straight up

THE MAGAZINE OF THE BUILDING OFFICIALS INSTITUTE OF NEW ZEALAND

DECEMBER 2015

BOINZ ABS Programme
10 Years after Katrina
Seismic Design of Suspended Ceilings
Embracing density: we can do it better

Photo courtesy of Beacon Pathway

Building Officials Institute of NZ

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straight up

IN THIS ISSUE

From the President

Greetings everyone, as a very busy 2015 draws to a close.

At this time of year, you can't help but begin to think of the coming New Year, and what it may hold for the world of Building Surveying and Building Control. It would appear that the focus in our sector for 2016 is already apparent, and that focus is on 'the future.' This is a view clearly shared by our international counterparts, as Nick Hill and I learned during the week long International Code Council Conference in Long Beach, California in September. With over two thousand attendees, it was a truly international conference and a valuable experience, with many learnings being relevant to us here in New Zealand.

My first key learning from the ICC Conference was the huge importance the United States places on the recruitment of young Building Certifiers (Officials). Recruitment starts early; the "Kids Certification in Schools" programme has experienced Building Certifiers visit schools and teaching kids basic certifying skills. Your Board recognizes that the recruitment of young people into the sector is crucial, due to the increasing age of Building Surveyors, and likely replacement difficulty in the coming years, hence our Cadetship and Skill Recruitment projects. We will be entering 2016 with a renewed focus on these projects, in order to be equipped for the future of our New Zealand Building Surveying sector.

Paperless technologies will play a key role in the future of Building Control. I noted while in the United States that while they were still using paper based plans, they are transitioning to electronic processing. We as Building Surveyors and Building Control Officers need to embrace technology changes, as they do produce tangible benefits, such as easing the recruitment pathway of young people into our industry. Some BCA'S are already taking steps towards transitioning to electronic processing, and no doubt others will follow suit in the coming years, so it will be crucial for us to quickly become familiar with these technologies as uptake increases. The SBCO Forum presentation by our Plumbing and Drainage Trainer, Peter Downey, also emphasised this as an important technological aspect to quickly get awareness of.

Another trend I noticed in the States was the designing of buildings which greatly exceed the minimum Building Code standards; in particular, their timber sizing is a lot larger than what we here in New Zealand would traditionally see. In 2015, the Earthquake Prone Buildings Amendment Bill was introduced, which will have a reverberating impact, as the Bill is well on its way towards becoming law. Building owners will need to consider what they will need to do to make their building safe, according to their regional zone, and this will no doubt have an impact on the workload of Building Control Officers and Building Surveyors for years to come. This year also saw several high interest stories in the media about the quality of buildings being built during this "boom," with crumbling concrete and shoddy foundations in new builds featuring heavily in the short clips.

This should remind us that we are not just 'building', but we are building for the future. In order to guarantee a quality build, we need to ensure that skilled professionals and quality materials are applied each and every time. In this increasingly dynamic environment, it pays to make sure you have the skills you need to thrive as a professional in the Building Control and Building Surveyor sector. The Institute realises this, and has released its updated 2016 Education Programme. The Education Programme offers you a range of training options, including three new courses, to equip you with the skills and knowledge you need in your everyday role. For Building Surveyors in the Property Inspection sector specifically, the extremely comprehensive and very popular Accredited Building Surveyor Programme has four confirmed dates for next year, so if you are a practitioner in the Property Inspection sector and haven't yet completed the course, I would highly recommend you register for a course before 31 December 2016 in order to maintain your membership with the Institute.

Back to the ICC Conference, I also attended the Chapter President's Meeting with 140 other Chapter Presidents from all around the world. The theme of this meeting was "Partnership for Future Success." The key outcomes of this meeting were the identification of existing opportunities, strengths, and weaknesses for the Chapters and the ICC, and how to manage them for the future. The identification of leadership responsibilities and commons issues was also discussed, with focus on the ways to ensure the future success of Chapters and the ICC as an organisation.

For BOINZ, leadership will be a primary focus for 2016. The Institute is acutely aware of its own role as a leader in the sector, and as 2016 quickly approaches, BOINZ will be working with its partners and building relationships with other key players to ensure that the future of the building surveying sector will be a positive one. We are experiencing significant building performance issues, as I mentioned earlier. Auckland seems to be at the forefront of compliance issues, product non –conformance, and latterly, compliance fraud. These will be significant areas for us to maintain vigilance in. Please remember the Institute's vision as we say goodbye to 2015 and welcome 2016 –"Improving the Quality and Performance of the built environment." Without our effort and oversight, the public, whether they are building owners or occupiers, are exposed to dubious practices.

Please keep up the good work, and on that note, I would like thank you all for your support this year, as the Institute continues its work to improve the quality of the built environment. I wish you all a Merry Christmas and a Happy New Year, and I look forward to a productive and fulfilling 2016.

Stu Geddes
President

Introducing our Training Academy Tutors

BOINZ is very fortunate to have a group of highly experienced industry leaders as its tutors in its Diploma based courses that are keen to share their knowledge. Members can be assured of receiving the best possible instruction from these highly skilled professionals. Some of our current tutors are listed below with a brief summary of their areas of expertise.

JOHN TAIT:

John has over 20 years in the building industry. He is currently self-employed through his business Building Health Services. While working for the DBH/BIA John was involved in writing guidance material for the industry and working with territorial authorities in the administration and application of the Building Act. He also undertook technical reviews of Territorial Authorities and Building Consent Authorities. Presently John works part time for a local council, is an IANZ assessor and is on the IANZ Professional Advisory Committee.
John is a facilitator of a variety of BOINZ Training Academy courses.

DAVE WELLINGTON:

Dave also has over 20 years' experience in the building industry. He is currently self-employed through his business Independent Building Consultants, is a Licensed Building Practitioner-Design and has a New Zealand Certificate in Adult Education. He was Head of the School of Carpentry and Joinery at the Wellington Institute of Technology for many years.
Dave's expertise lies in a comprehensive understanding of Building Construction and he is involved in a selection of Training Academy courses.

ALAN MOULE:

Alan Moule is a highly experienced fire engineer.
Alan holds a degree in Fire Engineering, is an International Professional Engineer (IntPE), a Member of the Institution of Professional Engineers NZ, a Chartered Professional Engineer, a Member of the Institute of Fire Engineers and a corporate member of FPA.
Fire engineers and BCA officers constantly seek Alan's advice on technical matters relating to fire safety and compliance.

PETER DOWNEY:

Peter is a Certifying Plumber in New Zealand and a Licensed Plumber and Drainer in Queensland and has a New Zealand Certificate in Quantity Surveying. Peter is currently the Managing Director of Hydraulic Services Consultants NZ Limited. The company delivers quality plumbing design solutions, with specific expertise in the high rise apartment market.
Peter has been at the forefront of delivering plumbing training to numerous organisations and has delivered hundreds of how-to seminars to plumbers, building surveyors and architects over the last 20 years.

CHRIS RANDELL:

Chris has over 30 years' experience in the building industry, 11 years as a building official at Dunedin City Council. In 2014 Chris established Building Compliance Solutions Limited.
Chris has sound knowledge of what is required to be an effective and efficient Building Surveyor and is an expert on compliance schedules.

DIANNE JOHNSON:

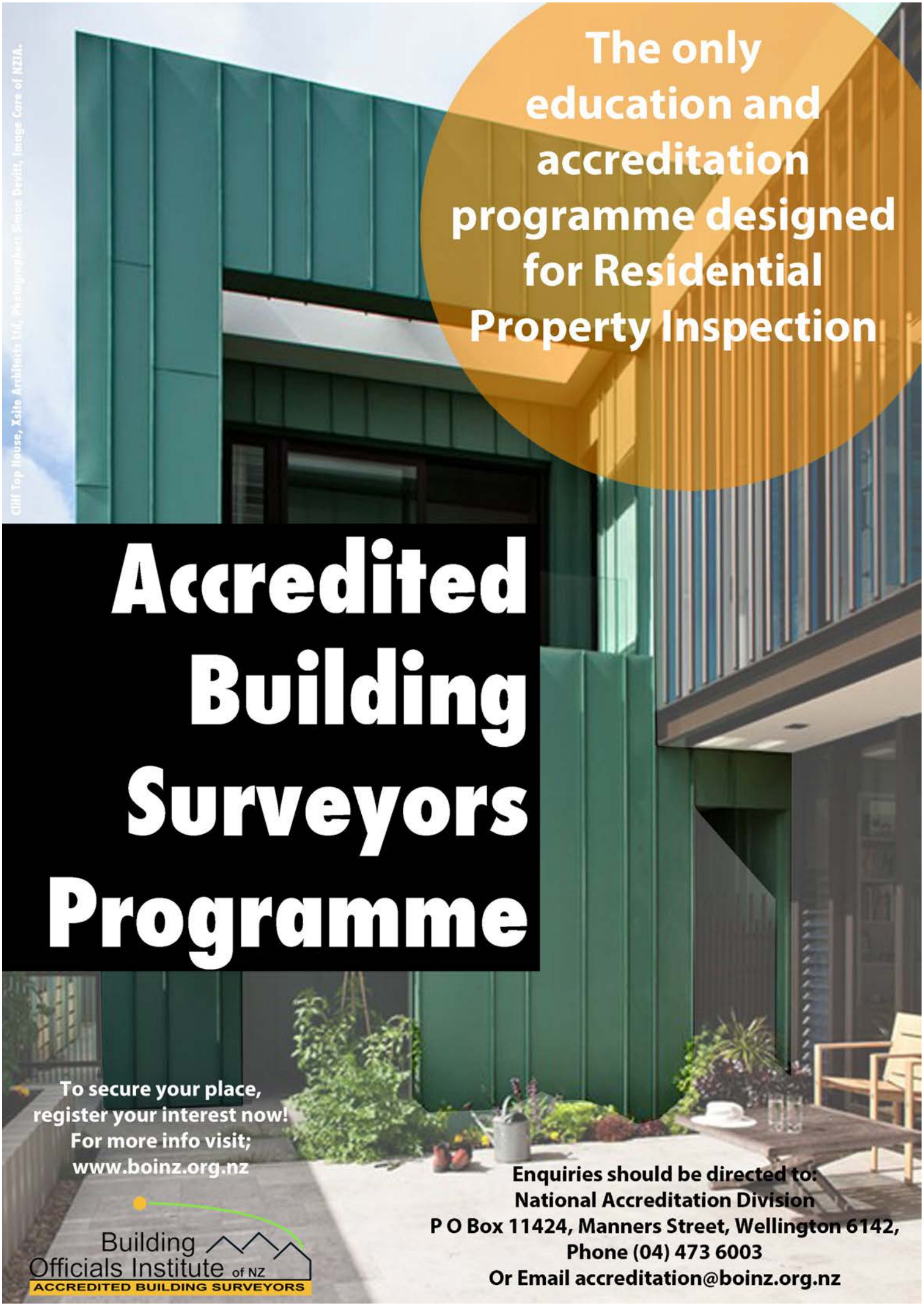
Dianne will be known by many of you, especially with her work in the weathertightness and dispute resolution areas.
Dianne's experience spans from her early draughting career, project, contract, and property management. She is director of Capital Improvements Ltd. She has also served on many industry bodies and maintains involvement as a member of the LPB Board, NZIBS, RICS panel member, LEADR, NAWIC and Society in Construction Law.
Dianne brings a very rich experience in construction, weathertightness, building law and dispute resolution which she wishes to share with others.

