery Act) to modify the Building Act 2004 to address the increased risk to public safety from unreinforced masonry (URM) buildings in areas of increased risk of further earthquakes over the next 12 months. The four areas identified are Wellington City, Hutt City, Marlborough District and Hurunui District, and on routes that have high pedestrian and vehicular traffic.

Councils will notify building owners if this requirement applies to them by issuing a notice under section 124 of the Building Act 2004. From the date of the notice, building owners will have 12 months to make sure the parapets and facades on their building are secured. The relevant council will decide whether the requirements have been met and the notice can be lifted.

A draft guidance document has been published that will provide support to engineers, building owners and councils to understand what the Order in Council means to them, how the requirements of the Order can be met, and information on funding eligibility. BOINZ has reviewed this document and provided feedback to Hurunui District Council - who compiled a submission - ensuring the interests of the Building Surveying Profession are being heard.

The Government has set up a fund to support building owners who are subject to the requirements. It will fund half of the design and construction work associated with securing parapets and facades, up to a maximum of $15,000 for a URM façade, and/or $10,000 for a URM parapet.



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Don't Go It Alone By Site Safe NZ Inc

Working alone can be dangerous. Whether it's long hours on the road or meeting clients, working by yourself presents some unique risks. The new Health and Safety at Work Act has identified working in isolated or remote situations as a hazard that must be managed.

Are you a lone worker?

A lone worker is someone who is isolated from help, either due to location, time or the nature of their work. This could be someone who:

- Drives through or works in geographical isolation and/or difficult areas to access, such as mountain terrain.
- Drives through or works in an area not likely to be accessed by others, such as remote rural areas.
- Drives through or works in an area where communications are difficult, such as telecommunication black spots.
- Works a sole charge late shift.

Ask yourself:

- Would anybody raise the alarm if you crashed your car on the way to a rural site?
- If you were alone and injured on-site and couldn't use your cell phone, how would your boss know?
- How would you get in touch with your employer if there was a natural disaster?

What are the risks of working alone?
Risks to lone workers will vary, depending on the nature of each job. But some common risks may include:

- Safety: working alone means if something goes wrong or there is an accident, there may be no-one else there to help.
- Security or confrontation: working alone may put you at increased risk from other people that you interact with, such as clients or strangers.
- Social, technological or organisational isolation: you might feel cut off from opportunities, information, interaction and events.

What the law says:

The new Health and Safety at Work General Risk and Workplace Management Regulations specifically require PCBUs (a person/entity conducting a business or undertaking) to manage any risks to the health and safety of their lone workers. If risks cannot be eliminated, they must be minimised, as far as is reasonably practical. And because each work situation is different, PCBUs may need to consider the risks to lone workers on a case-by-case basis, unless there are specific codes of practice or industry guidelines already in place. Under the new rules, PCBUs must also have an effective way of communicating with their lone workers.

How to stay safe and well as a lone worker

Some steps you and your employer could consider:

- Design a plan with your manager for how you can get help quickly in an emergency.
- Ask your employer to draw up a plan of what risks you might face as a lone worker and discuss how these can be eliminated or minimised. Your employer may wish to consider setting up a policy for this.
- Set up a plan with your manager for what to do when communication is lost - for example in a natural disaster or when you are working in a cell phone blackspot.
- Ensure your emergency contact details are up-to-date.
- Consider getting a first aid certificate and carrying a first aid kit in your vehicle.
- If your work requires a lot of travelling or driving, discuss the steps you can take to prevent fatigue. You can download a free guide to preventing fatigue at www.sitesafe.org.nz.
- Set up a system of regular, scheduled contact with another person or supervisor. Your manager should make sure that there are regular opportunities to keep in touch and to bring you together with the rest of the team (even if this is by email, telephone conferences or video conferences).
- Ask your manager to ensure you have access to the same or more advanced technology as other employees.
- Ask your manager to ensure you have access to the same information, training, consultation and development as other employees. Managers should try to invite you to work-related and social events whenever possible.

As part of its Advanced Passport course, Site Safe offers training on how to manage workplace risks. To talk to an expert health and safety advisor about protecting lone workers, or setting up a health and safety policy, go to www.sitesafe.org.nz.

Site Safe is a not for profit, industry led organisation, that promotes a culture of safety in the New Zealand construction and related industries.

Auckland Builder Prosecuted For Falsely Claiming To Be A Licensed Building Practitioner

Unlicensed Albany-based builder Blair Cole has been convicted of two charges of falsely claiming to be a licensed building practitioner, resulting in a $5,000 fine and an order to pay court costs and $1,296 in reparation.
The case against Mr Cole was brought to the North Shore District Court by the Ministry of Business, Innovation and Employment's Occupational Licensing Team.

"Mr Cole, who trades as Akoranga Construction Limited, ran numerous advertisements in local papers falsely claiming to be a licensed practitioner and displayed the Licensed Building Practitioner (LBP) logo on his business card, despite never holding an LBP license," says Investigations Team Leader Simon Thomas.
"Furthermore, an Orewa homeowner responded to one of these print advertisements, engaging Mr Cole to replace a number of piles under the deck of her house. Mr Cole undertook this work, continuing the guise of a licensed builder. The homeowner paid Mr Cole for the job, which remains unfinished."

It is an offence under the Building Act 2004 for a person to claim to be licensed to carry out or supervise restricted building work, while not being licensed.

Mr Cole pleaded guilty to both charges, was fined $5,000, and ordered to pay court fees and $1,296.02 in reparation to the homeowner for the unfinished work on her Orewa home.

"This prosecution sends a clear message to the building industry that claiming to be a licensed building practitioner without actually holding such a license is illegal. Where MBIE has evidence of this occurring, offenders can expect to be prosecuted accordingly," Mr Thomas says.

This article comes from MBIE's website. To view the article on their website, click below:
http://www.mbie.govt.nz/about/whats-happening/news/2017/auckland-builder-prosecuted-for-falsely-claiming-to-be-a-licensed-building-practitioner

Spotlight on a Member

Name: Luke Hight, LAMBOINZ Official Job Title: Structural Project Manager, OPUS International Consultants Region: Taupo

It's hard not to be inspired by Luke Hight. Until he was 30, he had devoted his time to working on various passion projects - whether it be sport, motorcycles/ classic cars or surf lifesaving. It was only when he hit his third decade in life that he decided to go for one more career swing – civil engineering. He's always grabbed the bull by both horns, and ensures he is as informed as possible in any task he undertakes. This has led him to completing all 3 levels of the Accredited Building Surveyors course – a feat so far achieved by no other. When talking to him, he is so calm and collected you wouldn't think there was a building boom and a skills shortage happening, but don't be fooled – Luke is just one of those people who has mastered the art of making something extremely difficult and time consuming look easy and all in a day's work.

What was your first full-time job?

Working as a builder's labourer during the holidays back at school. I was in the First XI cricket at Hamilton Boys High School and we toured the UK. In order to raise funds for that I worked all my holidays full-time to get the money together to go on the tour.

After school I mucked around for a couple of years doing odd-jobs – mostly automotive. I was into playing rugby and cricket for Fraser Tech in Hamilton. I became more career-focused and started studying when I was 20 and did my Bachelor of Sport & Exercise Science. Then I did a couple of years of physio school after that in Auckland. Then I hit the wall and decided healthcare wasn't the path for me so I went overseas to the Sunshine Coast and worked in Mooloolaba in the motorcycle industry for 4 years. My job in the end was Service Manager for the #1 KTM dealership in Australia though I worked at several big multi franchise dealerships. It was another passion project and I loved every minute. I lived across the road from the beach, I could go surfing every day and ride whatever bike I wanted. But one day I woke up and realised that whilst I loved it, if I wasn't careful I could be doing this forever.

How did you get into the industry?

My grandfather was a surveyor and a borough engineer back in the day, so I decided to come back to New Zealand and study civil engineering when I was 30. I earnt money whilst studying, working as a professional Surf Lifeguard at Whangamata Surf Lifesaving Club. I'm still involved there as an active senior. My brother is the club president, so there is a big family involvement. I got my first engineering job in a structural consultancy in Taupo, for a structural engineer called Ian Smith. He was basically like Yoda and was one of the leading engineers in New Zealand for seismic assessment and design. Ian picked me up based on my attitude and at first I was well out of my depth, but I really pushed myself and grafted hard to learn my trade from him. Ian triggered a passion for structural engineering that inspired me to do my degree by correspondence in civil engineering. I've recently been assessed by IPENZ as having Washington Accord knowledge so I'm applying to be a Chartered Professional Engineer right now. There's no doubt I wouldn't be here if it wasn't for Ian, he was so inspirational. Even in his late 70's, he could still work harder and longer than most people far younger. He was even in the office working the day after having heart surgery! Incredible. The team at ISPS were all high-performing individuals. We worked from the Smiths' house, so it felt like being part of a family. We were all devastated after Ian and Mary's fatal accident at the end of last year.

Why did you decide to do the Accredited Building Surveyor's programme?

I've always been really interested in buildings and wanted to supplement what I already knew. With structural engineering, you generally tend to either build things up or out i.e. be a buildings guy or a bridges and infrastructure guy. I'm a buildings guy and I really liked the idea of really knowing a lot of the building controls stuff - learning about other Building Act clauses, not just B1 and B2. By this stage, I'd moved to Opus as part of an initiative to diversify our local business. A few years ago, the Opus Taupo guys were working on a tender for a big transportation project, about $100M of work over 7 years. There was no surety of winning it so long story short: they had to diversify the business. The business manager at the time Chris Davies gave me a shot to be part of this and now we have a multi-disciplinary office and a separate transportation office because we won that tender too! I respect Chris immensely for his vision and for backing me. We presently have three other structural engineers, a couple of civil engineers, several project managers, a planner, a couple of surveyors, a geologist and about ten transportation guys. One of the ways I chose to grow what I was doing was getting accredited with BOINZ. With structural engineering, you've got a very in-depth knowledge, but it pays to broaden your focus a little bit in order to become a better expert. I wanted to know about a lot of the weathertightness stuff that is in the programme – or more precisely understand bad buildings so I never fall into the same trap as a designer. We also started to get hit-up for a lot of building inspection work. For a while we were in a property boom and were doing inspections to top our hours up. However, there's a skills shortage for structural engineers in New Zealand, a huge building boom and just for good measure you get a bunch of earthquakes. That means there's so much engineering work ahead. A lot of stuff gets pushed our way so we're kept very busy. I'm also considering picking up fire engineering and writing fire reports. Again, the need is definitely there – there

can be up to a 6 month wait for structural engineers in some parts of New Zealand, and Fire Engineers are also rare.

The accreditation course was a big eye opener for a lot of people doing it. Everyone was amazed about things they weren't aware of about the system overall – we can get a bit stuck in our ways and we're so used to seeing things one way until someone else shows us a different way to look at it.

What do you think has changed about the industry since you first started working in it?

