New Zealand Institute of BUILDING SURVEYORS

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The Journal

Lessons from the edge of the built environment

From thermal control and moisture risk to logistics and material performance, working in Antarctica strips building practice back to first principles.

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FRONT COVER: The view one NZIBS member has, at Observation Hill between Scott Base and McMurdo Station, Antartica.

CONTACTS

President: Darryl August
Executive Assistant:
Sarah Pugh
Email:
operations@buildingsurveyors.co.nz
NZIBS Contact: New Zealand Institute of Building Surveyors
PO Box 79015 Avonhead,
Christchurch, 8446
Phone: 0800 113 400
Email:
operations@buildingsurveyors.co.nz
Layout: Heysmartypants Design
www.heysmartypants.co.nz
Editor: Sarah Hohaia

FROM THE PRESIDENT

DARRYL AUGUST
NZIBS PRESIDENT
president@buildingsurveyors.co.nz

Development and education in building surveying

The March Education Day was held last weekend, and member feedback on both the speakers and the programme has been excellent.

A highlight was Dr. Naseem Ameer Ali's dynamic presentation, Jill of All Trades and Jack G Pete. His engaging delivery and insightful commentary on the evolving role of Building Surveyors, particularly the concept of "Prompt Surveyors" in an AI-driven future, resonated strongly with attendees. As artificial intelligence becomes increasingly embedded in professional practice, NZIBS is exploring further presentations and potential training courses to ensure members remain informed and competitive.

In parallel, NZIBS has continued its long-standing effort to support the establishment of a tertiary qualification in Building Surveying in New Zealand. After several unsuccessful attempts across multiple universities over previous years, we are pleased to confirm that this initiative has finally come to fruition.

Special acknowledgement is due to David Clifton for his substantial work in developing a Building Surveying major within the Bachelor of Building Science at Te Herenga Waka—Victoria University of Wellington. The programme, scheduled to commence in July of this year, has already exceeded expectations, with 26 students enrolled, significantly more than the original estimate of 15–20.

As part of our ongoing commitment to education, Max Harlow and I recently met with Elrond Burrell, Senior Lecturer in Architecture and Programme Director for Building Science at Victoria University. NZIBS has been invited to contribute to the development of several papers, beginning with *BILD: Introduction to Building Surveying*, ensuring strong alignment with the NZIBS Diploma framework.

This year continues to present challenges and uncertainty, particularly with geopolitical tensions in the Middle East contributing to rising fuel prices and growing pressure on supply chains. These conditions raise important questions for the construction sector, including the potential for renewed material

shortages similar to the previous plasterboard crisis.

Further changes affecting the industry include amendments to Schedule 1 of the Building Act relating to granny flats, as well as the proportional liability bill expected to go before Parliament later this year, with enactment planned for 2027. We were fortunate to have David Hall provide updates on these regulatory shifts during the March Education Day, and we appreciate his willingness to present on a Saturday.

In my previous journal update, I outlined the transition from joint and several liability toward a proportionate liability model and the introduction of mandatory requirements. Since then, my colleague Joshua August and I have been preparing an analysis of the three warranty products currently available in New Zealand. This work aims to serve as a practical consumer guidance tool produced by NZIBS. The piece is nearing completion, and we expect to publish a version in the next Journal.

BOINZ has recently secured approval to commence the revision of NZS4306, a development NZIBS views as an important and worthwhile contribution to the sector. However, progress is currently limited by a shortfall in funding. At present, only NZIBS, BOINZ, and NZIBI have committed financial support, representing approximately 27% of the total funding required. We encourage members to share any suggestions, contacts, or potential sponsorship opportunities that may assist in advancing this essential review.

Our member engagement webinar series continues to deliver strong value, with two successful sessions completed so far. The upcoming May webinar (date to be confirmed) will focus on the APC process. It is important to emphasise that APC readiness is not solely a transitional member responsibility; Registered Members play a crucial role by providing mentoring and participating in mock interviews. Ensuring our transitional members are well prepared and successful in their APC assessments is a collective effort, and we encourage all members to attend the next webinar to support this shared objective.

In addition to progressing our educational and policy initiatives, sponsor engagement continues to play a vital role in supporting NZIBS activities. Our member engagement webinar series has been particularly successful, with sponsors contributing industry insights and helping ensure these sessions remain valuable for attendees. The first and second webinars featured presentations from Resene Construction and Gib, our gold sponsors, whose involvement was well received by members. The next webinar will include a presentation from Nuwall, further demonstrating the strong partnership we maintain with key industry stakeholders. Sponsorship remains an essential component of NZIBS' operating revenue, enabling us to deliver high-quality events, resources, and updates for the membership. We remain grateful for the continued commitment of all our sponsors and look forward to strengthening these relationships as the year progresses.