RALF KESSEL:

Ralf has been involved with a series of large-scale developments, apartment designs, hotel projects and institutional facilities in Berlin with a further five years in Ireland as an architect.
Ralf joined CCANZ (Cement & Concrete Association) in 2009 as a Project Manager to advise and teach on architectural concrete topics and publish guidance for the industry.

GORDON BARRATT:

Gordon is the director/owner of LGSC Ltd. A design, project management and consultancy company specialising in light steel framing. Gordon is also the Chairperson of NASH and Chairman of the NASH Technical committee.
Gordon formed Frametek (NZ) Ltd in 1997 and is director/owner of Tek Supplies Ltd and is on the board of PrefabNZ.
Gordon has been involved in the development of the Training Academy's Light Steel Framing course.



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An Industry First – The BOINZ ABS Programme

By Kerry Walsh
BOINZ Board Member

In response to a need to ensure quality services and public confidence in the way individuals perform property inspection and audits on existing buildings, the Institute is committed to the high quality accreditation programme for its accredited members.

Becoming an accredited building surveyor through the BOINZ ABS programme is not just as easy as putting your hand up saying you are experienced in building with a qualification. You need to take part in a comprehensive 3 day training programme culminating in a 3 hour exam with a minimum 70% pass. You must also submit two property inspection reports for consideration and approval by the accreditation committee. You will also be subject to a comprehensive back ground check and need to provide evidence of PI insurance.

As with all good accreditation schemes it is important to have a robust complaints service. As a Board member I currently have the responsibility of assessing these complaints on behalf of the board. Because of this, I have chosen to complete the training programme to get a better understanding of process and the standard. I also saw some benefits for our BCA work around COA's. As a BCO it was a new experience to be educated on carrying out property inspections in accordance with the NZS4306:2005 standard.
The training programme was highly detailed and thorough including topics on ethics, report writing to the standard, site observation, report templates, crucial site features to look out for, how to avoid getting yourself into potential liability and detailed modules on each aspect of housing.

The emphasis on good report writing was noted as this is often an area where property inspectors can get into hot water, a lot of hot water! Wording a $500 - $700 report incorrectly could have potential liability for hundreds of thousands of dollars… so it's important to get it right.

The training programme in Christchurch that I attended was fully subscribed with approx. 20 attendees from throughout the country. Some of the attendees had been in the industry for years while others wanted to move into the industry. What we all had in common was a desire for high quality standards and to be associated with a well-regarded professional body. The willingness to learn new things and get reporting right was obvious even though several people had been carrying out property inspection reports for 15 years or more. I was amazed

at the knowledge these guys (there were no women on the course) had of identifying products and construction methods.
You really do have to have a sharp eye to operate in this space successfully.

I have no doubt that these next ABS approved inspectors will be of high quality and will offer a great service to their customers.

BOINZ is about to start a publicity campaign around ABS to further strengthen the programme and to support the ABS's. The association has also set up the ABS Update to provide the institute with a vehicle to convey technical, legal, process, inspection and reporting guidance to our accredited members. In doing this we believe we have created an important and positive tool and service for establishing a rapport that adds value for our ABS members.

For many of our accredited members,

unlike our licensed members, there is no other organisation such as MBIE that provides the high level of guidance and support. Working in Building Inspection Services means
often working on their own and in isolation from their peers. It is BOINZ's intention that the Accreditation Surveyor Division of the Institute provides this guidance and support by sharing experience and developing communication in a meaningful manner, while importantly, delivering a much needed professionalism and public confidence.

I encourage BOINZ members to recommend ABS accredited property inspectors. They are ethical, carry out their reports and inspection to the NZ standard along with being insured, trained, and accredited!

The ABS Programme has four confirmed dates for 2016:

- 2 – 4 March 2016, Wellington
- 4 – 6 July 2016, Auckland
- 5 – 7 September 2016, Christchurch
- 2 – 4 November 2016, Auckland

For further information, and to obtain an application pack, please visit www.boinz.org.nz and see the Accreditation section.

BOINZ Training Academy Training Calendar
March – July 2016 Training Schedule

MARCH		
1 - 2 March	TA005 Plan Processing	Auckland
3 - 5 March	TA022 BWoF and Specified Services	Hamilton
7 - 10 March	TA008 NZS 3604 Timber Framed Buildings	Wellington
11 March	TA010 Light Steel Framing	Wellington
14 - 16 March	TA002 Building Controls	Wellington
14 - 15 March	TA007 Advanced Plan Processing (Using Simple House Acceptable Solution)	Christchurch
17 - 18 March	TA017 Services and Facilities	Dunedin
APRIL		
1 April	TA004 Accreditation	Christchurch
4 - 5 April	TA009 NZS 4229 Concrete Masonry Buildings not Requiring Specific Engineering Design	Wellington
6 April	TA015 Clause D1 Access Routes/ TA016 Clause F1 Safety of Users	Wellington
9 April	TA018 Piped Services and Waste	Hamilton
7- 8 April	TA006 Site Inspection	Auckland
11- 12 April	TA014 B2 Durability	Christchurch
13 April	TA001 Communication/TA003 Ethics	Dunedin
MAY		
2 - 5 May	TA008 NZS 3604 Timber Framed Buildings	Auckland
9 - 10 May	TA012 H1Energy Efficiency	Christchurch
11 - 13 May	TA020 Fire Documents	Christchurch
26 - 27 May	TA017 Services and Facilities	Hamilton
30 May - 3 June	TA019 Plumbing and Drainage Compliance	Auckland
JUNE		
8 - 10 June	TA002 Building Controls	Hamilton
20 - 21 June	TA007 Advanced Plan Processing (Using Simple House Acceptable Solution)	Hamilton
23 - 24 June	TA013 E2 Weathertightness	Auckland
27 - 28 June	TA006 Site Inspection	Wellington
27 June	TA018 Piped Services and Waste	Christchurch
JULY		
1 July	TA001 Communication/TA003 Ethics	Hamilton
4 - 6 July	TA022 BWoF and Specified Services	Christchurch
7 - 8 July	TA005 Plan Processing	Christchurch
11 July	TA004 Accreditation	Wellington
11 July	TA010 Light Steel Framing	Hamilton
13 - 14 July	TA009 NZS 4229 Concrete Masonry Buildings not Requiring Specific Engineering Design	Auckland

The Training Academy also provides an In-house training option for our courses, which has been utilised by individual councils, cluster groups and stakeholder organisations.

Please be aware that for various reasons we may have to change our dates, so check the BOINZ website for the most up to date information.

For more information, course details and to register, please visit our website www.boinz.org.nz or contact the Training Academy via training@boinz.org.nz

Seismic Design of Suspended Ceilings

By Hedda Maria Oosterhoff (MArch, BMus)

The series of recent major earthquakes highlighted a systemic problem with the seismic design of suspended ceilings. In some cases, suspended ceilings failed and in others, ceilings were compromised by unrestrained or poorly restrained building services and partitions.

Aside from the obvious concerns about the safety of building occupants and widespread non-compliance with the Building Code, the avoidable damage increased re-occupation time and was a significant burden on the economy.

The industry is under increasing pressure to assure seismic compliance of suspended ceilings on current and future construction projects.

FAILURES

There are many reasons for possible failure of suspended ceilings, which may include bad design, insufficient bracing, non-tested systems and products, cross-nogging and incorrect installation procedures or poor workmanship. As shown in recent quakes, interference from insufficiently braced non-structural building components and services within the ceiling plenum and where lineloads from partition walls were tied into the ceiling grid also caused much damage.