Emphasis on safety with the HASAW Act and Directors' responsibility to keep the troops safe. I have some insight with this because my brother is a risk strategist and has developed a handy application called Safe365 which assists company Directors to comply with HASAW Act without needing expensive H&S consultants. Without software packages like this I could see many PCBU's struggling if someone gets hurt on a building site. This is all such a huge change from my early days on building sites where you only wore boots and did the thinking for yourself. Nowadays I have to consider safety in design with most of the jobs I do or I'll be in the gun and we also have some clients that have incredibly high standards with safety.

The other big change is the impact the earthquakes has had on the industry – I saw the result of the first and second major earthquakes in Christchurch as I did a project down there but I was surprised when I had banks asking me to inspect homes in Taupo for damage after the Kaikoura earthquake!

What is the most interesting part of your job?

Scoping and designing new buildings and developments from scratch, or finding pragmatic ways to strengthen buildings. I really enjoy taking a complex problem and finding simple and workable solutions. If I can add value during that process, then I'm stoked. Day-to-day most of the work I'm doing now is seismic assessment and improvements and commercial and high level residential new building design. I do have a creative side, I'm also a musician so I do enjoy the design part. Most people out there don't know what an engineer does. Thus, engineers are often not appreciated in society like say a doctor is but we have such an important job to do with very significant consequences.

I'm generally doing more complex projects which helps to keep things interesting - a school hall with a failed cladding system, power stations, prisons. It all helps to keep the job varied and challenging.

What do you consider to be the biggest challenge in your role?

My work needs to comply with so many rules and regulations. To give you a bit of an idea, NZS 4219 the Residential Inspection Standard is the skinniest standard I've got on my desk. The concrete code (NZS 3101) has got hundreds of pages in it, the steel code (NZS 3404) has probably about the same, the NZSEE Guidelines for Assessment and Improving Buildings is probably about 400 pages. That's only three, and isn't including the other material codes like the Timber Code (NZS 3603), Masonry (NZS 4230), the Loading Code (NZS 1170) or legislation like B1 or B2 of the Building Act. And don't forget the non-specific design codes (NZS 3604 and NZS 4229). Then there's the other compliance documentation, acceptable solutions, verification methods…all this stuff we must design to. We need to keep up to date with amendments etc on top of all of that. That's a vast volume of material.

Really though our biggest challenge is time – we're under-resourced. A nationwide shortage and in the biggest building boom ever. We keep having these earthquakes and more people are becoming risk-adverse like TAs, the banks and insurance companies. It creates heaps of work for us, which is good but there's only so much so many people can do. It ultimately just creates bottlenecks and it's the toughest thing to tell someone "No" when you really want to help them but are unable.

I like to be as informed as possible before I do a Building Inspection – I always look at the original drawings first and because I know the local risk-areas and factors, have knowledge about construction over the decades and the different design codes over time, I have a good amount of knowledge already. You can identify your risk factors early and you've got the drawings with you so you can tell if there have been any alterations. If you see any dodgy areas, just look at your drawings while onsite and reconcile that detail against what you see.

It's key to have local knowledge of the land – you might be inspecting one building that's on a bluff or something, so obviously, we need to know what this slope stability is like in the area. My mentor Ian Smith used to live in Wellington so on this occasion he knew the area well. On one project, we were looking at the seismic capacity of a commercial brick building in Wellington in the lower end of town. Ian knew from

Whangamata SLSC senior lifeguards (fossils) patrolling over Anniversary weekend

experience that there was a curve in the road and the building was set back from the road, so he suspected it was probably better ground conditions than what other engineers were assuming. In that instance, we got a CPT rig in there which cost tens of thousands of dollars. We did some testing on that site which confirmed our suspicion and so the capacity on that building tripled. So, you're saving somebody hundreds and hundreds of thousands by having that knowledge so they're usually happy spending a little bit to confirm. And that was based on one guy's local knowledge who was almost 80 years old.

What do you think is different about being in the Built Environment in Taupo versus other regions?

As I mentioned before, having local knowledge really does make a difference. For example, we are lucky and have quite good building conditions here – we have pumiceous sands which are generally fantastic to build on with few risks. However, we also have areas of sawdust fill and volcanic ash layers, but we have a fair idea where they are. Generally, we have good material and it's abundant here. We also have moderate seismicity to consider. By comparison of hazard factors, we're approximately 70% as seismic as Wellington. We also have geothermal steam fields and we're in the Taupo Volcanic Zone. There are many natural hazards for us to be aware of. We do temperature testing in the hot areas and we have a couple of big subsidence bowls locally. The lake also changes in volume, there are many surveys and studies on the lake so we're learning more all the time. We need to make sure we're protecting the lake and river and the environment at all times. We have to be aware of all this stuff. We're also subject to big temperature swings, we can get down to sub-zero which can affect design with concrete. One interesting example of local conditions is when building Knoll Ridge Café, Ian Smith and Stanley Construction had to helicopter in materials. The whole thing is keyed into

Luke at Work

rock, so you have a modern building, way up the mountain with serious weather constraints on construction. Everyone who worked on the café were clever buggers, so now we have one of the coolest most unique buildings in the area. Most of the stuff I do isn't up a mountain, it's around the central North Island and Coromandel - on hydro stations up the Waikato River, or on geothermal stations, all sorts really. The electronic era has meant we can be based anywhere and I've done lots of work in Wellington, Auckland, Bay of Plenty and all over the place.

New Zealand's an incredibly diverse country, but despite these variations in regions, rules are still the rules no matter where you are.

What do you see as the future of the built environment?

In general, I see BIM being the future. It will help us have far better records and know a lot more detail about places. Documentation has generally gotten a lot better. It's also a possibility that in the future we will have too much documentation and so you lose the ability to see the forest for the trees. You want to be able to cut straight to the stuff you need – the specifications, drawings and engineering calculations. Who knows how it could be presented in the future – maybe even virtual reality. With the technological advances we're making, who knows what is around the corner. Perhaps Li-Fi (Wi-Fi through your lights) will become a commercial reality? It's already been invented.

We've also started using drones. I flew up into the bush in a chopper recently and used a drone to survey a repeater tower. Our land surveyors used them to pick up the position of cables – massive high-tension lines by switchyards as there were a whole lot of trees getting close to it and they didn't know exactly how close they were. The drone was able to tell them to the millimetre how far away they were.

The cost of everything is going up too. It's getting harder to do economical design work, because of all the extra work and administration that must be factored in as a result of this. Hopefully better technology will help with this in the very near future!

In every edition of Straight Up we are going to focus on one of our members to learn more about their background, what brought them into the built environment and how they feel about it. Each member will be asked the same questions (this issue was slightly different to include a question on Luke's Accreditation). If you have a story to tell, or think you might know someone who does, please get in touch with events@boinz.org.nz, we'd love to hear from you!

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Plumbers, Gasfitters & Drainlayers Board Update: It's Time To Sort The Pros From The Cons

With the construction industry and housing activity showing little sign of slowing down, this exciting time of growth provides its own set of challenges.

At the forefront in 2017 for The Plumbers, Gasfitters and Drainayers Board will be ensuring those embarking on building or home renovation projects don't pay the costly repercussions of using the wrong people.

New Zealand has been fortunate to have a regulated plumbing, gasfitting and drainlaying industry for over 100 years. High-quality training means we have some of the most highly competent and qualified tradespeople in the world.

"So, how do we protect the integrity of our tradespeople from those who bring the industry into disrepute by working unlawfully? Our public awareness campaigns and unauthorised work initiatives need to work harder", says Martin Sawyers, The Board's Chief Executive.

In response to the current challenging environment, the Board has reinvigorated its public awareness marketing campaign. The idea is simple and works on many levels.

The main message of the new 'sort the pros from the cons' campaign shows consumers how to choose the right people when building or renovating.

It highlights the importance of qualified tradespeople, and the need to eliminate risk by asking to sight a New Zealand Practising Licence before any work begins.

The advertising for the campaign has been created using different angles to get the message across. The main visuals show the licence card highlighting an authorised tradesperson while pushing an unqualified person out.

The campaign emphasises that anyone can have tools or a van, but that doesn't mean they have the skills and experience required to do the job properly.

It reminds consumers that New Zealand homes have a complex network of pipes and fittings that mix high pressures, high temperatures, gas, electricity and many other high-risk hazards which are dangerous and could potentially put their health and safety and insurance under threat if handled incorrectly.

Messaging has also been targeted specifically at people who try to do it themselves and provides clarification of what's legal and what's not.

The campaign has full media attention through TV advertising, print media, digital advertising on Stuff, The Herald Online, TVNZ OnDemand, and Trademe. Youtube and email campaigns also play a part in spreading the word. See the full campaign at www.pgdb.co.nz/ publications/card-campaign.

"Providing behaviour change quickly is hard" says Martin. "However the campaign is already providing good results. In the early stages, it is exceeding the expected measures for its target audiences - and we plan to have this three-month summer campaign on repeat for the next two years."

Tackling illegal operators through a strategy of joining forces is another one of the Board's initiatives that is having an impact and responding to the unauthorised work challenge.

In October and November of last year raids on illegal operators netted 25. Investigators from the PGDB swooped on Auckland suburbs Millwater and Flatbush. Both were targeted areas identified by the industry reporting illegal activity through the R.A.C (Report-A-Cowboy) mobile app.

Sixteen illegal operators not qualified to carry out restricted work were found in Millwater and nine in Flatbush who will be prosecuted in the District Court or penalised through disciplinary action by the Board.

In late 2016 the Electrical Workers Registration Board (EWRB) joined the successful PGDB initiative and added an electrical reporting component to the app, and reports are beginning to emerge identifying potential illegal activity in the electrical trade.

"More places throughout New Zealand will be targeted in 2017 that have been identified by practitioners who are joining forces with the Board and reporting illegal operators through the R.A.C app", says Martin.

"We encourage all industry tradespeople and building inspectors to download the R.A.C app at www.pgdb.co.nz and assist in identifying, and holding to account those people who are carrying out restricted work unlawfully and put the public at risk."

Boinz Lending A Helping Hand

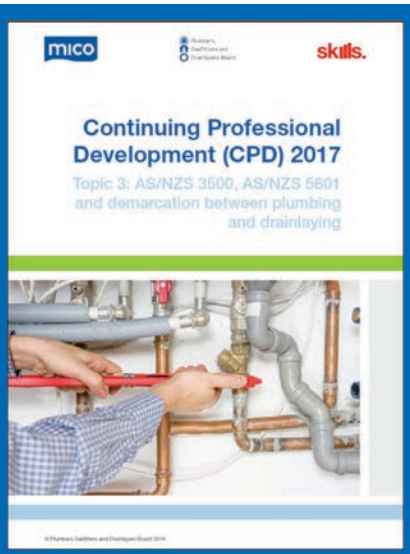
By D. Scheibmair – Technical and Education Manager, BOINZ

The September 2016 Straight Up Edition contained information on Plumbers, Gasfitters and Drainlayers Board (PGDB) changes to their public register relating to fraudulent use of members' authorisation numbers. This was part of a continuing focus on improving key business processes. Another key initiative is the review and creation of up-to-date content to be delivered in their CPD sessions.