I'm always happy to hear from you, so please don't hesitate to get in touch if you have any questions or would like to discuss anything directly. ■

SARAH HOHIA
EDITOR
marketing@buildingsurveyors.co.nz

Building better in a changing industry

Our construction sector continues to sit in a state of uneasy balance, between reform and reality, ambition and delivery. Across this issue, a consistent theme emerges, while the system around building is evolving, the outcomes on the ground are not always keeping pace.

For many in the industry, this raises a fundamental question: are we improving how we build, or simply changing how we manage the risk when things go wrong?

Recent and proposed regulatory changes seem pretty clear. Shifts toward proportionate liability, compulsory warranties, and more targeted approaches to seismic risk reflect a system trying to become fairer, more efficient, and more predictable.

These reforms aim to reduce bottlenecks, clarify responsibility, and restore confidence across the sector. On paper, they address long-standing concerns. In practice, however, they introduce a new layer of complexity, one that will rely heavily on how well the industry interprets and applies them.

That tension between reform and implementation is not new. It echoes a longer-standing challenge within New Zealand's building system: the gap between performance-based regulation and consistent, high-quality delivery.

The move away from prescriptive standards has enabled flexibility and innovation, but it has also contributed to uneven outcomes. The persistence of defects, rework, and avoidable failure suggests that capability – not just compliance – remains a critical constraint.

This is where the conversation shifts from systems to culture. The drivers of poor quality are rarely technical alone. Time pressure, cost constraints, fragmented responsibility, and a reliance on minimum compliance all shape decision-making on site.

The result is a cycle where issues are identified after the fact, rather than prevented through better planning and coordination. It is a pattern that continues to affect productivity as much as it does performance.

At the same time, the environment in which buildings are delivered is becoming more demanding. Expectations around sustainability are rising, bringing greater scrutiny to material use, waste, and whole-of-life performance.

The growing focus on demolition practices, hazardous materials, and resource recovery reflects a broader shift, buildings are no longer judged solely on how they are constructed, but on how they endure, adapt, and eventually come apart.

Overlaying this is the increasing complexity of projects themselves. Large infrastructure developments highlight what is now becoming typical across the sector: intricate staging, tight operational constraints, and the need to integrate new systems into existing environments.

These conditions leave little room for error. They also place greater emphasis on coordination, foresight, and technical understanding, qualities that cannot be legislated into existence.

Taken together, these pressures expose a central issue: reform can reshape the framework, but it cannot substitute for capability.

A more efficient consenting system, clearer liability settings, or broader access to products will only deliver better outcomes if the people applying them have the knowledge, judgement, and independence to do so effectively.

This is where the role of the building surveyor becomes more visible, and more important. Across the stories in this issue, there is a common thread of surveyors working at the intersection of design intent, regulatory expectation, and real-world performance.

Delivering practical insights

The NZIBS March Education Day, held on 14 March, delivered a strong programme of practical insights and professional discussion.

Attendees engaged with a range of topics relevant to current building surveying challenges, with presenters offering grounded, experience-based perspectives. The day provided valuable opportunities for members to deepen their technical knowledge while connecting with peers from across the sector. Feedback highlighted the quality of speakers and the relevance of content to day-to-day practice. As the profession continues to evolve, events like this play an important role in supporting ongoing learning, strengthening networks, and reinforcing the value of the NZIBS community. ■

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Whether investigating failure, advising on risk, or supporting decision-making, the role is defined less by process and more by interpretation.

Building surveyors are often engaged when something is uncertain, disputed, or not performing as expected.

That position requires more than technical knowledge. It demands the ability to question assumptions, to connect cause and effect, and to translate complexity into clear, practical advice.

It also requires independence, a willingness to prioritise long-term outcomes over short-term convenience.

As the sector continues to evolve, that role is unlikely to diminish. If anything, it will expand.

Greater regulatory change, increasing project complexity, and ongoing quality challenges all point to a future where informed, independent expertise is in higher demand.

The opportunity, then, is not simply to respond to change, but to shape how it is realised.

For building surveyors, this means continuing to engage with reform, contributing to standards and guidance, and maintaining a strong focus on technical competence and professional judgement.

Because while the system will keep changing, the goal hasn't. Buildings still need to perform, last, and work for the people using them.

The question is whether the industry can keep up, not just in terms of process, but in skill, judgement, and follow-through (that's where the difference will be made). ■


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HON CHRIS PENK
BUILDING AND CONSTRUCTION MINISTER

Fixing the basics and building the future for construction

New Zealand is barrelling steadily into election year, with just eight months left before the 54th Parliament dissolves. As the countdown ticks, it is a good moment to reflect on the successes of this term in government and to consider what lies ahead for building and construction, should voters put their faith in the blue team once again.

As the shepherd of the portfolio, I have approached every policy decision with one guiding question: will this make it easier and more affordable to build in New Zealand? That has meant examining the pinch-points and barriers in the system that slow productivity and create uncertainty for the industry, making it harder to invest and get projects underway.