There are two main types of ceiling failure: either individual tiles become dislodged from the grid and fall to the floor or the failure of an individual component or joint of the grid results in the collapse of the ceiling across a large area (cascade failure). Either failure mode presents a significant risk.

CURRENT

In October 2015 the AWCI in association with BRANZ launched a Code of Practice for the Design, Installation and Seismic Restraint of Suspended Ceilings (COP). It states that regardless of past industry practice, it is not acceptable to treat seismic restraints [..] as if they were optional.

Clause B1 of the New Zealand Building Code requires that structures withstand loads they are likely to experience, including people, wind, snow and earthquake loading. Earthquake forces can act in vertical or horizontal directions and must be considered for all suspended ceilings in New Zealand to comply with AS/NZS 2785:2000 - Suspended Ceilings - Design and Installation, NZS 4219 - Seismic Performance of Engineering Systems in Buildings and NZS 1170.5:2004 - Structural Design Actions.

Additionally, the Health and Safety at Work Act imposes new duties on those who design structures as well as suppliers and installers. Penalties under the new act are significantly increased.

BUILDING CONSENT PROCESS

Currently the design of non-structural building elements often occurs after the building consent has been granted. The seismic bracing system is thus typically the responsibility of the contractor and their subcontractors.

The COP states that ideally, the lead-designer should be responsible for coordinating non-structural building components in the plenum so that there are no conflicts. This includes specifying ceiling back bracing layout where applicable, detailing edge fixing details and coordinating services in the plenum.

SEISMIC DESIGN PRINCIPLES

The seismic design for suspended ceilings can be summarised by two main points.

- The wall to ceiling connection; how will this accommodate movement in an EQ event?
- What bracing method will tie the ceiling to the supporting structure?

Wall to ceiling connection:
There are two ways of approaching the design of the suspended ceiling to wall junction: fixed or floating.

If the ceiling is fixed to the perimeter wall, line loads on the grids are transferred out to walls during seismic movement. When the ceiling is floating, the ceiling moves with the structure above and is not affected by the wall movement.

BRACING:

Regardless of fixing methods, due to grid flexibility, bracing is required to securely attach the ceiling to the supporting structure. Fixing the edges of a suspended ceiling to the perimeter walls provides some bracing, but this only has a local effect. For moderate to larger ceilings, back bracing is required to restrict movement.

DESIGN GUIDELINES

Since 2010, T & R Interior Systems with Joseph Bain (PhD, BE (Hons), MIPENZ, CPEng, IntPE(NZ) have been developing a seismic design system for suspended ceilings. Its principal premise is that at least two adjacent sides of a ceiling must be floating. Floating edges must also be provided around rigid objects that pass through the ceiling (e.g. columns, wall partitions, sprinklers). This is to prevent opposing and external forces acting on a ceiling grid.

Research has shown that line loads are attracted to fixed edges first and foremost and therefore as soon as a ceiling requires back bracing, all edges must be floating. When all edges are floating the ceiling acts as a diaphragm and all line loads are transferred to the structure above.

Back-bracing layout can be challenging, and is complicated by the support required for other equipment in the plenum space. Calculators developed by engineers can assist.

CONCLUSION

EQ loads on a suspended ceiling are related to the height of the ceiling, the mass of the tiles and other loads, distance off the ground and location in New Zealand. Because of these variables there are no standard design parameters; every ceiling is different. However, in general, for small ceilings, fixing two edges and floating the rest can accommodate earthquake loads. For medium to large ceilings, additional back bracing is required.

Design co-ordination is possibly the largest issue around the seismic design of suspended ceiling work. In general, it is advised to coordinate the design of the ceiling with services at the earliest possible time.

Why is Seismic Separation Important?

In the world of non-structural elements there is a great tendency to think of partition walls and glazing lines as temporary, as design elements and as finishing touches.

This couldn't be further from the truth.

With the damage from earthquakes around the country rendering structurally sound buildings economic write offs the focus on non-structural elements has sharpened.

The need to adhere to building code B1 Structure, utilising AS/NZS 1170 and AS/NZS 4219 comes from the intention of the code to protect life, preserve egress in emergencies and to ensure the continued operation of the businesses contained within the building.

Attaching the head of partition walls and glazing lines to the two way grid with a series of 10 gauge tech screws defies logic and voids the ceiling manufacturers warranty. This in turn prevents the issuance of producer statements and potentially voiding insurance claims when disaster strikes.

Allowing the separation of wall and ceiling provides the building owner with certainty, the building occupants with peace of mind and the insurance companies with a client that complies with the building code.

In addition to building code

requirements, the recent Practice Advisory 19 draft of the Health and Safety Reform Bill adds weight to our responsibilities. In particular sections 17, 37 and 38 defines the responsibilities manufacturers, suppliers and installers have to the end user. Best practice is no longer optional; it is a necessary requirement to better building.

Allowing the continued connection of wall to ceilings is remiss and leaves the client in a situation where the best has not been designed, and adequate solutions not provided for.

The focus on the cost of seismic separation is redundant as a correctly installed project will be completed more quickly saving time and therefore money and will provide greater value over the lifetime of the building.

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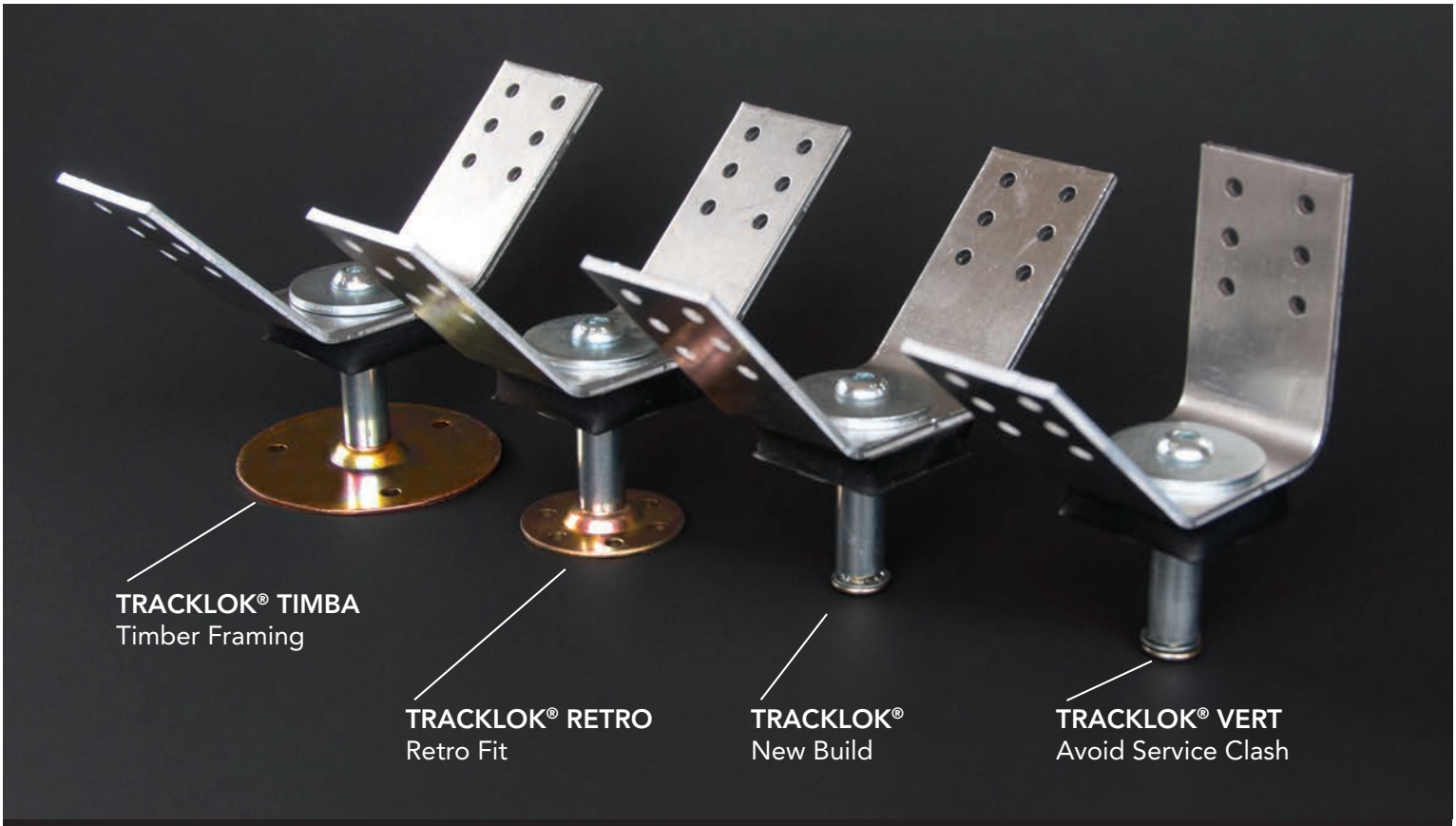

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Ten years after Katrina: 'People had to learn the hard way.'

By Nick Reiher

This article originally appeared in the August 27, 2015, issue of ICC eNews, copyright International Code Council, and is reprinted with permission. www.iccsafe.org.

A view of New Orleans' Lower Ninth Ward today, ten years after floodwaters from Hurricane Katrina ravaged the historic neighbourhood.

Ten years ago, on Aug. 29, 2005, Hurricane Katrina raged into the Gulf of Mexico with winds in excess of 150 mph, battering coastal towns and resulting in 1,800 deaths and more than $67.8 billion in losses across six states, most notably in Louisiana, Mississippi and Alabama. To date, it is the costliest natural disaster in U.S. history.