Their intent is to provide an updated booklet comprising training material to take away, similar to previous years, and provide an additional guideline with informative appendices and addressing Health and Safety requirements.

BOINZ staff are primarily assisting PGDB in the revision of training material content, and the associated booklet, from a compliance aspect entailing regulatory requirements. Of note and interest to the Institute's members is the inclusion in their training resources of the recently cited AS/NZS 3500:2015.

A direct benefit to BOINZ and its membership will be that these PGDB publications will also be made available in editable Word form, so that they can be customised and drawn upon as supplementary resources by BOINZ and its members. Indirectly we should also profit from our input in that their own members will have a much better understanding of the regulatory requirements having undertaken CPD training.



Strong Focus on Building System Performance

By Anna Butler, General Manager Building System Performance, Ministry of Business, Innovation and Employment (MBIE)

It's a busy time for everyone involved in the building and construction sector and MBIE is no exception.
Of particular interest to councils, two of the areas MBIE's Building System Performance branch is currently focused on are a refresh of the building consent authority (BCA) accreditation scheme and the upcoming Building (Earthquake-prone Buildings) Amendment Act 2016.

BCA ACCREDITATION SCHEME

BCAs play an essential role delivering consent processing, and the review of the BCA accreditation scheme set out to consider whether there were opportunities to improve the accreditation requirements, process and BCA compliance.

The review involved gathering and responding to feedback from BCAs, the accreditation body and other stakeholders. As a result, a key improvement being made is to list the technical qualifications for building control officials (BCOs). This is about recognising the importance and complexity of the BCO role, and ensuring all BCOs have foundational education and skills to support them to do their job. It's important to note that from July 2017 all BCOs doing a technical job will need to have a qualification, unless exempt. The National Diploma in Building Surveying is a useful qualification to hold, even if a BCO has been working in the sector for some time.

The new assessment process and regulatory guidance will be implemented on 1 July 2017, the same date changes to the Building (Accreditation of Building Consent Authorities) Regulations 2006 take effect. To support the changes, MBIE has developed regulatory guidance that is available on the Building Performance website.

Further information on the BCA accreditation scheme is available at www.building.govt.nz/building-officials/bca-accreditation

EARTHQUAKE-PRONE BUILDINGS

The Building (Earthquake-prone Buildings) Amendment Act 2016 is intended to take effect on 1 July 2017. The amendment addresses issues with the system for managing earthquake-prone buildings, identified by the Canterbury Earthquakes Royal Commission.
Instead of individual council policies currently in place, there will be a national policy framework, striking a balance between protecting people, costs of strengthening buildings and the impact on our built heritage.

The new legislation will:

- categorise areas of high, medium and low seismic risk, with varying timeframes to identify earthquake-prone buildings (5, 10 and 15 years) and to strengthen them (15, 25 and 35 years)
- prioritise hospital and education buildings, emergency service facilities, and buildings on strategic routes or buildings on routes of high pedestrian or vehicle traffic in high and medium-risk areas. These will be required to be identified and remediated in half the standard time
- clarify the definition of an earthquake-prone building, making it easier to interpret and apply, and confirm that part of a building can be earthquake-prone
- establish a set of regulations and methodology for identifying earthquake-prone buildings, setting out what is required of building owners, territorial authorities and engineers under the Amendment Act
- set up a public register of earthquake-prone buildings and a system of enhanced notices to increase public awareness.

Consultation on proposals for regulations and the earthquake-prone building methodology closed on 10 February 2017.
MBIE will provide ongoing guidance and training in support of the new measures and requirements under the Amendment Act.

Expansion to External Plastering Restricted Building Work

On 10 November 2016 amendments were made to the licensed building practitioner (LBP) licence class competencies for design, bricklaying and blocklaying and external plastering. These changes were largely technical in nature, however there is an important change for those carrying out, enforcing or monitoring the on-site application of the restricted building work (RBW) regime.

The external plastering LBP licence class has always been relatively strict as to what extent external plastering work could be considered RBW. A determination issued by the Ministry of Business, Innovation and Employment (MBIE) also highlighted this issue.

Licence class competencies before the amendment

The licence class competencies for external plastering identified two areas of practice: solid plastering and proprietary plaster cladding systems (PPCS).

- The solid plastering area of practice related to plastering over a solid surface in accordance with NZS 4251.
- The PPCS area of practice was narrower, and within the competency performance indicators two substrates were identified: exterior insulating finishing system (EIFS) and fibre cement sheeting.

Determination 2014/064

In 2014 MBIE issued Determination 2014/064 in relation to basement tanking and the carpentry licence class. It was considered tanking was not restricted building work as it did not fall within the competency performance indicators for applying damp proof material in the carpentry licence, noting that there was some confusion depending on how each was defined.

Confusion over RBW limits

An interpretation of RBW in the external plastering PPCS area of practice was that it was effectively limited to the work identified in the licence class competency performance indicators, ie EIFS and fibre cement sheeting. This caused significant confusion within the industry as to the limits of RBW (eg did RBW in the PPCS area of practice only relate to those specified substrates, or was any PPCS work RBW?).

What has changed

To avoid confusion, MBIE has amended the licence class competencies for external plastering so they are more general. These changes take effect from 23 March 2017.
The competency performance indicators for the PPCS area of practice now include terms such as "installation of substrate". This means that there is a less strict limit to the work generally covered by this licence class.

Without limiting competency indicators, Determination 2014/064 no longer causes confusion. The new performance indicators mean that any PPCS type of work is now RBW whereas previously there was an argument that only PPCS over EIFS or fibre cement sheeting was RBW.

How the amendments will affect you

From 23 March 2017 it is necessary for anyone carrying out, enforcing or monitoring external plastering work to be aware that any new projects or consents that include PPCS over a substrate other than EIFS or fibre cement sheet will be RBW (as long as all other criteria for the work being RBW are met).

For the avoidance of doubt this includes the application of PPCS over products such as aerated concrete panel. This will be recognised as RBW from 23 March 2017.

You can find out more about RBW at

www.lbp.govt.nz

You can read about the competency changes in more detail in our Codewords 76 article on the Building Performance website –

www.building.govt.nz

Use Your Expertise To Develop Standards

Being part of a standards development committee provides a unique opportunity to work with your peers to create something that is of great benefit to both your sector and New Zealand as a whole. Would you like to be involved?

HOW ARE COMMITTEE MEMBERS SELECTED?

We invite organisations – such as BOINZ – that represent the views of a large, usually national, group with a common interest in the area being addressed by the standards solution to nominate a representative for the committee. We appoint members from the nominations received – working to ensure the committee is balanced and has a good mixture of expert knowledge and experience. The final composition of the committee must be approved by the Standards Approval Board.

NOMINATING ORGANISATIONS

Nominating organisations may be industry regulators, professional bodies, research agencies, manufacturers, end users, or others with an interest in the subject.
The Building Officials Institute of New Zealand, for example, nominated a committee member for the development of the New Zealand standard NZS 3604:2011 Timber-framed buildings and P3603 Timber Structures Standard. Other organisations who nominated committee members included BRANZ, the Certified Builders Association of New Zealand, and the New Zealand Building Industry Federation.

WHAT ARE THE BENEFITS OF BEING INVOLVED?

By being involved in the development of a standards solution, committee members are able to directly contribute to the development of a standard that is authoritative and widely accepted in a particular sector. The process can also support a committee member's professional development by:

- Enhancing their professional experience
- Building networks and learning from other experts in their field
- Contributing to, and learning from, the latest international knowledge and practice
- Representing and protecting the public interest.

HOW LONG DOES THE DEVELOPMENT OF A STANDARD TAKE?

Our standards development process has been streamlined so that the average New Zealand standard takes between 12 and 18 months to develop, including a 2-month period for public comment and consultation. This means that standards can be developed and published relatively quickly compared to the time frames required to change Acts and regulations.

WHAT SHOULD I DO TO EXPRESS MY INTEREST?

Let BOINZ know of your interest in wanting to sit on a development committee by contacting Daniel Scheibmair, Technical and Education Manager; Technical@boinz.org.nz . Or to learn more about the Standards development process in general you can view the Standards New Zealand work programme on our website

STANDARDS NEW ZEALAND

Standards New Zealand specialises in managing the development of standards using internationally recognised best practices.
We also publish and sell New Zealand, joint Australia-New Zealand, and international standards. Our standards are developed by appointed committee members who are experts within their profession and who have been nominated by organisations that will be directly affected by the final standards solution. We have some of the best and brightest people within their fields serving on standards development committees.

Standards span an enormous breadth of subject areas including engineering, building, adventure tourism, organic production, health and disability, children's toys, clothes and furniture, gas and electricity, energy efficiency, and risk management.

Collaborative Efforts For A Safer Built Environment
– Engagement With StandardsNZ / MBIE

By D. Scheibmair – Technical and Education Manager, BOINZ

Since joining BOINZ in late 2016 there has been some good progress in the hand-over of existing relationships BOINZ has enjoyed with StandardsNZ and MBIE, as well as expanding on these to develop working relationships with StandardsNZ and MBIE further, providing improved benefit to BOINZ and its members:

- **Greater engagement in the standards review process** – we're working with StandardsNZ for our membership via BOINZ having representation on appropriate standards being updated. This provides benefit to BOINZ in that we are aware of pending changes much earlier and by utilising and offering expertise in our membership who can help guide the outcome of reviews to be relevant and enforceable from a compliance aspect.
- **Providing cost effect standards access –** BOINZ has and continues to be a StandardsNZ reseller and is able to offer our membership discounted prices on standards purchases. To take advantage of or find out more on this please contact training@boinz.org.nz. Work is also underway to investigate other standards access options including online access of a set standards library containing the most commonly referenced standards.
- **Draft standard and MBIE guideline consultations –** BOINZ reviews publicly published draft standards and guidance documents not only to be aware of likely upcoming changes that may affect our membership, but also to make formal submissions and submit feedback – often in consultation with member experts – to drive a desirable outcome for the Building Surveying Profession.
- **Staying up to date with changes –** While most of our membership may not be aware of the above given this generally happens 'behind the scenes', all members should well be aware that keeping you current on changes is a core activity; updates and distribution of key StandardsNZ and MBIE communication is published for your reference in every BOINZ monthly e-news update and in the BOINZ Straight Up journal.

Facilitating all of this not only requires considerable resource within BOINZ's support office but also relies on commitment from its membership - thank you to all the dedicated individuals that contribute on a voluntary basis.

And on that note; if you're interested in playing a pivotal part to the Institute's success in achieving its vision - Improving the Quality and Performance of the Built Environment – please do get in touch technical@boinz.org.nz … your fellow members might just thank you one day.

'Perspectives from the Past' Series – Part 1: C Ray Smith

As part of BOINZ celebrating its 50th year, National Office has been looking at the Institute's history and talking to many of its past prominent members and presidents. A lot of people have dedicated many years of their lives to the Institute and one can't help but feel incredible respect when talking with these people and hearing their stories and learning more about the Institute's past. But why let National Office have all the fun – so we thought we'd ask a few of these people to put their memories and perspectives down in writing for us all to enjoy.