When I first entered the role, two long-standing issues quickly became clear. At countless stakeholder meetings, site visits, or industry conferences, someone would inevitably raise their frustration with either the way responsibility is determined for defective building work or the system for assessing and managing earthquake-prone buildings. That is therefore where I put my focus.

Building liability is an issue that sits at the heart of delays in the consenting system. The current framework has created a culture of risk aversion among Building Consent Authorities, slowing approval of the projects New Zealand needs. When something goes wrong, a customer can pursue any one party for the full cost, regardless of who was responsible. In practice, that often means councils, backed by ratepayers, carry the burden for work they did not do.

We are changing that. The Government will replace joint and several liability with proportionate liability, so each party is accountable for the work they undertook. This is a fairer system that will support faster consenting and reduce the pressure on councils.

Protections will remain in place. Designers will be required to hold professional indemnity insurance, home warranties will apply to new builds up to three storeys and to

renovations over $100,000, and disciplinary settings for Licensed Building Practitioners will be strengthened.

Councils will also be able to consolidate Building Consent Authority functions, reducing duplication and inconsistency. That will make the system easier to navigate and help lift performance across the country.

The second major area of reform has been the earthquake-prone building framework, which is designed to prevent loss of life by requiring buildings to be strengthened within set timeframes. While well intentioned, the system has not focused resources on the buildings that pose the greatest risk. Some structures have remained unrepaired and, in some cases, abandoned because the cost of compliance was too high.

One of my first actions was to extend remediation timeframes and direct MBIE to review the system. This revealed that while roughly 1,500 buildings had been strengthened, the system is unsustainable. It now captures over 8,000 buildings, including lower-risk structures such as small timber-framed buildings that were never intended to be included.

The soon-to-be-replaced system requires owners to strengthen earthquake-prone buildings to at least 34 percent of the New Building Standard, regardless of risk. This has led to inconsistent assessments and requirements that are often disproportionate to the danger posed.

Moving forward, %NBS will no longer determine which buildings are earthquake prone. The focus will be on high-risk structures, specifically concrete buildings three storeys or higher and those made from unreinforced masonry. Around 55 percent of current earthquake-prone buildings will have their status removed entirely, while others will have more manageable remediation needs.

Strengthening requirements will be tiered according to building type, height, location, and occupancy, making work more practical and often more affordable. Regions including Auckland, Northland, and the Chatham Islands will be removed from the regime.

This risk-informed approach aligns New Zealand with international best practice, targeting interventions where they matter most. Refocusing on the highest-risk buildings and making remediation achievable is expected to save Kiwis around $8.2 billion. While that is a significant result, what matters just as much is the broad support these reforms have received across the aisle. This gives building owners confidence that the new system will endure. The Earthquake Prone Building Bill is now being considered by the Transport and Infrastructure Committee.

Refocusing the earthquake-prone building system and reforming building liability are big pieces of work. Over the next few months, a central focus will be turning these promises into real-world change. That means putting in the political energy to pass the legislation that will allow these reforms to take effect and start delivering tangible results.

Two further accomplishments achieved this term may be less complex, but they are no less important. The first is exempting granny flats, or minor dwellings, from building and resource consent requirements. The second is making it easier for tradies and do-it-yourself homeowners to access high-quality overseas building products.

Exempting minor dwellings is expected to see at least 13,000 more self-contained homes built over the next decade. This will give families more flexible housing options and create opportunities for homeowners to generate additional income from their properties.

Opening access to overseas building products is already making a difference. More than 130,000 materials commonly used in countries such as Australia are now readily usable in New Zealand.

This will strengthen the industry's resilience to supply chain disruption and help put downward pressure on costs. Work is ongoing, with more products currently under assessment.

Much of the reform programme so far has focused on residential construction. That has been deliberate. New Zealand still faces a housing shortage, and increasing supply is one of the most direct ways to improve people's quality of life. We know that access to warm, dry, well-built homes is a factor which can drive the biggest difference in family outcomes.

There is more to do in that space, but my mind is also turning to the commercial construction sector. The delivery of commercial buildings shapes the places where Kiwis learn, work and play. Over the year ahead, I want to better understand the barriers this part of the industry faces and where government can make practical improvements. Hearing directly from builders, designers, councils, and suppliers will be critical in helping to identify what is working and where change is needed. This will inform the next phase of policy reform and support further reductions in unnecessary red tape.

I hope the industry will remember this term as a turning point for New Zealand's building system, a time when meaningful changes were made to the foundations that shape how we design, consent, and construct. These reforms are intended to create a more practical and predictable system that can better support the homes and infrastructure our communities need. This is about fixing the basics so the system works as it should, and building the future New Zealanders deserve. ■

MARK KIRBY
AUCKLAND UNIVERSITY OF TECHNOLOGY

NZ's $2.5 billion shoddy building bill: how to fix the 'build now, fix later' culture

New Zealand's residential construction industry contributes **roughly NZ$26 billion** annually to the economy and employs around **70,000 workers**. Yet despite its significance and scale, the sector's productivity levels have **flatlined since the mid-1980s**.