Katrina also was the first time in a long while that New Orleans took a direct hit from a major storm, explained Bhola Dhume, who has retired after serving for several years as a code official for the Crescent City.

Maybe that's why it took so long for some people to heed the mandatory evacuation order in New Orleans. And maybe that's why there had been no official statewide codes until after Katrina — and a few weeks later, Hurricane Rita — hit the region.

Although no codes are strong enough to withstand Katrina's massive winds and storm surges, the same ones that wiped out dozens of New Orleans' levies and claimed more than 1,000 lives, Dhume said state officials woke up and adopted the 2006 versions of the International Building Code (IBC) and the International Residential Code (IRC). Just as importantly, Dhume said, the Louisiana legislature mandated jurisdictions within the state follow those codes to the letter; no more or less restrictive.

State legislatures in Alabama and Mississippi also adopted the I-Codes statewide. But according to the Insurance Institute for Business and Home Safety in its 2015 "Rating the States" report, those states weakened the mandates in one form or another.

MISSISSIPPI

"Most people in Mississippi don't like building codes," said Hank Rodgers, Building Official in D'Iberville, giving a hint of the struggle that state has had adopting more stricter regulations, even after Katrina. "But FEMA didn't suggest we adopt ICC codes when we rebuilt, they demanded it. They said you can opt out, but there's no guarantee of getting any federal funds to help rebuild. Six coastal counties were required to adopt the Codes, and five did. The sixth figured they were too far inland and didn't have as much damage anyway."

The new ways caused a bit of a problem at first, agreed William Carrigee, Acting Building Official for the city of Waveland, Miss., who worked in Bay St. Louis during Katrina. "You can't teach an old dog new tricks, except with a stick."

Although it took a little convincing by FEMA to get some reluctant Mississippians on board, Rodgers said once they saw the codes meant better, stronger and more resilient buildings, they softened their stance a bit. And it got officials to sort out how the IRC and the National Flood Insurance Program complemented each other, he said, which was a big help.

"It always seems to take a catastrophe to change our ways," Rodgers said. "We've taken the position that building codes work. Inspections work."

Still, the few code officials in Mississippi at that time thought the new wind standards were some 10 to 15 mph stronger than need be, especially since most of their buildings did fine under the Southern Standards Technical Document (SSTD) that was developed by ICC legacy organization Southern Building code Congress International. As with towns hit by Hurricane Sandy, most damage in along the Gulf Coast during Katrina was due to storm surges as high as 25 feet. And no code can protect against that, he noted.

What also helped is insurance carriers, wary about new policies after Katrina, were more likely to write them if structures were built to code, Rodgers said.

In Mississippi, state lawmakers debated the issue of statewide codes for nearly a decade after Katrina until 2014, when they adopted a building code law that governs construction of most residential buildings in the state. The law, which allowed municipalities to adopt one of the last three effective IRC code editions, became effective Aug. 1, 2014. However, it allowed municipalities to opt out of the requirements for adoption and enforcement within 120 days of the effective date, or Nov. 20 2014.

"So guess what happened?" Carrigee asked.

The IBHS said as of Dec. 31, 2014, 90 percent of the population in Mississippi's municipalities in Mississippi lives in areas that have not opted out of the new building code law. But they added some 50 percent of the state's population lives in unincorporated areas, governed by the respective county boards of supervisors, and the IBHS said they don't have data for those areas.

Regardless, the IBHS also noted Mississippi has not yet established a statewide program for licensing or training of building officials, although funding for training through local governments is provided by the state. General contractors are the only trade required to obtain a license and the state has mechanisms to register complaints from the public and discipline contractors. Carrigee said that leads to some pretty informal enforcement.

"You have a friend of your sister Susie's cousin doing inspections," he said. "Of course, he has no certifications."

Carrigee said he taught a lot of code classes in the days following Katrina so officials who had the experience could get the certifications. Although Mississippi has made a lot of strides, Carrigee said they still have a long way to go.

"We learned a lot from Katrina. If you take the time to explain it, and you have people listen, they understand the codes have helped us get better-built buildings," he explained. "But you're only as good as your enforcement. And right now, we have no requirements for enforcement."

ALABAMA

Effective Oct. 1, 2012, the IBHS said Alabama adopted the Alabama Energy and Residential Codes (AERC) for all jurisdictions statewide. The AERC is composed of the 2009 International Energy Conservation Code (IECC) and the 2009 IRC.

A view of New Orleans Lower Ninth Ward today, ten years after floodwaters from Hurricane Katrina ravaged the historic neighbourhood.

Although the energy portion of the code is mandatory at the local level, local jurisdictions are permitted to continue enforcing different editions of residential building codes. However, the law requires that if jurisdictions have not previously adopted a residential building code and decide to adopt one, they must now adopt the AERC codes.

The IBHS said enforcement aspects of the AERC are not clearly defined in the rule and/or can be considered non-existent. However, they noted several coastal communities within the state have strong code adoption and enforcement programs.

While Alabama has no statewide program to license building officials, the state requires licensing for general, plumbing, mechanical and electrical contractors, but not for roofing contractors. Mechanical and electrical contractors are required to obtain continuing education for license renewal.

The IBHS noted Alabama has experienced devastating coastal hurricanes and inland tornadoes. "Adoption of a modern mandatory statewide residential code throughout the state will help establish uniformity in enforcement and application of the important code provisions," the report said. "It also will reduce losses to life and property in the event of severe storms, to which the state is highly vulnerable."

LOUISIANA

In its original "Rating the States" report in 2010, the IBHS lauded adoption of the Louisiana Uniform Construction Code, based on the 2006 editions of the IBC and IRC. The code mandates enforcement through building officials, plan reviewers and inspectors. It also provides a regulatory scheme for the application and issuance of building permits, certificates of occupancy, authority to charge fees, penalties for violating the building code and a complete system to administer the building codes effectively.

There was a lot of blame to go around for the damage and deaths in Louisiana, especially in New Orleans, where improperly built levees broke under Katrina's storm surge. Of course, politics was a big problem as well. But when it came time to rebuild, Geoffrey Large, Building Code Administrator for Terrebonne Parish, said they looked to Hurricane-prone Florida for guidance.

"We saw that since 2004, they had had five hurricanes, with at least one in a high category," he said. "Yet damage was less there than we had in Louisiana. And the only major difference was that Florida had 15 years of a statewide code, and enforced it. Then it was just a logical progression that led to us adopting a statewide code."

And strong enforcement along with it, Large said. Code officials along the coastal areas of the state banded to form a code council to keep codes consistent throughout the parishes. That also helped keep contractors from cherry-picking among the parishes.

"Louisiana lawmakers put aside political challenges and took the bold step of adopting the statewide code because it was the right thing to do," the 2010 IBHS report said. "Since then, the state has encountered the types of difficulties that typically accompany any new program," including struggling financially to establish, staff, and manage inspection departments.

New Orleans already worked under the IBC at the time of Katrina, Dhume said. But it was critical to expand the codes statewide. And when they did, building officials needed to be certified, he added, and there were only five or six who were in the entire state at that time.

So Dhume did a lot of training, as well, with FEMA picking up the tab. That still goes on today, and they still need more people to train. What has helped, he said, is that training has expanded, with building officials getting multiple certifications, so they can branch out into plumbing, mechanical and electrical.

"They are now better prepared to handle emergencies and to help prevent them," Dhume said. "But people had to learn the hard way."

Are Producer Statements a get out of jail free card?

Helen Rice of Rice + Co Lawyers is presenting at the 2016 Institute's Annual Conference and Expo at Christchurch with a panel of Senior Council Officers and Claims' Managers addressing reliance on third party verification. This is the first of two articles leading up to the annual conference.

In 2015 the High Court delivered three judgments that held councils liable in negligence and awarded property owners damages totalling around $43 million. The three decisions are Nautilus, Fleetwood Apartments and Stadium Southland. These decisions should ring alarm bells for councils, particularly in relation to the acceptance of third party verification such as producer statements. This article focuses on the Stadium Southland decision, which is the most recent decision.

STADIUM SOUTHLAND RESULT

In 1999/2000 Stadium Southland was built. On 18 September 2010 the roof collapsed under snow. The High Court ordered the Invercargill City Council to pay the owners $18 million. The engineer who had the primary responsibility to monitor construction and to provide a PS4 did not defend the claim. The council obtained a contribution judgment from the engineer of 90%. However, the engineer's insurance was limited to $1 million. Therefore while the council was only liable for 10% of the judgment, it has been left to pay $17 million.

STUFFED TRUSSES AND THE REMEDIAL WORKS

During the construction of the stadium, the owners identified that roof trusses were sagging. An independent engineer carried out a review and found that the trusses and supporting structure had been designed for lighter loads than required. The independent engineer recommended roof repairs.

In 2000 the council issued a building consent for the roof repairs. The building consent required Mr Major, who was the original engineer responsible for the initial underdesign, to confirm in writing that the stadium trusses complied with the remedial requirements specified by the independent engineer. Importantly, the conditions of the building consent required Mr Major to provide measurements of individual trusses and confirm in writing the precamber to trusses was adequate. In addition Mr Major was to provide a PS4.
The council issued the CCC for the roof repair work before it had received the truss measurements or the PS4 (the CCC was issued without the knowledge of the council's principal building officer. It appears that the CCC may have issued so the owners could obtain a liquor licence for a function).

Following the issue of the CCC the council sought and received a PS4 from Mr Major, but it did not receive the measurements of individual trusses.