Our first part of the series comes from C Ray Smith. At our 2016 AGM at our conference, Ray was awarded Life Membership of the Institute. He joined the Institute in its first year, and had a membership number of 67. With the Institute, he has been Southern Branch Secretary and President, Conference Secretary (Dunedin 1973), Conference Chairman – Timaru 1978, National Executive Southern Branch Delegate 1980-82, National President of BOINZ 1983, 1984 and 1985 and Editor "BOINZ BUILDING" magazine 1996-1997, copies of which you will be able to see featured in our exhibition at our 50th Conference. Speaking of the exhibition, Ray has been an integral part of helping to make the exhibition happen by providing lots of information, sending through many items of memorabilia and helping to source contact details for other past members National Office has been trying to get in touch with. We are incredibly grateful to Ray for his many years of dedication, and hope that you find his perspectives as interesting as we have.

Ray receiving his Life Member Award from past president Stu Geddes at last year's conference

"Golden Memories" was prepared for the 50th Jubilee of the Building Officials institute of NZ (BOINZ). This narrative records the writer's 'memories' as a building inspector and building official. It includes National and International involvement as a 'Registered member' of the NZ Institute of Building Inspectors (NZIBI) and BOINZ as well as being their representative on the World Organization of Building Officials Board. It is crammed with anecdotes and highlights of life within the Institute from about 1967 and records the many of the challenges of that period.

Joining NZIBI came about by default, because the NZ Clerk of Works Institute declined to provide me with registered member status. They said "I was too young to be supervising major construction" even though I was employed as a Building Overseer with the then Ministry of Works on Contracts at Bayfield High School and Dunedin's new Momona Airport.

I had completed their 3 year study course (at Dunedin's Polytechnic) and passed their written papers and the oral interview, and furthermore, pre qualifications for Registration were: a Building apprenticeship with Trade Certificate and 10 years construction experience. That was an onerous task for a 27 year old Kiwi, who with his Fiancé was building a new house at weekends as well.

Frustrated, I resigned from the Ministry, which turned out to be a fortunate choice and applied for a Building Inspector vacancy at Dunedin City, then joined the NZIBI and was given Reg. No 67.

I didn't fit the image of a building inspector in those bygone days when they were expected to be at least: '6ft between the eyes', carry a 3ft folding rule, have the knowledge of a 'Dean of Building' and have some grey hair, but wait, suits & ties were mandatory.

My introduction consisted being given a full length 'traffic cop overcoat, a pair of 'galoshes', a copy of the Building Bylaws, (the Blue Bible), a key to the Council car and a bit of worldly advice: "don't bring your fancy Ministry of Works standards here, and, don't rock the boat". Little did they know what lay ahead and neither did I?

The Inspectorate at Dunedin consisted of a Chief inspector, a Special Duties Inspector responsible for Fire Construction & Means of Egress, and 3 District inspectors to cover the whole city, so we were pretty stretched most of the time. Dunedin operated under NZS 95 Model Building Bylaws first introduced in 1935, but I was told not to study it because a new Model Bylaw was being adopted so use that.

Mornings were programmed for vetting Building Permit Applications and addressing Enquiries with the afternoons on site inspections. The only mandatory inspection was the: "pre- concrete placing" i.e. footings, reinforcing and site boundaries. Thereafter we arrived without notice. I found it best to park up, walk a street, inspect all work and find heaps of illegal work.

Being well dressed with a small Black Field book at hand, to record dates, inspections etc led to some interesting encounters such as being invited to carry out the "Last Rites" by a desperately sad family member.

In 1964 there were **approximately 650 councils in NZ**. That included Cities, Borough's and Counties. Building standards were pretty high as profit was not the motivating factor it is today, and as a member of the Building family, I can boast that most 'builders' had huge pride in their workmanship, they didn't suffer fools and would walk off jobs rather than carry out shoddy work.

Until they learnt that I was one of them a lot of stick was handed out to the "new college boy"

In those early days each Council employed a Town Clerk as the General manger and a City, Borough, or County Engineer. They had a wide range of functions including Building control, a 'necessary evil' some said, so we were pretty much left on our own with little help. In some ways that was positive as there was minimal interference, unless someone complained and then experts seemed to appear from the woodwork.

The **Municipal Corporations Act** 1954 covered the legal matters such as: Prosecutions, Licensing of Public Buildings, Dangerous/Insanitary, Seismic Risk, and Dilapidated Buildings etc. and a **Building Bylaw system controlled construction. It was pretty Prescriptive** which I believe produces better quality and contained provisions for Innovations, new methods of construction new materials and designs if Owners wanted something different. Sadly, most Council's ignored those latter provisions and that was later used to justify huge change.

In 1964, NZSS 1900 "Model Building Bylaw" was produced by the Standards Association of NZ (as it was known). The Bylaw had 10 chapters and required adoption by each Council. But again some councils added and or deleted clauses resulting in varying interpretations that caused some skirmishes at Institute meetings with healthy doses of 'sheriff mentality' at times. Some eloquently referred to the "Bullshit Bylaw"

and that tended to derail much of the good work of those who wanted uniformity and professionalism.

Clearly there was need for change.

The late "City Engineer" of Christchurch City Council Peter Scoular assisted our early development by having Building Inspectors attend the South Island Local Government meetings in Timaru on Fri afternoons as part of the South Island Engineers Forum. That had a profound effect on the recognition of our membership in the South Island. But some years later he was again involved as this narrative will unfold.

Early meetings of the Southern Branch (whole S.I) were held on Saturdays between Christchurch and Invercargill. Later that became Nelson/Marlborough, Canterbury and Southern branches to minimize travel and increase attendance – which it did. Councils were somewhat miserable, so members shared private cars to save cost, yet there were some good attendances and very good friendships developed. But most importantly that provided the main source of continuing education.

In the North Island branches in Auckland, Wellington and a Central branch (around Rotorua), were formed but sadly too little effort was made to unify the Building Bylaws and obtain recognition for our members. Many considered it was beyond the scope of the Institute; however the bottom line was that too many members were reluctant to voice opinions that might be at variance to that of their Engineers.

Ray Jennings, Dunedin's Chief Building Inspector raised the standards when he became the Southern Branch delegate on the National Executive. His influence gained the respect of the Institute membership. He was a true professional from his dress code to his demeanour.

How fortunate to follow in his footsteps, and with his advice and support I went on to become National President 1983 – 86 and a Governor of the World Organization of Building Officials attending the inaugural WOBO Conferences in Saskatoon Canada in 1984, Sydney International Conference 1990, Darwin in 92 and New Orleans in 95.

Highly respected names during the early years include (but not limited to): the 2nd National Pres Don McCartney from Rotorua, an outstanding President, Trevor Bridges Paparoa, a later President, Dave Walker Wellington National Executive and Nick McKinstry Auckland CC, (yet to become President) all men who made decisions and took leadership roles and performed with distinction.

Ray displaying one of the old journals during his acceptance speech for the life membership award.

EDUCATION, CONFERENCES AND JOURNALS

Education was virtually non existent in my early years.

In Dunedin we had just enough staff to create healthy discussions when problems arose but the one man bands were most definitely on their own. And councils were to blame. It really was appalling as no training was offered or even considered necessary. Many of our members were controlled by Engineers who had little interest in building but much worse some Council's linked the role with another. One advert called for a Camping Ground Manager/Building Inspector, yet another council had decided to employ an untrained person. I was asked to write to the Mayor expressing the Institute's dismay – the happy outcome resulted in one of the Institutes outstanding members 25 years later.

The Formation of NZIBI raised the bar from those early times, with "Conferences", where we were educated by Industry specialists too numerous to mention and some of our own members.

But some councils refused to send their inspectors and/or subsidize Institute Subscriptions and Conference registration. Yet we were a resilient bunch, with many of us taking annual leave to attend.

A shameful interlude, *but one with an amusing outcome happened, when the local Mayor refused to 'Welcome' Delegates attending an International Seminar & Conference because he considered the venue too extravagant for Building Inspectors. So he dispatched his Deputy. When he discovered that International Delegations from 7 countries were attending, as well as the President of the NZ Municipal Association he arrived unannounced wearing his "Chains of Office" and demanded to be introduced. How sad to discover they had flown to a Beehive reception in Wellington and that left him red faced.*

Conferences became the benchmark of our continuing education i.e. the Institute educating its own members across NZ. Conferences were hosted by branches and the local building inspectors, when the Venue was away from a hub centre. Those committees put on some amazing functions with voluntary involvement being the norm and those groups "achieved the unachievable" by producing highly qualified lecturers that sent delegates home more than satisfied with improved Knowledge.

Communication in those early times was by either mail or phone - the latter being expensive, but the Institute provided seeding finance to ensure locals were not out of pocket. It wasn't until the mid 80's that Facsimile communication changed our lives. That really was an exciting tool.

What stood out was the untapped potential of the specialists within the Industry who were employed by Companies like Winstones, NZ Forest Products, Hardies, NZ Forest Services, Ministry of Forestry, Ministry of Works and not forgetting SANZ & BRANZ, Local Lawyers and a Judge. Everyone seemed so willing to act as Speakers and there were some outstanding presentations.

Likewise branch meetings took a similar format and that was the success of our organization.

Four Institute Journals per year were published with the Conference papers reprinted to ensure that members who couldn't attend were well informed. And furthermore there were articles from other trade related organizations and a (lively) "Letters to the Editor" column.

Following my resignation from Timaru in 1996 (to join the "Alternative Lifestylers", I enjoyed a stint as Editor following Kelvin Diffey who had carried the Editorship mantle for a very long time. I recall Ian Goldsmith from Rotorua being our first Editor. Many old editions will be on display at the 50th Jubilee.

LIABILITY DUE TO NEGLIGENT ACTS

In 1972 a **landmark decision in London** sounded a "wake up call" to councils throughout the British Commonwealth. It concerned a Judgement handed down by the Privy Council in **Dutton v Bognor Regis District (London).** The matter concerned a new house built on an old tip. The house settled and Dutton sued - the Borough was held to be Liable in Tort in the Lower & High Courts. The Borough appealed to the Privy Council who upheld the decision of the courts and Dutton received substantial remedial costs. Lawyers in NZ considered Lord Dunning's decision to be suspect and said "It couldn't happen here"…or could it?

Six years later, **Anns v The Borough of Merton (London)** came to our attention. It concerned a house with insufficient foundations and **Lord Wilberforce** concluded in a similar vein to Lord Dunning in Dutton v Bognor Regis.

Then in 1978 a NZ case sealed our fate forever. In **Johnson v Mt Albert Borough** it was revealed that the house was founded on "Gib board" & motor vehicle parts then in 1984 in **the city of Kamloops BC Canada** a Stop Work Notice was issued but not enforced and their Supreme Court upheld the Lower courts in a decision based on the above litigation.