In housing construction, "productivity" isn't a simple measure of output per worker; it refers to the industry's ability to deliver the right quantity of high-quality homes without significant delays or flaws.

If a builder spends ten hours rectifying **avoidable mistakes**, for instance, their productivity for the day is effectively zero. And this has become all too common within the sector.

A **2014 study** by the Building Research Association of New Zealand (BRANZ) confirms 92% of new houses surveyed had compliance defects.

Subsequent analysis carried out for BRANZ by the New Zealand Institute for Economic Research **estimated the annual cost** of defective building to the overall economy:

The results show that economy-wide effects of an increase in productivity would see New Zealand's GDP rise by $2.5 billion, as the industry's overall costs of production decrease.

That means nearly 10% of the sector's total value is lost to systemic quality failure. Based on the **average construction cost of an Auckland house**, that loss represents around 5,000 missing homes every year.

Recognising the productivity problem, the government last year **introduced major reforms** aimed at speeding up consent processes and allocating financial liability for defective buildings to those responsible.

But while poor productivity is often blamed on procurement methods, technology or labour, our research suggests **better quality management** is key to remedying the industry's "build now, fix later" culture.

Commercial viability before quality control

We surveyed the views of 106 residential construction professionals, including general managers, construction managers, site managers, project managers and subcontractors.

They were asked about the influence of quality management on improving residential construction productivity, and about the effects of government policy. The views expressed suggested a culture prioritising time and cost over quality is a systemic norm at the industry level.

We then traced the industry's problems back to the major policy shifts that began in the mid-1980s.

Before then, building quality was anchored in the prescriptive standards set by the Ministry of Works.

By specifying how to build, the ministry acted as a national governor of technical standards. But by 1988, those standards were viewed as a barrier to efficient market operation, effectively ending the era of the state as master builder.

The New Zealand Building Code subsequently replaced the previous prescriptive system with a performance-based model focused solely on outcomes.

Without strict procedural guidance, the industry moved towards a culture that prioritised speed and commercial viability over rigorous quality management.

A 'tick-box' culture

To understand why industry performance stalled, we refer to what's called the "theory of constraints", which argues a system is only as strong as its weakest link.

In New Zealand's residential construction sector, we argue, the weakest link is not just poor quality control but the absence of a quality-focused culture in general.

The 1980s shift to a hands-off, self-regulated model helped foster a "tick-box" culture rather than genuine organisational reform. This has meant that with every step forward, the industry is pulled back by the need to fix previous errors, stalling productivity.

On the building site, this manifested as a disconnect between the "work as imagined" (the manuals and checklists from head office) and the "work as done" by builders and subcontractors.

The worst outcomes are well known. New Zealand is still paying for the nearly $47 billion legacy of the leaky homes crisis, which peaked in the early 2000s. Poor quality, damp and mouldy housing contributes to respiratory illnesses costing $145 million annually in hospitalisations.

While policies such as the healthy homes standards for rental properties now exist, such measures mainly treat the symptoms of a deeper problem.

In Auckland alone, one-third of all projects fail their final inspection. The high volume of remedial work required chokes the entire system's throughput.

The government must lead

Fixing an annual $2.5 billion problem requires a structural shift. Our research proposes a framework where the state, as the primary funder and driver of major construction, sets the standard the rest of the industry must adopt.

The proposed framework is underpinned by "lean principles" designed to minimise waste and encourage continuous improvement through a "plan-do-check-act" cycle. It uses the ISO 9000 standards New Zealand already has in place for exports.

To help achieve this, we argue the government would need to do two things.

1. Establish a national construction, productivity and quality commission. This would be a nonpartisan body staffed by industry and academic experts to ensure reform survives beyond three-year election cycles.

2. Mandate quality management systems that align with existing ISO 9000 standards for all government-funded residential projects.

The aim is to create a trickle-down effect, driving culture change throughout the industry. To win stable government contracts, subcontractors would be forced to up-skill and formalise standards-based oversight of their work.

Improved quality and productivity should not be aspirational. New Zealand has 2.5 billion reasons to create the genuine structural reform required.

The author acknowledges the contributions of Senior Lecturer Funmilayo Ebun Rotimi and Associate Professor Nicola Naismith of AUT to the research described in this article.

IAN FONG
INDUSTRY CHAIR
industry@buildingsurveyors.co.nz

Auckland Airport Integrated Terminal Redevelopment

In late November 2025, members of NZIBS and RICS attended a joint site visit to Auckland Airport's major terminal redevelopment project, hosted by Auckland Airport (AKL) and Hawkins. The visit provided an excellent opportunity to observe progress on one of the largest and most complex commercial construction projects currently underway in New Zealand.