CAUSES OF THE ROOF COLLAPSE

The Court found that if the stadium roof had been properly constructed as designed it should have been able to withstand the 18 September 2010 snowfall event. Unfortunately, the stadium roof was not correctly constructed and contained defects.

COUNCIL RELIANCE ON PS4

The council sought to defend the claim on the basis that it had relied on the PS4 which was provided by Mr Major after the issue of the CCC. The Court did not need to consider this argument in detail as the Court held the council was negligent for not requiring Mr Major to provide measurements of the trusses as required by the building consent. If the measurements had been provided the defective construction would likely have been identified. The council could not defend the claim on the basis that it had relied on the PS4 because the council had not satisfied itself that all the terms of the building consent had been satisfied.

LESSON

This case reinforces why a council must not issue a CCC unless all conditions of the building consent have been complied with at the time of the issue of the CCC.

rice+ co lawyers

2015 NEW ZEALAND LAW AWARDS FINALIST

BOINZ BOARD ELECTIONS

Confirmed Board Election Timeline - 2016

Call for Board Nominations *70 days prior to AGM*	**7 March 2016 (at the latest)**
Board Nominations Close *50 days prior to AGM*	**27 March 2016**
Ballot Papers sent to members *28 days prior to AGM*	**18 April 2016 (at the latest)**
Voting Closes *(Not less than 14 days before AGM)*	**2 May 2016 (at the latest)**

New investigator appointed at PGDB

A police officer for 13 years with most of his career spent as an investigator in the Criminal Investigation Branch (CIB), Jayson Thomas, the new Board investigator has also worked previously as a regulatory investigator for the Civil Aviation Authority (CAA) before joining the Board.

"I am looking forward to contributing to the Board's efforts to clean up the industry, and as such my major focus will be on unauthorised work, which is where I need industry help", says Jayson.
Jayson can't be everywhere at once, but with a steady stream of information from practitioners, building consent authorities and industry stakeholders, he can coordinate investigations in a manner that will see him spending as much time as possible in the regions around the country that need his attention.

If you have information to assist Jayson in identifying illegal operators give him a call on

0800 74 32 62 or contact him via email at jayson@pgdb.co.nz or download the free R.A.C app.

R.A.C 'em up and finish the game

As part of the Board's increased focus on unauthorised work, a new app was launched in late November to compliment the new investigation and intelligence functions which have recently been put in place. The app will enable the consumer and industry stakeholders to help in squeezing out illegal operators, by being the "eyes and ears" assisting the Board with its strategic operations.

The R.A.C app will be a key weapon that the whole industry and the consumer can use to help deal with unauthorised work quickly.

The R.A.C app ("Report-A-Cowboy") allows easy on-the-spot submission of reports to the new Board investigator of non-compliant or other installations, with attached photo and/or video as well as the ability to enter any other basic vital information. The R.A.C app has the ability to log GPS coordinates, and allow those reporting through the app to request that their personal details remain confidential.

This new initiative aims to ensure unauthorised work is quickly identified by the Board and dealt with. The R.A.C app is available on both Apple (iOS) and Android (Google) stores to the general public, and function on both phone and tablet style devices.

Embracing density: we can do it better

By Verney Ryan, Beacon Pathway

New Zealand can learn a lot about meeting housing demand and addressing affordability from the variety of approaches to increasing density in Vancouver, Seattle and Portland.
In July I was lucky enough to join a group of 20 New Zealanders on a study tour of Vancouver, Seattle and Portland. The goal of our tour? To experience successful medium density solutions in both suburban and inner city settings.

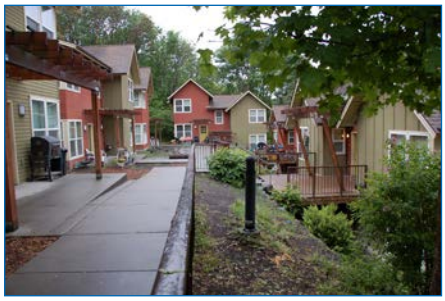
WHY VANCOUVER, SEATTLE, PORTLAND?

These cities share our challenge of meeting growing housing demand and addressing affordability. Two million more people are predicted to live in the greater Seattle area in the next 10 years, and 1,300,000 more people expected to arrive in Portland by 2035. In Seattle over one household in six spends more than half their incomes on housing. An average two-storey house in Vancouver is so unattainable; people could find themselves spending 90.6% of their pre-tax household income on home ownership costs.

The difference is these cities have already taken steps to address these issues. Some strategies have been successful, some less so. It's true that no single city is going to provide all the answers, but there is plenty to be learned. Here are four key things New Zealand should take on board.

1. **Make the most of opportunities – they lead to success**
   Some of the most successful medium density developments we saw were the result of one-off opportunities and serendipitous events. A prime example is Vancouver's Southeast False Creek development. This brownfields site, originally an industrial park, and the 2010 Olympic Village, is being developed into a mixed-use community with a total population of 13,000 people, with a focus on residential housing. Southeast False Creek aims to be a leading model of sustainable development, with high performance housing, walkability to local services, and a variety of architectural designs, ownership opportunities, recreational activities, and transport options.

   Vancouver has worked with its constraints and opportunities to develop an approach to density, known as 'Vancouverism'. This style



is reflected in a built aesthetic of 15-40 storey towers, with a minimum separation of 24 metres to preserve views and privacy. Around the base of each tower is a podium lined with three storey townhouses or retail/commercial offices. From a street level, this preserves a human and relatable scale to street views and experience.

Vancouver's planning system is based on the idea that private gain brings public benefits. Growth leads to growth; cost charges and development levies support amenities, the same amenities attract people to developments. Vancouver took the opportunity after the World Expo '86 to rezone large areas of vacant waterfront land previously occupied by railroads and industry. As these were converted to high density residential, development levies paid for a range of public amenities and infrastructure, without calling on taxpayer funds.
20% of units are built as social housing (paid by the City) and 25% are designed for families. Despite limited land, the downtown peninsula will add another 50,000 people, more than doubling its downtown population.

2. **Explore new ways of intensifying neighbourhoods**
   All three cities are struggling with intensifying existing neighbourhoods. The 'missing middle' is a recognition that many people still want to raise kids in a house, and densification needs to explore diverse housing options (including duplexes, triplexes, and bungalow courts) of varying affordability, designed to fit alongside existing stand-alone housing.
   One different approach is that of pocket neighbourhoods which can consist of new developments or can be achieved through careful retrofitting of existing houses. Seattle allows double density if houses are smaller, share a common area, and are not dominated by cars. Pocket neighbourhoods form small community of 6-8 neighbours with some shared facilities and appeal to an untapped market of people wanting to downsize. Similar clustered housing options include regular homes redeveloped into co-housing through to purpose-built mini-villages.

   New developments are also offering shared communal spaces and facilities. Grow Community in Bainbridge, Seattle, is a very successful development focused on creating a connected urban neighbourhood which offers houses on separate titles while maximising effective use of communal space.

3. **Consider long term rental and different models of tenure and community**
   It was noticeable that all three cities focused on affordable rentals, rather than affordable home ownership, guided by a ratepayer base that understands the importance of providing affordable housing for vulnerable citizens. Affordable rental is funded at local, state and federal level through complex arrangements of tax credits, significant value trade-offs, and planning policy. The Seattle Housing Authority provides long term rental housing and assistance for 29,500 people on 400 sites. 80% of clients have an income less than 30% area median income, and rent is no more than 30–40% of income.

   Government is not the only investor; shrewd institutional investors are behind numerous large scale rentals. In Portland, the Falcon Art Community includes 25 artist studios at low cost, and, to address the risk of gentrification, developer Brian Wannamaker froze the rent of residents so that they weren't forced to move on from their community.

   Also evident were the different ownership structures which were used for affordable rentals, including co-operatives and leasehold structures that enabled a greater variety of housing tenure and choice, as well as longer and more secure tenure. This helps to build a better sense of community where renters don't feel that their residency is only temporary and at the whim of the landlord.

4. **Always consider transport infrastructure and housing together**
   The benefits of transit oriented development are fast becoming appreciated, and we saw many examples where transport options and developments were preceding hand-in-hand.

   The Cambie Corridor Plan in Vancouver is a land use policy which will guide future development along Cambie Street. The plan focuses on integrating development with transit and enhancing the existing neighbourhoods along the Corridor while supporting the City's goals of environmental sustainability, liveability, and affordability.
   And in progressive cities such as Portland, the focus is also on bike oriented development, providing good bike access and cycle networks to attract a growing resident base.

Further reading
Vancouver style http://www.spur.org/publications/article/2003-11-01/vancouver-style
Video on pocket neighbourhoods https://www.youtube.com/watch?v=k749w3cHSPk
Missing middle http://www.treehugger.com/urban-design/missing-middle-another-model-providing-dense-family-housing.html

HIANDRI – Protection for the Life of the Building

By John Oliver
Marketing Manager - Hiandri

HIANDRI bottom plate packers have been promoted over the past year as a solution to preventing delays at the pre-line, due moisture levels over 20%, which of course it does well. However, this is not the reason they were invented, there is a lot more to HIANDRI bottom plate packers.

They were invented to help solve the 'leaky home' problem, or more accurately put, 'the rotting timber frame' problem that has reportedly cost this country $11.4 billion not to mention the huge human toll this problem represents!
Once HIANDRI has been installed on all timber framing of a building, the bottom plate can never sit in water, which once saturated, acts like a blotter, sucking water up the studs over a long period of time, with the obvious end result. Better than that, the fact that the timber remains dry over its life, means moisture can drain from the frame, it cannot when the timber is saturated.