All doubt as to the Liability of councils was extinguished - the rules were changed and in **the writer's humble view it was most timely.**

For too long some councils had employed unqualified inspectors and or inspectors who carried sloppy inspections and employed sloppy processes and furthermore, in some instances Document fabrication by staff had taken place and they were found out.

Joint & Several Liability added another dimension that further complicated the riddle.

However the positives were, and remain (in the writer's view):

- **The Institute's position was strengthened** – training systems & records became imperative and councils took a new look at their Inspectorates and supported the Institute.
- **If the construction process is thorough then no liability attaches** - really basic, isn't it?

Becoming a NZIBI executive member in 1978, after having served as Southern Branch President & Timaru Conference's convener was a new and exciting challenge, as was being involved with Peter Morpeth, our National Secretary. A Chartered Accountant Peter was an inspiring figure whose company underwrote the finances of the Institute for many years with little recognition after he took the Institute reigns from his business partner David Gray.

In 1979 Local Government amalgamation ruled our lives. The "LGA 1979" replaced several previous Acts. 86 Territorial Authorities replaced the 650 previously and for Building Inspectors, it was a poignant time - some felt threatened others rejoiced, however there were new opportunities for the ambitious. Of most importance to our membership was that in future administration of Regulatory Functions would be separated from other TA Functions. At long last **Building Inspection was gaining some traction and the status it rightly deserved.**

At the 1983 Invercargill Conference my appointment as President was confirmed and the first task was to meet and introduce our Guest Peter Scoular who had recently retired from his lengthy career at Christchurch City. The Invitation was a stroke of genius on Institute Secretary Peter Morpeth's part as a political colleague had suggested to him that Peter Scoular was being considered for a role to Review construction industry controls. The timing was perfect.

Following the most successful Conference in Invercargill under the careful stewardship of Eric Hawkes the hard work began.
It was an exciting challenge to initiate change as the Institute had become bogged down. Too many Past Presidents had remained on the Executive and fresh blood was needed to progress the organization and that literally happened one night.

Our new team included Nick McKinstry (later to become President from Auckland CC) and Dave Walker Wellington CC. Both made serious contributions.

National "Recognition" for the Institute was a high priority for me, but it needed to be managed with professional responsibility for the huge challenges ahead.

In 1983 the Executive hosted a 'Reception' in Wellington for Industry Managers and it cemented my vision for the Institute to be included in future Industry forums. Although not intended at the time an additional benefit was the financial support that was provided later for Institute attendance at the Inaugural Congress of the World Organization of Building Officials in Saskatoon Canada in 1984.

The new Executive initiated several innovations including media releases on topical issues, one of which caused a frenzy. On arrival at Timaru Airport after an Executive meeting my wife asked; "What the heck have you done in Wellington, there's a heap of telephone calls for you and there's even one from the Ministers' office!"

A mother's advice to her 3rd son "if you want to get noticed create a dust storm, but first you must decide how to control the fallout". But it worked: we were invited to the Minister of Internal Affairs Office at the Beehive 2 weeks later. Clearly, we were being noticed and recognition was imminent but it didn't come easily.

C Ray Smith from 1993

An invitation arrived from Canada and National Secretary Peter Morpeth immediately contacted the Congress Organizer Omi Channan in Calgary and Brian Jackson, the highly respected Winstone NZ Technical Manager and Institute advocate. Could they assist with financing a delegate? Brian Jackson a powerful personality appealed to some Industry leaders and Omi Channan contacted the British Commonwealth Trust in London. Success: The Commonwealth Trust met my travel costs, the Canadian Building Official my accommodation and the organizations who had attended our 'Reception" covered the costs for my 3-week study tour following the World Congress. How unbelievably fortunate?!

The Canadian Experience was a revelation to this Kiwi and provided the platform and the confidence to recommend change as was meeting delegates from around the world and most importantly "Sharing Information" globally, plus, many valuable contacts and friendships were made for future reference.

At the Congress dinner in Saskatoon, Canada I was privileged to be seated alongside Lord Wilberforce much to the dismay of my Aussie counterpart. He was a sparklingly interesting man so the creation of a story about his family connection with the mighty Wilberforce River in the South Island, as well as the invitation to share a day's Fly fishing on his family's river seemed, to intrigue him. I am in absolutely no doubt he saw through my subterfuge, however next day he was sporting a Kiwi badge as a tie pin, so even if my storyline failed he did appreciate that "little golden Kiwi" (his words).

The Conference theme "Liability due to

Negligent Acts" was most appropriate at that time and Lord Wilberforce's presence was a huge benefit to everyone.

The information gathered and international contacts provided an ideal platform for the Institute to make a worthwhile submission to the Reviewers of Building and Planning Controls. That further cemented our position in the construction hierarchy when previously we were ignored.

The Canadian systems and processes were light years ahead of NZ at the time, as was their Research and Standards facilities. Unlike Kiwi builders, their 'Constructors' as they called them, were far better qualified – they knew their building codes as I found out on site visits. Their Codes were very prescriptive yet simple & pragmatic, balanced by an "Equivalents" pathway that provided the mechanism for innovations and alternatives by those who wanted to use it. How utterly simplistic!
An interesting innovation was that their Building Act contained "Supplementary" Documents that dealt with specific matters thereby simplifying the Principal Document.

One Supplement that appealed to me was: "Duties & Responsibilities of Councils, Constructors and Owners". How much simpler would the BA 2004 be to negotiate if that was followed in NZ?

Disquiet within the Building Industry had grown to the point that Prime Minister Muldoon called a Forum of industry leaders, on Planning and Building Controls. It was no secret and had been signalled a couple of years earlier, and we were ready.

Peter Scoular and Jack Searle, a civil servant were appointed "Commissioners" to head a "Commission of Enquiry". Their "Review of Planning and Building Controls 1985" was scathing of the existing Building & Planning Control regime. A Building Industry Commission was tasked to prepare Legislation, and resulted in the Building Act 1991 and the Resource Management Act a year or so later.

The Institute provided the largest submission to the "Reviewers". Its depth and technical content staggered them. Many of the Institute's submissions were accepted but others were reshaped in the "Halls of Power" such as to our proposal for a Building Warrant of Fitness Regime. How a dangerous building could be issued a warrant because the "Safety Features" had been inspected was beyond my comprehension. However, the "Determination" process the Institute recommended remains intact to this day.

In 1991 the Building Act passed through Parliament with the support of both Parties.

It contained powers that revoked all building construction related legislation and furthermore it revoked the powers of councils to adopt/amend/ignore the new Legislation. A win for NZIBI and the Crown would be bound by the Building Act. No longer could Government Deptartments enjoy the privilege of exemption. We were all singing from the same prayer book at last. **However valuable Legislation relating to "Dilapidated Buildings" and the Housing Improvement Regulations were shelved.**

That false move has led to the serious deterioration in NZ's Housing standards for the very people those rules were designed to protect - the under privileged.

The most contentious inclusion in the BA 91 was the **Privatising of Building Inspection**. It provided the mechanism for Private Certifiers to compete with councils on Plan Approval & Inspections. **That Legislation was very damaging**. Suffice to comment that single stroke by the bureaucrats was, I believe, **the primary cause of the lowering** of Building standards in NZ and, the primary cause of the "Leaky Building" saga that continues to haunt the industry 40 years later. It may be of interest to readers that two colleagues and I wrote to the Building Industry Commission warning them what would happen and it did.

It is noteworthy that there were forces pushing for complete privatization of Building Control in NZ and the benefit of that meeting with the Minister became apparent. Through his advisor who we met on that occasion, we learnt of the proposal to abolish council building control. It didn't take long from my contacts in WOBO to prepare a paper on International Jurisdictions that followed that principal - in short they all had degrees of corruption.

Another most serious issue for Building Inspectors was not the challenge associated with massive change, but the **shocking fact that Building Commission had not budgeted a single dollar for education across the entire building industry.**

"Well well and Ho Hum, you'll just have to manage somehow was quoted by a senior BIA staffer at a meeting in Christchurch.

But everyone rose to the occasion and we educated ourselves and the industry, with pamphlets, discussion groups, conferences and the like.

BOINZ IS BORN

Now it's the 1990's. There are new faces such as Ron Roberts, Des Barnes, Jon Appledoorn, Neil Eade and Robert Wright to name just a few. It is their future – time for me to sign off.

POSTSCRIPT

My saddest reflexion during those exciting early years was the difficulty some members had differentiating between the Institute's role as a separate professional entity, from that of their Councils.

Ray Smith - Fellow Award 1986 - Life Member

Aug 1998 Eric Hawkes, - Staunch Southlander died on duty. Chief Building Inspector Southland District Council was tragically killed whilst flying home to Invercargill after a day's work at Stewart Island. A later enquiry revealed the light plane with 10 aboard probably ran short of fuel. Eric was mentioned, by those who were saved as providing great assistance to some young passengers. Eric was a highly-respected colleague who took an active interest in Institute affairs, becoming President of the Southern Branch and a regular at Institute meetings & Conferences. He had a wonderful relationship with DOC tamping in to back country huts in his own time to carry out his duties.

If you have some memories or perspectives that you think **BOINZ** National Office and/or our membership would like to hear, please don't hesitate to contact

marketing@boinz.org.nz

or call

Janine on 04 473 6005.

Where It All Began By Frana Divich

Over the last 45 years there has been a proliferation of negligence cases brought against councils. Have you ever wondered how it all started?

In this, the 50th anniversary year of the Building Officials Institute of New Zealand, we thought you might be interested to learn about how the modern law of negligence as it applies to councils, came about in this country.

Once upon a time (Sunday 26 August 1928 to be precise) Mrs Donoghue travelled from Glasgow by train to Paisley. Once in Paisley she visited the Wellmeadow Café with a friend. Her friend placed an order, a pear and ice for herself and a Scotsman Ice Cream Float (a mix of ice cream and ginger beer) for Mrs Donoghue. The café owner brought a tumbler of ice cream to the table and poured ginger beer on it from an opaque, brown bottle labelled "D. Stevenson, Glen Lane, Paisley". Mrs Donoghue had some of her ice cream float. Her friend then poured the rest of the ginger beer from the bottle into the tumbler – and horrors – a decomposed snail came out of the bottle. Mrs Donoghue said she felt sick at the sight of the snail. A few days later abdominal pain caused her to see a doctor. On 16 September she was admitted to the Glasgow Royal Infirmary for "emergency treatment". She was subsequently diagnosed with severe gastroenteritis and shock.

The ginger beer had been manufactured by David Stevenson, who ran a business manufacturing both ginger beer and lemonade, less than a mile from the Wellmeadow Café. The manufacturer's contact details were on the label attached to the bottle and Mrs Donoghue's friend dutifully wrote them down.

On 9 April 1929 Mrs Donoghue's solicitor issued a writ against the ginger beer manufacturer, Mr Stevenson, seeking damages of £500 (this would be the equivalent of approximately £27,000/$46,500 NZD today).