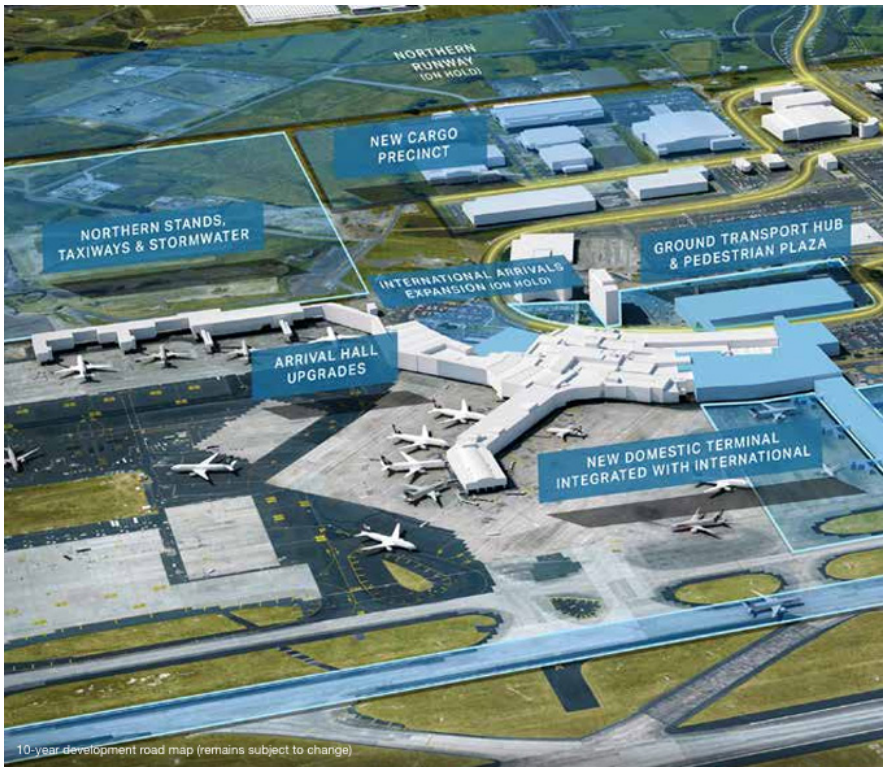
As with many NZIBS and RICS visits, the event brought together a mix of building surveyors and construction professionals, all keen to gain insights into the complex staging, engineering challenges, and logistics required to keep the country's busiest gateway operational during significant construction works.

A major transformation for New Zealand's main gateway

Auckland Airport is currently undertaking its largest redevelopment programme since the airport first opened in 1966. The centrepiece of this work is the new, combined domestic–international terminal, which will integrate jet operations under one roof for the first time since 1977, and will transform the traveller experience upon completion in 2029.

Attendees were given a helpful and interesting project overview that outlined both the scale, and goals of the redevelopment. These include:

- Integration of the new domestic jet terminal into the eastern end of the existing international terminal



10-year development road map (remains subject to change)

- Enhanced passenger transfer efficiency, reducing domestic–international transfer times to around five minutes
- Smart baggage systems
- Improved transport links
- Increased gate capacity
- Highly efficient aircraft turnaround facilities

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- Sustainability targets aligned with AKL's climate resilience and emissions reduction strategies
- Employment of approximately 2,000 people at peak construction

The briefing reinforced that the programme is not simply an expansion, but a long-term reimagining of the airport experience, not to mention a significant operational challenge, given the need to maintain uninterrupted aviation services.

Observations from the site visit

At the time of the visit, works were advancing across multiple fronts:

Installation of the curtain wall system to the new domestic jet terminal building's exterior had commenced, with several bays already framed out and glazing progressing in a staged sequence.

The group observed active piling operations for the new aircraft pier, a major structural component that will accommodate additional gates and improve aircraft movement efficiency. Cross-Laminated Timber (CLT) will be used for the structural flooring to Levels 1 and 2 of the new pier, a sustainable alternative to the more conventional concrete and steel construction, using locally manufactured materials.

One of the most technically demanding aspects of the project - connecting the new structure with the live existing terminal - was also well underway. Temporary propping, staged demolition, and structural works were visible, demonstrating the careful coordination needed to carry out tie-in construction within an operational airport environment.

Internal fit-out works had not yet begun, which meant that we had a clear view of the building's structural frame and could truly appreciate the scale of the future terminal volumes. The open condition of the superstructure provided a rare opportunity to observe core structural and services integration interfaces before later construction phases.

On site experience

It was a hot, sunny day at the airport, affording excellent visibility across the construction zone and adjacent airfield. Members navigated designated safe pathways and elevated vantage points, providing clear lines of sight to both building works and airside operations.