I installed HIANDRI bottom plate packers on a 400sqm home in Hamilton belonging to an engineer, 9 years ago. I recently visited him for a testimonial, which he was more than happy to provide. He then went on to tell me his shower had been leaking for many years, which he had difficulty solving, plus showed me a nail through the cold water feed under the laundry bench, also leaking for 9 years. In both situations, the owner would have been facing very expensive repair bills, but for the installation of the HIANDRI bottom plate packers.
HIANDRI costs less than $4/sqm installed. It is not a product to be used only when it rains or for just 6 – 8 months of the year, it for the life of the building and the security of everyone involved in the building process. It raises the building industry to a new level.

Please note that this is a product technology update from the inventor of the system and that the Institute takes no responsibility for the accuracy of the claims made in this article.

Organisational Changes at BOINZ National Office

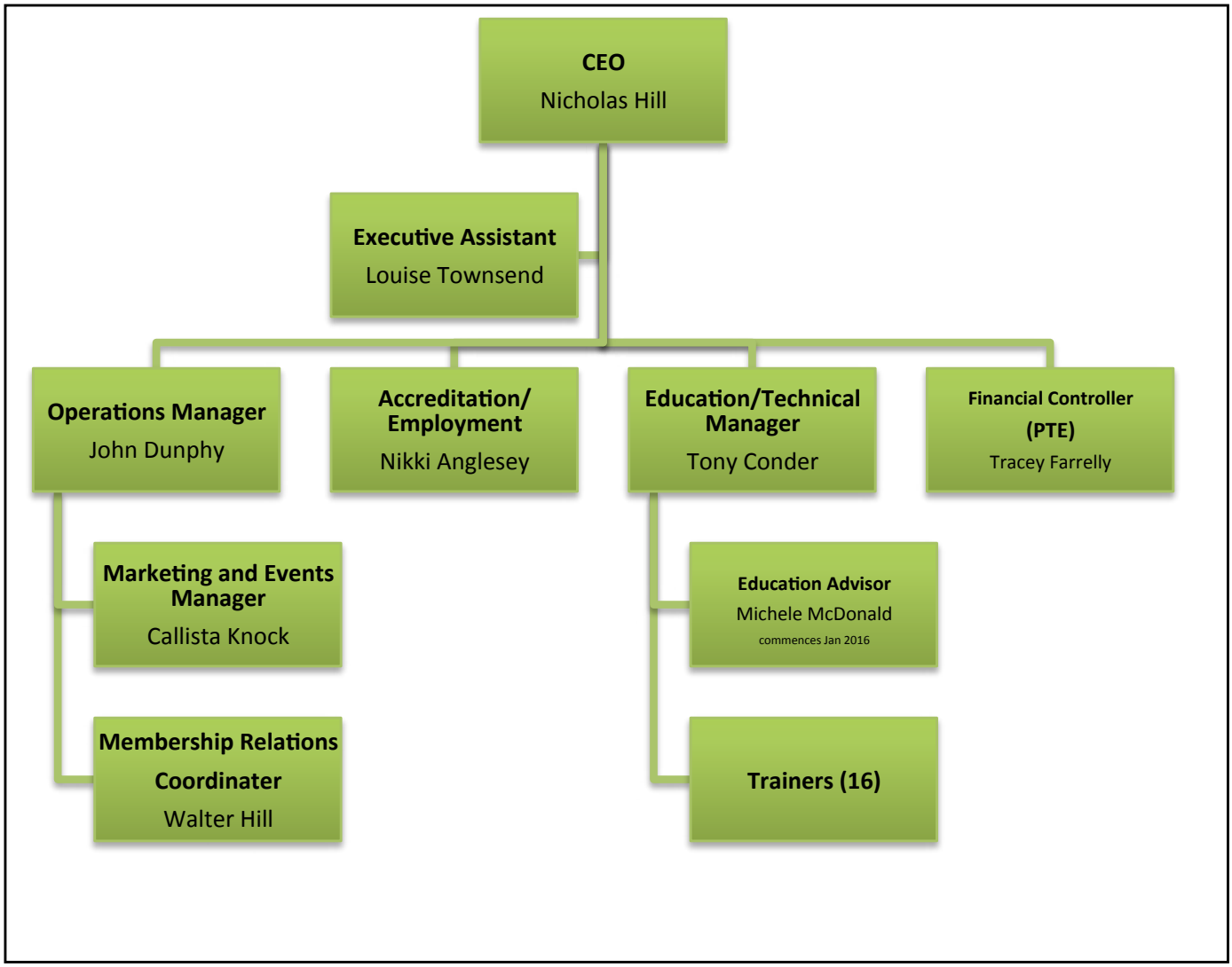
Over the last few years your Institute has experienced the strains of meeting increasing demands resulting from a rapidly expanding building environment.

In April this year the Board agreed to a recommendation from the Chief Executive to fund an effectiveness and efficiency review to establish the HR capabilities to meet future business needs in order to remain relevant and competitive. The Review was carried out in May with the conclusion there was no spare capacity in the organisation and indeed several roles were overloaded and required incumbents to work unreasonable hours just to keep up. A key conclusion was to free up the Chief Executive of operational activities with the implementation of a more supportive structure.

The organisational structure outcome was the appointment of two new roles (November), and a redefining of job descriptions. The effective head count moved from 6.2 Full Time Equivalents (FTE's) to 8.2 FTE's. The two new roles and appointments are Operations Manager (John Dunphy) and National Accreditation Division & HR Division Manager (Nikki Anglesey). The operations role reflects the increasing expansion of services offered in the marketing events and membership areas, while the Accreditation and HR division role is reflective of increasing growth and potential in these respective areas.

The National Office is proud to be of assistance to you, and of the Institute's growing influence and status within the sector.

BOINZ Organisational Structure – as of December 2015



Code of Practice for Internal Wet Area Membranes

The Waterproofing Membrane Association Inc (WMAI) is proud to announce the publication of the Code of Practice for Internal Wet Area Membranes. The WMAI was tasked by the then DBH to develop a Code to fill a gap in ensuring compliance with NZ Building Code Clause E3, Internal Moisture.

This Code focuses on industry best practice, design, membrane selection and installation of membranes in internal wet areas, and is a must have for anyone in the design, installation and inspection of internal waterproofing membranes. Along with the Code of Practice for Torch-on Membranes, this Code will become a valuable asset to the industry, and we anticipate that it will be referenced as the industry standard for best practice for internal wet area membranes within the whole of the construction industry.

After 4 years of research and development by industry suppliers and at a cost exceeding six figures, this complete and concise Code will be available for purchase in December 2014 as either a download ($7.50 incl GST) or as hardcopy ($25 incl GST and p&p) from the WMAI website at

WWW.MEMBRANE.ORG.NZ.

Council Liability For Pim's:
Monticello Holdings Ltd v Selwyn District Council

Does a council owe a duty of care to a developer when issuing a PIM? Is a council required to disclose information in its historical records? These questions were answered in a recent decision of the High Court.

The case concerned an allegation by a developer that a council was negligent by failing to disclose the existence of a former town dump on land purchased by the developer.

Like elephants, the court found that councils never forget information.

BACKGROUND

In July 2005 a developer purchased a 10 hectare parcel of land in Leeston, near Christchurch. The sale and purchase agreement contained a LIM condition and a LIM was obtained.

In April 2007 the developer entered into an agreement to purchase another hectare of neighbouring land owned by Mrs Cooper (the Cooper land). The developer neither requested nor obtained a LIM for the Cooper land.

Later the developer submitted a resource consent application to subdivide the Cooper land into two lots. Mrs Cooper retained the lot with her house on it while the other lot was to be amalgamated with the 10 hectare parcel purchased by the developer in 2005 (the amalgamated land is referred to as "the land" from here on in).

In July 2007 the developer applied for resource consent to subdivide the land into 103 residential lots. In October 2007 the resource consent was granted. It included a condition that:

43. The consent holder shall identify and report all hazardous waste sites within the subdivision prior to any engineering works commencing. Where a hazardous site is found at any stage of the subdivision development works then the Consent Holder shall undertake all necessary work to rehabilitate the site. This may include treatment and offsite disposal. All work shall be undertaken at the Consent Holder's expense.

In August 2008 Mrs Cooper applied for a building consent and a PIM to install and connect a sewer pipe from her house to the new sewer line and to disconnect and decommission her existing septic tank.

In September 2008 the council issued a PIM to Mrs Cooper. The PIM made no reference to any hazardous material.

Four years passed with little activity.

While completing site works for the subdivision of the land in October 2012, the developer discovered a buried rubbish pit. It was on the Cooper land. The rubbish was part of a disused town dump established in about 1933 and used until around 1955 by two predecessors of Selwyn District Council.

The developer excavated the buried rubbish and placed it elsewhere on the land. It has remained there in a large mound ever since.

A year later the developer applied for (and was granted) a combined subdivision and land use consent to create 19 of the total 103 lots in two stages. The consent included a condition that the contaminated land be remediated. The cost of remediating the land, by treating the contaminated material and removing it off site, is estimated to be in excess of $800,000.
The developer issued high court proceedings against the Selwyn District Council.