Mrs Donoghue's case was that Mr Stevenson owed a duty of care to her to ensure snails did not get into the bottles of ginger beer and that he had breached the duty of care by failing to have a proper system in place to clean the bottles given that the business was supplying drinks intended for human consumption. She alleged that the ineffectiveness of the cleaning process resulted from the bottles being left in places "to which it was obvious that snails had freedom of access…and in which, indeed, snails and snail trails were frequently found". The breach of duty was alleged to have caused Mrs Donoghue's illness.

Back in 1929 injury caused by defective products was normally only claimable in contract between the seller and the consumer. However in this case, Mrs Donoghue had no contractual relationship with the café, as she had not placed the order. Her friend had a contract with the café, but she had not suffered an injury. Neither Mrs Donoghue nor her friend had a contractual relationship with the manufacturer.

The case proceeded and Mrs Donoghue succeeded at first instance. Mr Stevenson appealed and he won by a majority decision. Mrs Donoghue then appealed to the House of Lords.

The appeal was heard by five Lord Justices on 10 and 11 December 1931. After an unusually long delay for those times the House of Lords gave judgment on 26 May 1932 . The court held, by a 3-2 majority, in favour

of Mrs Donoghue and we like to think she lived happily ever after.

Lord Aitken commented that he did "not think a more important problem has occupied your Lordships in your judicial capacity; important both because of its bearing on public health and because of the practical test which it applies to the system under which it arises". He agreed that Scots and English law were identical in requiring a duty of care for negligence to be found and explained his general neighbour principle on when that duty of care arises. He famously said:

> ***"The rule that you are to love your neighbour becomes in law, you must not injure your neighbour; and the lawyer's question, "Who is my neighbour?" receives a restricted reply. You must take reasonable care to avoid acts and omissions which you can reasonably foresee would be likely to injure your neighbour. Who, then, is my neighbour? The answer seems to be – persons who are so closely and directly affected by my act that I ought reasonably to have them in my contemplation as being so affected when I am directing my mind to the acts or omissions which are called in question".***

In 1972 (when BOINZ was 5 years old) the English Court of Appeal applied the "snail in the bottle" reasoning to a situation where a council had issued a building permit and carried out inspections. In 1975 (when BOINZ was 8 years old) the English case was followed in a New Zealand building defects case brought against the then Hamilton City Corporation.

Interestingly our council liability law has developed separately from the English law (that could be the subject of a whole new article) and can still be traced back to that British House of Lords case all about a snail in a ginger beer bottle.

So next time you are out on a building site carrying out an inspection you may wish to spare a thought for poor Mrs Donoghue and remember that a defect in a building today is the equivalent of a decomposed snail, hidden in an opaque bottle, waiting to do harm.

1. **Donoghue v Stevenson [1932] AC 562 (HL)**
2. **Dutton v Bognor Regis Urban District Council [1972] 1 QB 373 (CA)**
3. **Gabolinscy v Hamilton City Corporation [1975] 1 NZLR 150 (SC).**

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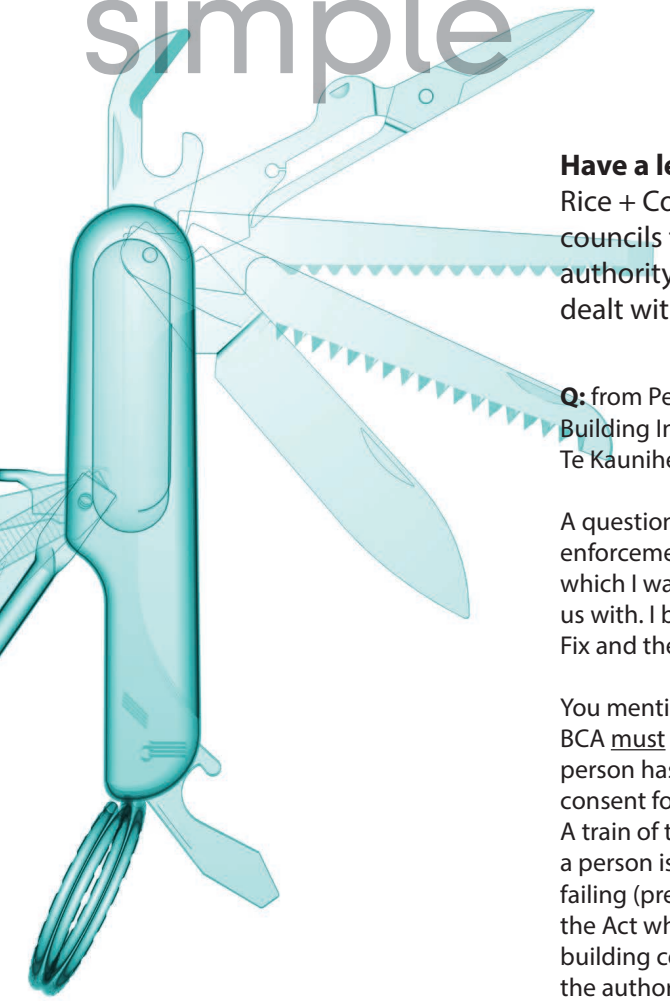

Helen Rice | Partner

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Q: from Peter Bothwell Team Leader Building Inspections Nelson City Council / Te Kauniherao Whakatū.

A question has arisen since your enforcement and compliance workshop which I was wondering if you could help us with. I believe it is to do with Notices to Fix and the interpretation of Section 164.

You mentioned in the workshop that a BCA must issue a notice to fix when a person has failed to obtain a building consent for work which requires one. A train of thought has arisen here that a person is no longer contravening or failing (present tense) to comply with the Act where the work that required a building consent is completed therefore, the authority has the option whether to issue a Notice to Fix. Is this a correct interpretation?

A: Many thanks Peter for your question. You are correct that s 164 of the Building Act is drafted in the present tense - if a council considers on reasonable grounds that a specified person is contravening or failing to comply with the Building Act or Regulations under that Act then the council must issue a notice to fix.

In your situation (where someone hasn't applied for a building consent) the person is failing to comply with the Building Act because s 14B makes an owner responsible for "ensuring that building work carried out [past tense] by the owner" complies with the building code. Therefore, if an owner didn't get a building consent when one was required, the owner is still contravening s 14B of the Building Act even though he or she carried out the work sometime earlier.

Moreover, if you look at s 165(c) of the Building Act it says that "if it [notice to fix] relates to work that is being or has been carried out without a building consent…" We put this down to bad drafting more than anything else.

Please send your questions to helen@riceandco.nz.

Watch this space.

Ready. Set. Stop.

By James Donkin

A recent Supreme Court decision has significant ramifications for the litigation of leaky building claims. In Lee v Whangarei District Court [2016] NZSC 173, the Supreme Court found that an application for an assessor's report under s 37(1) of the Weathertight Homes Resolution Services Act 2006 (Act) not only "stopped the clock" for the purposes of a claim in the Weathertight Homes Tribunal, but also for related court proceedings. This departed from previous authority that considered such an application to pause the limitation period for bringing a claim for the purposes of Tribunal proceedings only.
Background

Ms Lee built a house between 2007 and 2008. It leaked. She engaged in a number of separate claims and proceedings in relation to this issue:

a. May 2008: Ms Lee gave her builder formal notice of a dispute and raised issues with the cladding.
b. 6 June 2008: Ms Lee commenced adjudication proceedings under the Construction Contract Act 2002 (which were ultimately unsuccessful).
c. 12 August 2008: Ms Lee applied for an assessors report under s 37(1) of the Act.
d. Late 2008: the cladding installer sued Ms Lee in the District Court for an unpaid balance owed to him and Ms Lee counterclaimed, alleging defective work. Ultimately, Ms Lee's cross claim failed and judgment was entered against her.
e. 10 March 2010: Ms Lee initiated adjudication in the Tribunal against several respondents, including the council (but not the builder or the cladder).
f. March 2013: the Tribunal held that the subject of Ms Lee's claim in the Tribunal was the same as her counterclaim in the District Court, and was closely related to the subject matter of her arbitration claim under the Construction Contracts Act. Ms Lee's claim in the Tribunal was terminated under s 60(5) of the Act.
g. 21 May 2014: Ms Lee filed High Court proceedings against the council.

WHEN DID TIME STOP RUNNING?

The issue for determination was whether, for the purposes of the 2014 High Court claim, the clock had stopped running when she applied for an assessment in August 2008. If so, the High Court claim could proceed. If not, then it would be time-barred. The Limitation Act 1950 provides that an action founded on tort cannot be brought after the expiration of six years from the date on which the cause of action accrued. Ms Lee had obtained reports from building surveyors in February and April 2008 that identified weathertightness issues.

The council applied to strike out Ms Lee's claim on the basis that it was time-barred. Ms Lee argued that s37(1) of the Act meant that the application for an assessor's report had the same effect as filing proceedings in court for the purposes of the Limitation Act, and therefore stopped the clock in both the Tribunal and any related court proceedings as at the date of the application. The High Court rejected this argument and held that Ms Lee's claim was time-barred. The Court of Appeal agreed.

THE SUPREME COURT

The Supreme Court agreed with Ms Lee that her High Court claim against the council was not time-barred. It found that Ms Lee's interpretation was supported by the scheme and purpose of the Act:

> *"[45] … [T]he purpose of s 37(1) is to 'stop the clock' on limitation while the dwelling is assessed, allowing homeowners to make informed decisions about their options without, in the meantime, any legal claim they may have becoming time-barred. To interpret s 37(1) more narrowly risks those with leaky homes falling into procedural traps. This would not accord with the purpose of the WHRS Act as set out in s3(a) of providing leaky home owners access to speedy, flexible and cost-effective procedures for both the assessment and resolution of claims."*

The Supreme Court rejected arguments from the council that Parliament intended s 37(1) to be limited to adjudication proceedings in the Tribunal, and that it would mean councils faced open-ended liability. In relation to the former, the Court held that the Act could have been expressly limited in clear language if that was the intention, particularly in the context of a statute intended to benefit consumers. The reference to court proceedings in s 37(1) was also significant. In relation to the latter, councils would not be exposed to more claims. The only issue would be whether the same claim is advanced in the Tribunal or the courts.

The end result was that the proceedings were not time-barred. The Court concluded by noting that the process for Ms Lee had been "torturous and fraught with procedural difficulties" and that the procedural quagmire that Ms Lee found herself in had not been of her making. The Court went on to note that the Act "has not lived up to its purpose of providing 'speedy, flexible, and cost effective' (or indeed even readily understandable) procedures for the resolution of her leaky home problem".