As is customary with NZIBS and RICS site visits, there was plenty of enthusiastic engagement from attendees. We discussed the durability and long-term maintainability of façade systems, the challenges of working in a live aviation environment, staging constraints and passenger flow considerations, climate resilience and sustainability outcomes for major infrastructure assets.

Our hosts from AKL and Hawkins provided a comprehensive walkthrough and fielded questions on programme complexity, construction methodologies, logistics, and stakeholder coordination. They detailed challenges such as landside/airside boundary shifts, security, crane operations, jet blast barriers, and baggage system requirements.

Their insights into procurement, supply chain management, and staging around busy peak travel periods provided valuable context for surveyors and construction professionals involved in large-scale infrastructure or operationally sensitive projects.

Following the site tour, the group enjoyed refreshments at Te Kaahu, the restaurant at the Pullman Hotel adjacent to the airport precinct. The elevated setting provided sweeping views across the runway, construction zones, and the Manukau Harbour - an ideal backdrop for informal professional discussion and reflection on the scale of the development.

Looking ahead

The November visit provided a rare behind-the-scenes look at this exciting project one year into construction, with NZIBS and RICS members looking forward to future visits over the coming years, as construction continues to unfold.

A big thank you to AKL and Hawkins for an insightful afternoon. ■

GRAEME CALVERT

What is a Building Surveyor?

This chapter of the series, Graeme Calvert reflects on four decades in construction and the evolving responsibility of building surveying in New Zealand.

When Graeme Calvert talks about buildings, he speaks with the calm authority of someone who has spent 40 years watching the industry change from the inside out.

From his beginnings as an apprentice builder in the mid-1980s to managing hundreds of leaky building claims and now leading a multidisciplinary surveying team, Graeme's career traces the evolution of building surveying in New Zealand, as well as the growing responsibility the profession carries.

Calvert's construction journey began in 1986, straight out of school, when he took up an apprenticeship as a builder.

"I've never really moved from the construction sector. It's all I've known since high school, and it's what I enjoy."

That early hands-on grounding would shape his approach for decades to come, instilling a practical understanding of how buildings are actually put together, maintained, and repaired.

By the late 1990s, Graeme was ready to broaden his perspective. In 1999, he began working part-time for a private building certifier in Christchurch, testing the waters of what would become a long career in building surveying.

At the same time, he was employed at a local freezing works, responsible for building maintenance, a role that further deepened his interest in how buildings perform over time.

A major turning point came in 2004, when legislative changes removed private certifiers from the Building Act.

Graeme moved into local government, joining Christchurch City Council as a Building Inspector.

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It was a shift that gave him a front-row seat to regulatory processes and the complex relationship between councils and the private sector, knowledge he still draws on today.

Then came the leaky homes crisis.

From 2007 to 2011, Graeme managed leaky building claims against the Council, overseeing around 250 cases during his tenure.

The work ranged from minor moisture issues to full reclads of residential buildings, including multi-unit developments. Commercial claims followed later, as the scale and complexity of the crisis became clearer.

It was a period that left a lasting impression.

“When you’re dealing with these things, there are always hurting victims. You’re usually the bearer of bad news, so you have to deliver that with empathy but without sugar-coating anything.”

The emotional weight of the role was significant. Mediation sessions often ran long into the evening, and while Graeme made a conscious effort not to take work home, the human impact of the crisis was impossible to ignore.

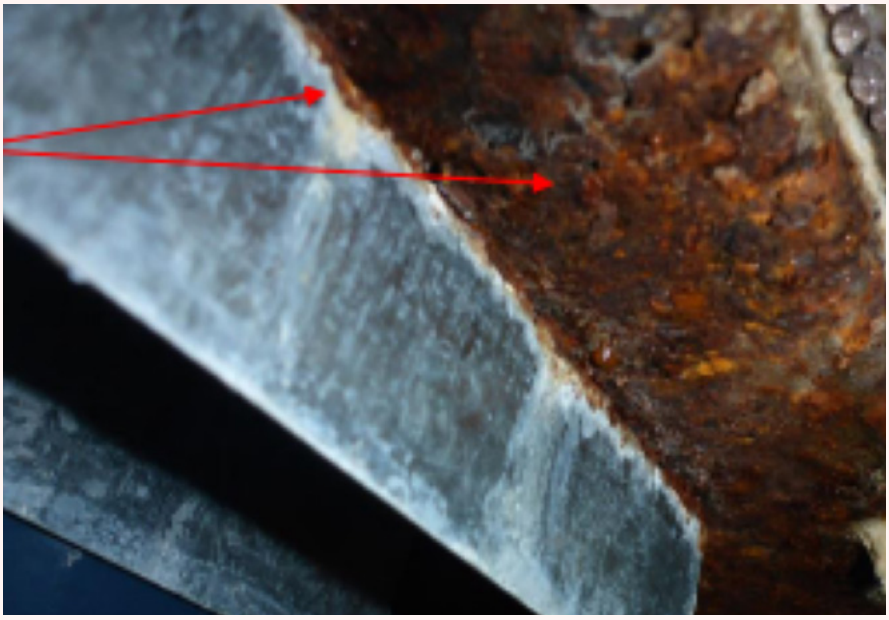
“It’s a job I really enjoyed but it’s not a job you can do forever.”