THE LEGAL ARGUMENTS

The developer alleged that the council owed a duty of care to (a) maintain adequate records and record contamination in PIMs; (b) maintain adequate records and record contamination in LIMs; and (c) not to issue resource consents for land the council knows, or ought to know, is contaminated.
The court found:

- The council did not owe the developer a duty of care when it issued the PIM because the only person entitled to obtain the PIM was the neighbour, Mrs Cooper, and the PIM was solely for the sewer works and not the broader subdivision. A council's responsibility for issuing PIMs does not extend to third parties;
- The council was not liable in relation to issuing a LIM, or failing to record relevant information on a LIM, because no LIM was sought or received by the developer; and
- The council did not owe a duty of care to the developer to furnish it with information when it issued the resource consent and the council was entitled to rely upon the information placed before it. The court also found that there was insufficient proximity between the council and the developer for a duty of care to exist.
- For these reasons the claim against the council failed. However the court went on to make some useful observations.

WHAT DOES A COUNCIL KNOW?

The council argued that just because a predecessor council knew of the dump did not mean that the current council did. Even if the information was in the council's archives it was not reasonable for the council to discover that historical information. To do so was described by the council as an "impossible burden".

The court said that a council is required to disclose such information in its records, even its historic records. The justification for this is as follows:

1. Members of the public rely on local authorities for information;
2. A fee is paid for the provision of the information;
3. This information is in the sole control of the council;
4. The disclosure need not be extensive – it needs to draw the attention of the parties to the hazard, rather than to provide substantial details of it;
5. The council knew that there were contaminated sites within its district;
6. The presence of the dump raises health and safety in relation to building or future building, which is what the Building Act is concerned with. Immediate obvious health and safety concerns might include the existence of heavy metals, leaching and a risk of subsidence;
7. This conclusion was supported by case authorities in relation to LIMs which applied equally to PIMs. The court referred to Westland District Council v York and Henry & Tan v Auckland Council;
8. It was reasonably foreseeable that members of the public would rely on the information contained in a PIM they have requested – after all, the PIM must disclose special features of the land. That is one of the express purposes for which they exist; and
9. The former dump site was owned and managed by the council's predecessor in time – this was not a piece of land for which the council has no records where contamination could only be discovered if a site investigation was undertaken. Quite simply, the council ought to have known about the dump.

WHAT IF??

The council had a convincing win. A copy of the judgment is on our website (Heaneypartners.com)

This case has unusual facts. In a more straightforward situation, i.e. if the developer had applied for a LIM, and the LIM failed to disclose the rubbish dump, then the council would have been in serious trouble.

It is interesting to speculate what the court would have decided if Mrs Cooper had applied for a PIM to build on the rubbish dump, and had shared that information with the developer. In that situation it is likely that the PIM could have been relied upon by the developer.

THE LESSONS ARE?

It will come as no news to councils that they are potentially liable if a PIM fails to disclose a known hazard. What is a worry is that a council is potentially liable where records of that hazard are buried deep in the council's archive. Such records can be difficult to access; they may be held off site for instance, and they are difficult to search if held on paper or microfiche. The court was not prepared to accept these logistical challenges as an excuse.

This decision may encourage councils to devote more effort to digitizing their paper / microfiche records.

Monticello Holdings Ltd v Selwyn District Council [2015] NZHC 1674

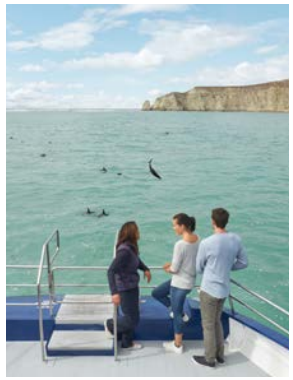
HAERE MAI!

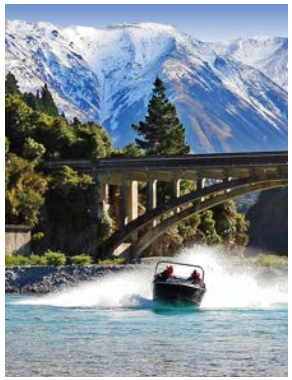
WELCOME TO THE INTERNATIONAL STRAW BUILDING CONFERENCE 2016 TO BE HELD 3-9 MARCH IN CANTERBURY, NEW ZEALAND. THE CONFERENCE WILL BE A CELEBRATION OF NATURAL BUILDING WORLDWIDE AND PROVIDES A RARE FACE-TO FACE OPPORTUNITY FOR NETWORKING WITH OTHERS IN THE FIELD FROM ALL OVER THE GLOBE.

BUILDERS, HOME OWNERS, ENGINEERS, ARCHITECTS AND DESIGNERS, BUILDING OFFICIALS, HOUSING PROVIDERS, BUILDING SUPPLIERS, FARMERS, RESEARCHERS AND ACADEMICS, AND ANYBODY ELSE WHO CARES ABOUT THE QUALITY OF THE BUILT ENVIRONMENT AND ITS IMPACT ON THE WORLD WE SHARE.

COME JOIN US!

www.strawbuildconference.co.nz





Christchurch & Canterbury Convention Bureau | ISBC 2016 International Straw Building Conference | 100% PURE NEW ZEALAND newzealand.com

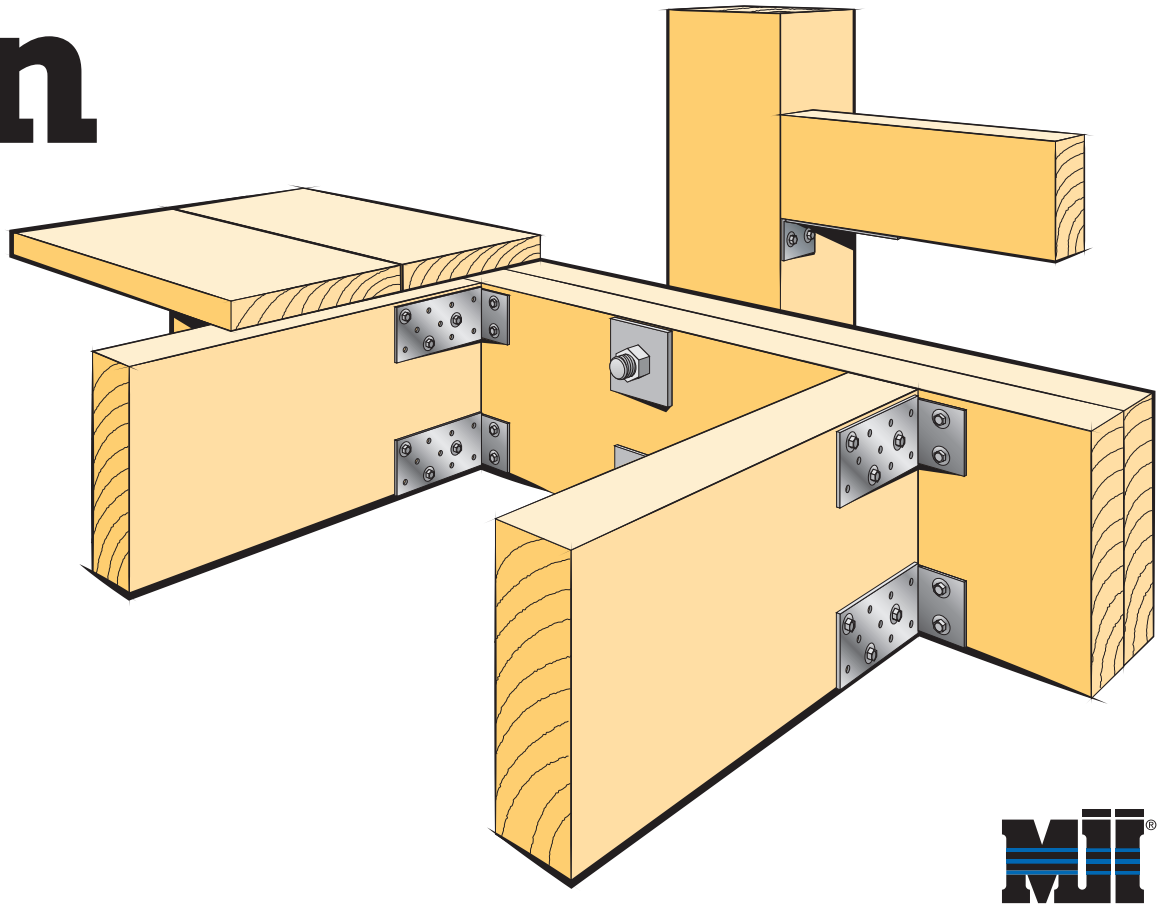
Hardware Awards 2015
- winner -
SUPPLIER OF THE YEAR
- HARDWARE -

Here's a top deck solution

Deck Joist Fixing

ALTERNATIVE SOLUTION
TO CLAUSE 7.4.1.3 NZS 3604:2011
Provides the required fixing between the deck joist and boundary joist to suit a cantilever baluster system

Trade Pack of 50 stainless steel cleats and 250 corresponding screws



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Don't be fooled:
A heads up from the Water NZ Backflow Group

By Logan MacDonald

As technology continues to evolve we are exposed to a wider range of products. There are all sorts of products being offered that will state they have achieved particular standards. Standards are there to ensure materials and products are fit for purpose and appropriately authorised for use. Some of these products are foreign to us and understanding how they operate can be tricky. It might be easy to overlook the risk a particular product may pose to the safety of your property and the health of the people on it.

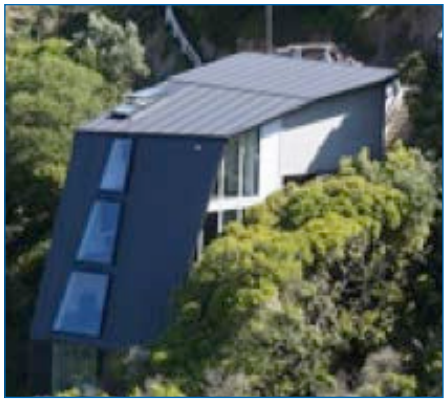
The Water NZ Backflow Group has recently discussed concerns surrounding bidet toilet seats, onsite effluent disposable systems, chemical soap dispensers and commercial dishwashers. Some of these products will state they meet a particular standard yet upon further inspection it is questionable if they do and what exactly they have been certified for. Please don't be fooled. We encourage you to check that they are fit for purpose.