TAKE HOME POINT

The Lee decision means that for home owners with an eligible claim under the Act, the clock stops for both Tribunal and court proceedings on the date that an application is filed for an assessor's report. This should not mean that councils are exposed to an increased number of claims overall, but it will mean that some claims that previously could only be progressed in the Tribunal can now be litigated before the courts instead. On the plus side, Lee allows councils to join third parties to a court proceeding where they may have previously been time-barred

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APRIL		
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4 - 5 April	Plan Processing	Dunedin
4 - 6 April	Investigative Training	Christchurch
10 - 12 April	Fire Documents	Invercargill
27 - 28 April	Services and Facilities	Wellington
MAY		
22 - 24 May	BWoF and Specified Systems	Hamilton
22 - 26 May	Plumbing and Drainage Compliance	Queenstown
23 - 24 May	E2 Weathertightness	Dunedin
25 May	Accreditation	Hamilton
29 - 30 May	Advanced Plan Processing	Wellington
31 May - 1 June	Site Inspection	Wellington

Training Academy Going On Continual Professional Development

By D. Scheibmair – Technical and Education Manager, BOINZ

With the Training Academy being a fundamental component of the Institute it must evolve with changes in the construction industry, advances in the education sector and take advantage of changes in IT to continue to provide the best service possible to members. As a result a major review of the existing Training Academy framework is now well underway which looks to re-shape what the Institute delivers to members, how it better engages with external experts and training facilitators, and the ways in which training is disseminated. The proposed new framework that will pave the way for improvements to the existing Training Academy structure to be implemented over the course of 2017 is to be discussed and approved at the next board meeting.

Given the broader mandate BOINZ holds beyond traditional Building Control, the proposed Training Academy framework will be able to provide consistent service to all of the Institute's departments as courses can be either non-brand/non-product related 'Education' or brand/product related 'CPD'. If desirable some courses may also be suitable to be run as one event across the different Institute departments.

Broadly speaking the rudimentary proposal is for the Training Academy's functions to split into distinct segments:

- **Education** will be focused on non-brand/non product specific content to be compiled and/or reviewed by subject matter experts. Delivery of the course material is by suitably skilled individuals; in some instances subject matter experts, others generic training facilitators. Education courses will be run as face-to-face and largely at similar to existing rates.
- **CPD** workshops will allow sponsors and partners to provide relevant and vetted content to the Institute's membership. It's proposed these courses be of shorter duration and could be run face-to-face as well as online (an appropriate online learning tool is being investigated). Cost to attendees will be much lower than that of educational courses.
- **Branch/Cluster** assistance to the membership services team would remain largely as is, though all content to be presented at branch/cluster meetings will be more closely monitored by the Training Academy. This is to ensure it is aligned with and doesn't detract from Education and CPD training but also as these presentations often offer valuable content that should be disseminated to the wider membership.

The proposed framework allows for **greater interaction and collaboration with like-minded organisations, associations and industry bodies** as content can be delivered as technical content focused (Education) or brand/product related (CPD). For example some of the Education courses may appeal to ADNZ, IPENZ (or technical/special interest groups thereof), NZIA, and alike, whereas CPD courses might appeal more to NZCB, RMB, or similar.

Hosting courses across different organisations **provides BOINZ members with an opportunity to knowledge share and network driving greater consistency in key messages provided in training.**

It also has potential to create more **cost effective delivery of educational and CPD training as a result of shared development and delivery costs.**

The proposal aligns with both our Diploma strategy and delivering national consistency providing skills alignment to all BCAs/TAs and thereby improved career pathways for members.

Heading to Court, Michael Morris Invercargill City Council

– Gathering the right information in the right format

By D. Scheibmair – Technical and Education Manager, BOINZ

In September 2016 Michael Morris – in-house Lawyer at Invercargill City Council – presented an interesting insight into Dangerous Buildings, going to Court and an update on the Stadium Southland case, at the Southern Branch Training and Networking event in Invercargill.
A full report on Michael's presentation can be found contained alongside the branch meeting minutes on the BOINZ website, however some key notes on heading to court and what happens at court are published in this article as it was felt valuable information to share with the wider BOINZ membership. Because the following is an excerpt from the full document it refers to dangerous buildings, however the same principals apply to other cases that head to court:

SO WHAT DO YOU NEED TO GO TO COURT?

Because this is a significant interference with property rights, heading to Court we need to be sure we are right. This includes:

1. Having photographs of all angles around the building and specifically of the issues.
2. An assessment of why the building is actually dangerous; A record of what you saw and your opinion.
3. Have we followed the Notice Procedure? Did you put the Notice on the door, do you have photographs of the door, the notice and the notice on the door and the door of the building so the building can be recognised. Has there been a further inspection once the time period allowed for in the notice has elapsed. Does this confirm that no action has been taken and lastly has the 10 day notice as required by the Act been provided and expired.

If yes, then we can proceed to Court. The application for your information is called an Originating Application. This is simply the application that goes to the Court and that is accompanied by an Affidavit from the Inspector responsible and a $200.00 filing fee that we don't get back. No Council wants to waste money so we need to ensure that we are right.
If the Application is not opposed, then we will proceed by way of a formal proof hearing which means the Judge will consider our evidence and make orders.
If the Application is opposed then we will proceed to a Hearing which is where you will be asked questions by the other sides Lawyer and I will get a chance to ask the other side some questions and then the Judge will make a decision.

You will be questioned about your evidence and will be cross examined. Cross examination is not a lot of fun to be subjected to. You are questioned about what you have done and will often be criticised about how you have done it. The best advice I can give you is preparation. It is vitally important you know what you have done and why you did it, and you of course need to tell the truth, always be respectful and remember to call the Judge "Sir" "Maam" or "Your Honour" as appropriate. One of the things that I have learned, is that it is important you draft your own evidence.

BASIC PROCEDURE IN THE COURT:

In Court as the Applicant, we will go first, which means you will be first up so the rough process in Court is that there will be an opening, a statement from myself, you will then give your evidence and so I will get you to confirm your evidence, then you will be subject to cross examination from the Opposition Lawyer, the Judge and then I will have the opportunity to ask any clarification questions as required. These clarification questions are used only if there was an answer to a question that you gave that there was a little bit more information we need to get out for the Court, or just to clear up a point as to what you meant.
After our case concludes the Opposition have their chance and they go through the same procedure and there are closing statements and the Judge will make a decision.
The decision is often reserved which will mean that the Judge will take some time to consider what has been said, consider the Law and will issue a decision.

The Criminal Court operates essentially as I have outlined above, it is just the end result is a fine rather than an order to demolish a building.
So that is a very quick overview of Court processes for dangerous buildings.

What is most prudent, regardless of what the reason you might one day be heading to court, is the thorough approach to documenting and recording of evidence. And given you never know when you may just end up in court it's a good idea to apply best practice in all your actions. If you'd like to read more about good technical reporting processes refer to the article published in this edition of Straight Up at the end of the magazine. The Accredited Building Surveyors (ABS) Programme training course can also help you develop technical reporting skills, or the BOINZ Investigative Training Course launched this year will help you upskill in this area – check out the BOINZ website for more information.

Building Officials Institute of New Zealand

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Each step in the Investigative and Prosecution process is explained and examples provided to establish what is required of a Building Surveyor to fully support a successful prosecution:

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BUILDING SURVEYING QUALIFICATIONS	This course can be credited

Buyer Beware – A New Zealand Home Buyer's Guide

By Maria Slade

There is no shortage of information out there about what may or may not be happening in the New Zealand housing market.

Most of it comes from individuals and organisations seeking to gain either financially, or in the case of our elected officials, to score political points.

As Auckland Issues correspondent for Fairfax Media I was writing much about the housing crisis when publisher Penguin Random House came calling.

They had spotted a gap in the market for a how-to guide aimed at home buyers – not investors, or property sellers, but people simply wanting to buy a roof over their heads.

Buyer Beware, a pragmatic walk-through the challenges of purchasing property in this country, was the result. Covering everything from obtaining finance to avoiding leaky homes, it aims to cut through the heat and light and arm the Kiwi home buyer with the best possible information.

This includes how to obtain a reliable pre-purchase building inspection report. In today's overheated market buyers fearful of missing out are often skipping basic checks. However the advice from the experts is unequivocal: Unless you're an investor with deep pockets and a high tolerance for risk, the single most important step you should take before buying a home is to get a decent building inspection done.
But in an unregulated sector this has its challenges, as the following extract from the book explains.

CHAPTER 3

Doing your due diligence

Pre-purchase building inspections

A point the property professionals all agree on is that the single most important step a home buyer can take is to get a building inspection report.

However, as with a surprising number of other areas of life in New Zealand, the inspection sector is unregulated, and so you have to know who you are hiring before you send someone in to perform this crucial task. Currently anyone with a ute and a dog can say they offer a prepurchase building inspection service, and many do.

There are no requirements for registration or minimum qualification levels, and those attempting to uphold some standards in the industry say a lot of inspections done by tradies are well below par. Builders don't necessarily have a strong knowledge of the Building Code, and they sometimes don't spot the mistakes other builders make, it is argued.

The good news is there are professional groups that offer training in pre-purchase inspections, and the best plan is to hire someone who is a member of one of those organisations. The main ones are:

- New Zealand Institute of Building Surveyors (NZIBS): http://www.buildingsurveyors.co.nz/. NZIBS members go through a 10-module training course before they can become a registered building surveyor. The NZIBS says that not all of its members offer pre-purchase inspections, but one of its advantages is that many of those who do also carry out building investigation work, so they have a sharp eye for the key problems.
- **Building Officials Institute of New Zealand (BOINZ): http://www.boinz.org.nz/. The BOINZ represents building surveyors working in building control compliance for local councils, specialized surveying such as Building Code compliance, and property inspections. Its members do the Accredited Building Surveyors programme, which includes a three-day training programme on conducting prepurchase inspections.**
A number of building surveyors are also members of the international professional organisation, the Royal Institution of Chartered Surveyors.

Then there is the New Zealand Institute of Building Inspectors (NZIBI): http://www.nzibi.co.nz/. The NZIBI broke away from the NZIBS about eight years ago because it believed there was a need for a group focused solely on building inspectors. Its members are people with building trade experience who do not hold a specific qualification, but who are assessed by their peers over the course of 200 to 300 inspections before they gain full membership.

HOBANZ advises to look out for inspections that are completed to the New Zealand Standard NZS 4306:2005 Residential Property Inspection. One of the requirements of this standard is that building inspectors must have up-to-date professional indemnity insurance, which will cover you if they do a poor job or break something during the inspection. However, the standard is voluntary, and the NZIBS says it needs updating.

Because there is no formal code of practice or standard for building inspectors, the quality and cost of inspection reports vary considerably. Some are simple tick-box forms, while others are full written reports.