What it did provide was invaluable insight into how buildings fail, how disputes unfold, and how critical clear, independent advice is when things go wrong.

It was during this period that Graeme joined the New Zealand Institute of Building Surveyors, formalising his place within the profession and reinforcing the value of independent technical expertise.

In 2015, he took on a new challenge, joining a property and building consultancy to establish and lead its Christchurch building surveying team.

Starting as Building Surveying Manager, he helped grow the office from the ground up. More than a decade on, he is now Technical



Director, overseeing a diverse team and an expanding range of services.

Today, Graeme manages the building surveying team while also playing a key role in developing new service offerings.

What began as a practice focused largely on earthquake damage and leaky buildings has evolved into a genuinely multidisciplinary operation.

The Christchurch office now includes quantity surveyors, project managers, asbestos surveyors, designers and structural engineers, allowing clients access to a broad suite of expertise under one roof.

For Graeme, the value of this model lies in responsiveness and depth.

"It's about all-round service delivery. If that's what the client needs, we can call on those services quickly."

At the same time, he is clear about professional boundaries.

Independence and conflict management remain central to the way the team operates, and where external or fully independent input is required, other firms are engaged.

Much of Graeme's work still sits squarely within the core of building surveying practice: technical due diligence, schedules of condition, long-term maintenance plans, and expert witness work for legal and insurance matters.

He is one of three surveyors in the Christchurch office who regularly act as expert witnesses, alongside undertaking specialist services.

Maintenance planning, in particular, reflects Graeme's enduring interest in how buildings age.

"Assessing a building's condition and providing a site-specific maintenance plan is critical," he says.

"That site inspection and assessment, that's the key."

It is work that draws directly on his early experience in building maintenance and reinforces the preventative role building surveyors can play.

Asked how he explains his profession to those outside the industry, Graeme keeps it simple – at first.

"I usually say, 'I look at buildings', but it's a lot more than that."

At its core, he believes building surveying is about providing value. Whether the client is an owner, manager, landlord or tenant, the building surveyor's role is to identify issues and then offer practical, compliant and economically sound options to address them.

"Sometimes those things don't align perfectly."

Compliance can introduce cost, and constraints are real. But thoughtful value engineering and a clear understanding of regulatory expectations can often bridge the gap.

Staying current in that environment is no small task. Graeme points to the constant pace of change across legislation, guidance and materials.

"Something changes somewhere in building every day."

For building surveyors working in retrospective and investigative spaces, maintaining a strong technical library (both past and present) is essential.

While online access and emerging tools have made information easier to find, judgement still comes from experience.

That emphasis on learning underpins the advice Graeme offers to those considering the profession. Building surveying, he says, is demanding but deeply rewarding.

"You're always learning."

Recalling advice given to him at the end of his apprenticeship, he adds: "The tradesman said to me, 'You're only going to start learning now.' And he was dead right."

Four decades on, he is still learning, and still contributing to a profession that sits at the intersection of buildings, people and accountability. Bottom of Form.

Lessons from the edge of the built environment

From thermal control and moisture risk to logistics and material performance, working in Antarctica strips building practice back to first principles. For NZIBS members, the experience offers a sharp reminder that durability, planning and professional judgement are tested most clearly when conditions are least forgiving.

On Ross Island, where active and dormant volcanoes sit beneath ice and wind drives volcanic grit across exposed surfaces, construction is less a matter of routine delivery than constant adaptation. For Tomas McLean, now working at McMurdo Station as Lead Interior Carpenter, that reality has turned every day into a lesson in building performance, sequencing and risk.

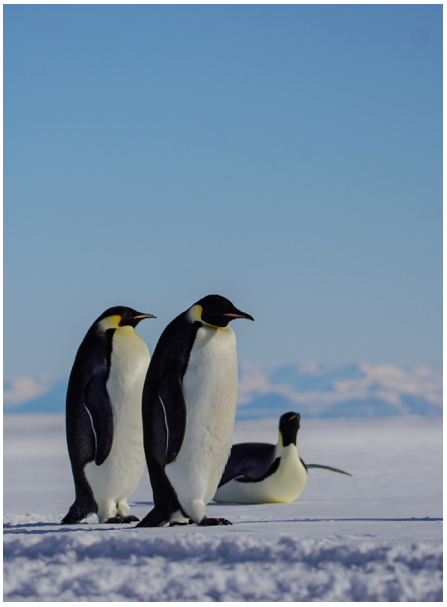
His current project is a large new lodging building: a three-storey, gable-roofed facility with about 200 dorm rooms and capacity for roughly 300 people. The scale alone is significant. So is the setting. In a place where winter temperatures can sit between -30°C and -50°C, and where materials, labour and programme are all constrained by isolation, the margin between a workable detail and a failed one can be very small.