Is an air gap ok in a unit that cannot be opened for inspection?
Is an air gap or vacuum breaker suffice in all types of commercial dishwashers?
Is a built-in dual check suffice on a commercial chemical soap dispenser connected to the potable supply?
What is the most suitable method of protection for a bidet toilet seat?
Is an onsite effluent disposable system fitted with the correct backflow protection? Does it actually have any backflow protection?

We need to be mindful of where we install the backflow protection. Is it accessible and easy to maintain? Sometimes the addition of a backflow device might not suit the manufacturer so it gets neglected. Same thing may apply for the installer or the end user. Check out the photo below. I wonder what this is serving and is it adequate protection? It is installed rather high up the wall but where is the highest outlet? Would an RPZ have been easier here? Just because it might not be easy doesn't mean it shouldn't be done.

We need to ask ourselves if the device is fully compliant and most of all protecting the potable supply. Recent investigations have revealed that not everything is always as it seems. The Backflow Group encourages council inspectors, plumbers, backflow testers and anyone involved with specifying and certifying a product to please check the product is fit for purpose. The Backflow Group welcomes you to contact them if you would like their experienced committee members to help you with your concerns. They are more than happy to offer some feedback.

PrefabNZ Top 5



Grand Designs proving popular with NZ public

Grand Designs NZ is capturing a lot of interest throughout New Zealand, and PrefabNZ Deputy Chair, Chris Moller is taking us through the ups and downs of some impressive building projects. See what he has to say about the programme here. http://www.stuff.co.nz/entertainment/tv-radio/72448026/chris-moller-talks-grand-designs-nz

In a recent episode the 45 degree house (see http://www.tv3.co.nz/45-Degree-House-Gallery/tabid/5272/articleID/120309/Default.aspx) constructed using steel was featured. "Nic Ballara has created a radical and highly original cantilevered design by utilizing the benefits of lightweight steel prefabricated construction" say Chris.

FLOATING HOUSES THE NEXT BIG THING?

The cost of land is a hot topic in many corners of the globe, but some lateral thinkers are considering how water can be used for housing. A recent think-tank on the local housing affordability crisis in London sought submissions from around the world on ideas to address the crisis, one of the ideas included floating houses. (something also considered for Auckland). Read more http://www.slate.com/blogs/the_eye/2015/09/21/new_london_architecture_shortlists_100_innovative_proposals_to_solve_the.html (Source: Slate's Design Blog)

PREFABNZ LAUNCHES UNIPOD DESIGN COMPETITION

The continued growth of retirement villages and the high need for cost-effective social housing will see a projected shortfall of 30,000 housing units by 2030, according to PrefabNZ SaRH Pipeline.

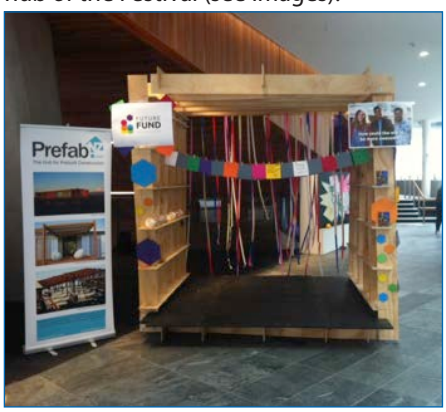
Pamela Bell, chief executive of PrefabNZ, says 'this means more innovative pre-packaged design and construction solutions are needed.' Speaking at the PrefabNZ and Retirement Villages Association (RVA) Forum today, Pamela launched the Unipod – a Design Competition for an open-source Universal Bathroom Pod.

The competition responds to the accessible needs of retirement and social housing dwellers, as well as for use in multi-unit residential developments. Competitor teams are encouraged to bring together individuals from across the design and construction disciplines to collaborate on the UniPod design, with an overall prize of $5,000 plus the winning entry is planned to be built and showcased at the PrefabNZ CoLab (http://www.prefabnz.com/Events/Upcoming-Events/CoLab2016/) in Auckland next April.

(Source: Hickory Group, Australia)

ClickRaft takes centre stage at Festival for the Future

Festival for the Future has been called New Zealand's most inspiring event, and features a range of guest speakers, hands-on workshops, performances, entertainment, and food. It's the festival that gives you the spark, the tools, and the passion to change the world. Check out the Clickraft that was stationed at the hub of the Festival (see images).



PrefabNZ heads to the Deep South

PrefabNZ recently held an event in Queenstown where they visited the Taramea Passive Climate House (image below left) and also the, soon to be finished, home of Larry Stenswick at Jacks Point (image below right). These fantastic examples of SIPs panel construction provided an insight into the thermal properties of panel construction. Sandwiched between the site visits were a number of presentations from local experts including case studies on commercial and residential construction projects.

GIB® PLASTERBOARD SYSTEMS

BEST PRACTICE SERIES

CEILING INSTALLATION

For best practice, and to avoid time-consuming and costly call-backs, Winstone Wallboards recommends the following best practice guidelines for quality ceiling installation. Framing dimensions and structured performance must comply with the requirements of NZS 3604:2011.

For full information, please refer to the latest edition of the GIB® Site Guide. Alternatively, contact the GIB® Helpline on 0800 100 442 during business hours.

For free on-site training, book at gib.co.nz/skills-maintenance-request-form/ or call the GIB® Helpline.

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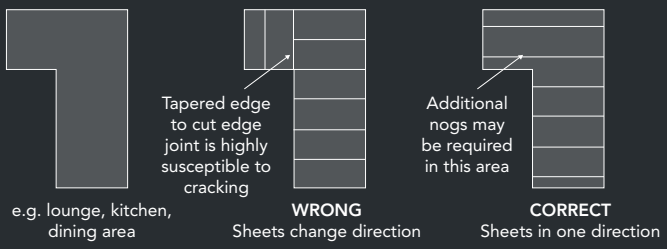
7 THINGS TO CONSIDER WHEN INSTALLING A QUALITY CEILING.

These recommendations are not a substitute for the full information contained in relevant GIB® technical literature.

STEPS

1 **Battens**
The use of GIB® Rondo® metal ceiling battens is recommended to achieve a stable substrate.

2 **Batten installation**
It is important that all ceiling battens run the same way within a ceiling plane. Although this may require some additional nogging to be installed, it ensures that all sheets' edge joints will be running in the same direction.



3 **Plasterboard**
Thicker 13mm GIB® Standard plasterboard is more rigid and less prone to sagging than 10mm plasterboard in a ceiling application. It is recommended that 13mm GIB® Standard plasterboard is supported at no more than 600mm centres, resulting in less battens being used for the job and less fasteners, meaning you will achieve an overall smoother finish. When batten, labour and board costs are taken into account, this system is cost effective as well as being the least prone to finishing defects.

Note: 10mm plasterboard will sag significantly more than the equivalent 13mm plasterboard on the same batten spacing. Given the wet humid conditions prevalent across many parts of New Zealand ceiling sag can be amplified. To meet the high expectations of the New Zealand market, Winstone Wallboards ceiling recommendation is 10mm plasterboard at 450mm batten spacing and 13mm plasterboard at 600mm batten spacing.

4 **Point loading**
To limit sag in GIB® plasterboard ceilings, long term uniformly distributed loads (e.g. fixtures and fittings and/or overlaid insulation) should not exceed 3kg/m2 unless independently supported.

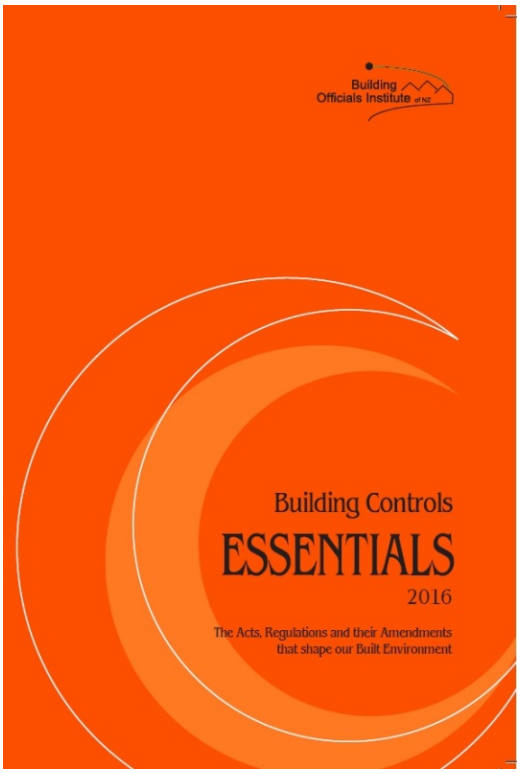
5 **Back blocking**
Back blocking strengthens and stabilises joints between GIB® plasterboard sheets. It is primarily used to reinforce the point where butt joints occur but is also recommended for sheet edge joints.

6 **Fixing**
All ceiling sheets must be fixed at right angles to the ceiling framing.

7 **Control joints**
Install control joints in large open ceiling planes exceeding 12m or points where cracking is often predictable, such as at changes in direction.

Building Officials Institute of New Zealand

Building Control Essentials 2016



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