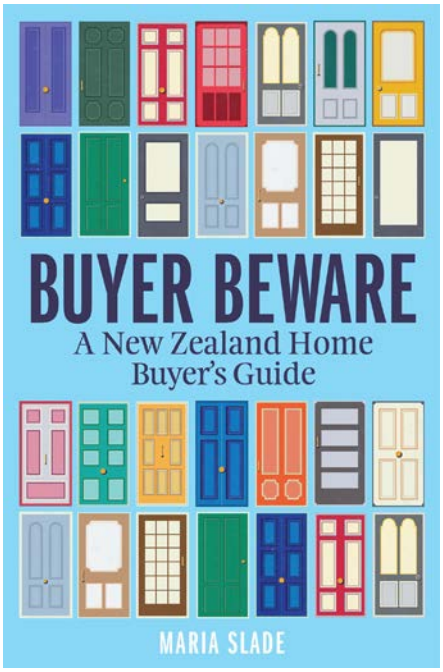
Report writing is an essential skill for an inspector, and makes up part of the pre-purchase inspection training course for NZIBS members. Picking up the defects in a house is one thing, but communicating those clearly and objectively to the prospective buyer so that they understand the consequences is the real challenge. For example, a report that says simply 'installation problem with the roof ' tells the buyer nothing. What it should say is that an unsuitable roof flashing has been used, meaning that water could be getting in and damaging the framing, which may require remedial work, including removing the cladding to assess the damage.

Building inspectors also need to know about the various eras of houses, because each period has its common problems. Homes built in the early 1900s are classic for borer, dry rot, and defects in the foundations, as concrete wasn't reinforced back then. The 1950s and 1960s were a pretty good time for residential building, but the houses aren't insulated and sometimes contain asbestos. Then there was the 1990s and its epidemic of leaky homes.

The main thing is that an inspection checks for the significant defects, such as overdue maintenance, gradual deterioration, suspect renovations, issues with the foundations and, of course, weather-tightness issues. These are the things you need to know, because it may determine whether you want to go ahead with the purchase, and, if so, how much you are willing to pay for the house. If a report shows up issues, it may be possible to get the current owner to fix them or to negotiate over the purchase price, taking into account what the repairs will cost. Bear in mind, though, that this will not be an option if the property is going to auction.

Be prepared to pay anywhere from $600 to $1500 for a pre-inspection, depending on the size of the house and how indepth the investigation is. It will be visual only, meaning the inspector won't be poking holes in walls or removing linings and floor coverings to see what's underneath. They also won't guarantee whether the property meets the Building Act or has the necessary consents (this is where checking the LIM and the Property File comes into play), but they will be able to identify work that is likely to have needed a consent.

Fresh Look for Accreditation in 2017



BOINZ 2017 ANNUAL GENERAL MEETING NOTICE

The Institute's 2017 Annual General Meeting will be held at **The Langham, 83 Symonds St, Grafton, Auckland,** in the Main Plenary on **Monday 8th May 2017** commencing at **3.45pm.**

Access to the 2017 AGM will be done by identification via your current Membership Card, proving your current membership status.
AGM Timelines

Notices of Meeting, agenda and any notices of motion to members will be conveyed to members by **10th April 2017**

To address concerns about unqualified operators claiming expertise in the field of pre-purchase property inspection the Building Officials Institute of New Zealand developed the Accredited Building Surveyors Programme. This programme and the Institute's ongoing support equips the attendees with the core knowledge and skills to carry out quality reports to the NZS4306:2005 Residential Property Inspection.

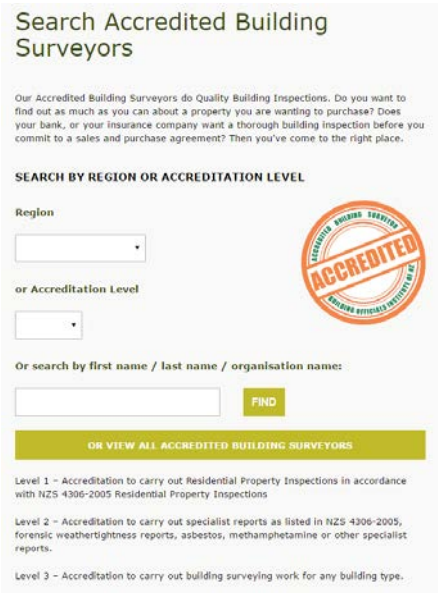
For the thirty Building Surveyors who have successfully completed the programme and gained accreditation and those pending accreditation, it is imperative that they can maximise this point of difference as to why they stand apart from the other unqualified inspectors. A home buyer, vendor, real estate agent, insurance company or other members of the public must be sure in the knowledge that they are using a recognised property inspector.

As the accredited members have spread throughout the country working in their chosen field the Institute listened to their feedback and concern as it became apparent that a logo was needed that clearly identified them as qualified. Therefore, an Accredited Building Surveyor logo (Accredited Stamp) was created which will now appear on all ABS marketing and advertising collateral. It will be able to be used on member's business cards and websites (upon approval) and even their cars will be able to sport printed vinyl graphics. Caps and beanies are in the pipeline too as we all know they must be also be 'sun smart' as well as 'surveyor smart'!

The aim is for this logo to be the focal point for the ABS brand and enforce the Building Officials Institute position as the peak body in New Zealand for Building Surveying.

With the new logo identifying the accredited surveyors to the public and now creating brand awareness it was logical to update the Find an Accredited Building Surveyor web page as well. So working with the members; logos, websites and information on the regions they covered was gathered and a new look page was created. This now allows users to search by region, accreditation level/and or organisation name. Try it out and find a Surveyor near you! https://www.boinz.org.nz/Site/accreditation/Find-an-Accredited-Building-Surveyor/default.aspx

The National Accreditation Manager, Nicola Hakes frequently receives calls from members of the public seeking clarification on whether an Inspector is Accredited and a member of BOINZ or asking for advice on who to contact to carry out a certain inspection report. Without any bias now we can direct them to the Find an Accredited Building Surveyor page so they can make that search for themselves.


Search Accredited Building Surveyors

Our Accredited Building Surveyors do Quality Building Inspections. Do you want to find out as much as you can about a property you are wanting to purchase? Does your bank, or your insurance company want a thorough building inspection before you commit to a sales and purchase agreement? Then you've come to the right place.

SEARCH BY REGION OR ACCREDITATION LEVEL

Region

or Accreditation Level

Or search by first name / last name / organisation name:

FIND

OR VIEW ALL ACCREDITED BUILDING SURVEYORS

Level 1 – Accreditation to carry out Residential Property Inspections in accordance with NZS 4306-2005 Residential Property Inspections

Level 2 – Accreditation to carry out specialist reports as listed in NZS 4306-2005, forensic weathertightness reports, asbestos, methamphetamine or other specialist reports.

Level 3 – Accreditation to carry out building surveying work for any building type.

Technical Reporting

– Accredited Building Surveyors Programme can teach you how.

By D. Scheibmair – Technical and Education Manager, BOINZ

One of the key requirements of a professional Building Surveyor is the ability to communicate defects in a precise and concise manner detailing general property and building information and defects. The resulting report is typically relied upon by property purchasers in establishing the condition of a property and hence the impact on its 'value' and/or bank lending potential – its accuracy therefor is vital.

Justice Williams has provided a clear High Court precedent, in the Hepburn v Cunningham [CIV-2011-485-1308[2013] NZHC 210] case, of the scope of the pre-purchase surveyors obligation in that…

> *…carrying out pre-purchase inspections is to point out observable significant faults and weathertightness risk factors (regardless of evident failure) in terms understandable to the layperson.*

He references there is an obligation to explain the implications of what an inspection has observed in terms that a lay person will understand and that the inspector cannot hide behind unduly technical or opaque language so as to protect their relationship with the referring agent, while maintaining professional standards.

While the Accredited Building Surveyors programme is specifically targeted at pre-purchase inspections and NZS4306, it does cover many aspects that are equally important to those in the building control environment. Of particular note would be

- The ability to effectively identify property and construction compliance and note any non-compliance or defects and risks (and any resulting implications) as part of a visual inspection, and
- To report such non-compliance or defects in a precise and succinct format.

As Sarah Symon, course facilitator says: 'we find many attendees come into the course confident they are providing standard compliant surveys and doing a good job. By the end of the 3-day course, many realise both their reporting and surveying has been sorely missing and state they will need to make some serious changes.'

The Accredited Building Surveyors programme educational course covers among other things:

How to conduct thorough site investigations often under time pressure.

Guidance on commercially available systems or templates that are compliant with NZS4306 for pre-purchase inspections, and 'fit-for-purpose' so as to make reporting more efficient, accurate and reduce undue legal liability exposure.

How to record information and write reports:

- It is important to report on each defect or risk area separately, especially if there are several of them in for example the cladding or roofing/flashing etc; identify each defect, preferably with a photo, noting what damage may be hidden and recommend what a client should do to rectify each defect.
- Identifying where further investigation or advice on repairs from an appropriate expert (ie. weathertightness,…) is required.
- If functional items such as light switches, sockets etc are inspected then note that they have been inspected and are operating.
- Items like windows and doors must be inspected twice; once on the exterior (weathertightness risk) and once on the interior (linings, operation, security).
- Record relevant detailed information; for example the depth of insulation, materials, comments on subfloor bracing, fixings, etc where these can and have been visually sighted.
- Arguably most important:
  - Avoid subjective comments.
  - Use a robust inspection report template that provides a checklist of items to be inspected so that none are missed.

The information gathered and communicated in the building control environment, is essentially used for the same purpose as the pre-purchase inspections; to identify the condition or compliance of a property and structure. Given the similarities, the Accredited Building Surveyor training course therefore is also of relevance to those in building control.

To learn more about the Accredited Building Surveyors Programme, the course and how to register, take a look at the Accredited Building Surveyors website section: www.boinz.org.nz/Site/accreditation/

Background on the Accredited Building Surveyors Programme:

For those not familiar with the Accredited Building Surveyors Programme here's a little more information that might help:

For any individual undertaking residential pre-purchase property inspections, the BOINZ Accredited Building Surveyors Programme (ABS) is the only pathway to becoming a BOINZ member. The ABS training programme that BOINZ offers within the Training Academy is also the only education and accreditation programme specifically designed for residential property inspectors. Through this education and training the Institute intends to continue to professionalise the Building Surveying profession in its entirety – from pre-purchase inspections, remediation and dispute resolution investigation, to building control in private and public sectors.

The development pathway is a result of the Institute's Board wanting to address activities and concerns within the residential property inspection field. The Board was keen to address both unqualified operators claiming expertise, and members using their general membership category as a means of promoting expertise in this area without undertaking the Accreditation pathway. As a result, the Institute's Board now requires new members working in this field to demonstrate they have the appropriate skills and qualifications to competently practice in the residential property inspection environment.

The programme for Level 1 Accreditation therefore includes a thorough 3-day course, an exam and a requirement to submit at least two reports. On successful completion and following Board approval, Accredited Membership Level 1 Status is granted, with a requirement for audit annually to retain accreditation. A substantial effort by BOINZ to regulate the Building Surveying sector with education and CPD that is of appropriately high standard, in light of absence of a government recognised qualification. This programme and its ongoing support will equip attendees with the knowledge and skills to carry out high quality reports to NZS4306: Residential Property Inspection.

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- Access carefully written, proven generics from 16 years of industry experience to help you build a report that meets NZ Standard requirements and industry expectations.
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To find out how you can become an Accredited Building Surveyor, contact 04 473 6001 or accreditation@boinz.org.nz.

ACCREDITED BUILDING SURVEYORS PROGRAMME
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