For New Zealand building surveyors, the value of this experience lies not in its novelty, but in its clarity. Antarctica magnifies the fundamentals: moisture control, thermal performance, durability, procurement and the need for precise coordination between design intent and site reality.

Building for cold, dryness and constant movement

At McMurdo, the environment shapes building design most clearly through insulation and envelope strategy. McLean describes wall assemblies built primarily around structural insulated panels, with dense polystyrene laminated to board substrates and thicknesses varying depending on whether they are used in walls, soffits or roofs. These assemblies are then clad with insulated metal-faced panels that form a tongue-and-groove outer skin.

For surveyors, the technical interest lies in what these assemblies are trying to achieve. In Antarctica, thermal resistance is not just about comfort or energy efficiency; it is fundamental to keeping a building



usable. But the more striking issue is how moisture is managed. In New Zealand, surveyors are accustomed to focusing on how buildings keep water out. In Antarctica, the greater risk often comes from the inside.

Because internal occupancy generates moisture through breathing, washing and day-to-day living, vapour control is applied from the interior side of the structure. McLean notes that much of the moisture protection is "from the inside out". That inversion is a useful reminder that building physics is always climate specific. The principles do not change, but the dominant risks do.

The region also challenges assumptions about roof design. McLean says one of the surprises has been the prevalence of low-pitch roofs. In most snowy environments, steep roofs help shed snow and reduce loading. In Antarctica, the extremely low humidity changes how snow behaves. It does not bind and settle in the same way as it might in New Zealand, so conventional expectations do not always apply.

That kind of context matters to surveyors. It reinforces a basic but sometimes overlooked point: performance cannot be judged by imported rules of thumb alone. Materials and forms must be assessed in relation to the actual environment they serve.

When products stop behaving as expected

Extreme cold does more than challenge people. It changes the behaviour of products that, in temperate climates, are treated as dependable.

One example from McLean's work involved expanding foam around cladding penetrations. The product needed both warmth and moisture in the air to cure and expand effectively, yet exterior conditions provided neither. Final flashings could not be installed until the penetrations were sealed, so the team had to improvise.

Their solution was to build an insulated box around the penetration, heat the space with a diesel heater, and introduce moisture with a spray bottle. Even then, success depended on fine control. Too little ventilation and the enclosure overheated, causing the foam to soften or fail. Too much ventilation and the space could not stay warm enough for the foam to expand at all.

It is a vivid example of practical problem-solving under pressure, but it also speaks to a broader surveying concern: product suitability is never abstract. A specification may appear sound on paper, yet fail if environmental conditions sit outside the product's functional range or if installation tolerances are not understood.

McLean is blunt about the limitations of materials often taken for granted in New Zealand. Silicone, for instance, is commonly relied on for exterior penetrations, but in Antarctica sealants must endure temperatures below -50°C, prolonged summer sunlight and abrasive winds carrying volcanic particles. In that setting, durability is not a theoretical attribute on a datasheet. It is a survival requirement.

Logistics as a technical risk

Isolation affects more than convenience. It reshapes planning itself.

McMurdo is supplied mainly in two ways: by annual cargo ship and by intermittent military flights. Shipping is the economical option, but it requires materials to be ordered and ready as much as a year before they are needed. Air freight is limited by aircraft type, frequency and payload. Once winter closes in, resupply options narrow further.

For project teams, that creates a very different risk profile from typical New Zealand work.

Delays in procurement are not easily solved with a phone call to a merchant or a substitution from another supplier. Materials may be stored months in advance, moved between projects, or effectively lost in the churn of seasonal labour and overlapping works. Under those conditions, inventory control becomes a core part of buildability.

McLean's observation that "the beauty of a good quantity surveyor has never been more apparent" is more than a passing compliment. It highlights the interconnected nature of professional roles on remote projects. Surveyors, project managers, procurement teams and site leads all become more dependent on one another when the cost of error is amplified by distance and time.

For NZIBS members, the lesson is familiar and transferable: good surveying is strengthened by good information management. Whether the project is in Antarctica or Auckland, defects often begin long before failure becomes visible — in procurement assumptions, incomplete coordination, poor storage, or product substitutions that are never fully interrogated.

Professional judgement under pressure

McLean's Antarctic work has also sharpened his view of professional conduct and project leadership. Working within a large US government and corporate environment, and under standards different from those used in New Zealand, has brought a heightened awareness of how professionals represent themselves on site and beyond it.

He has also seen how frequent turnover in personnel can disrupt continuity and decision-making. For surveyors, that resonates strongly. So much of effective practice relies on retaining project knowledge, documenting rationale and maintaining a consistent thread of judgement as teams change around the work.

Antarctica has not completely changed his view of risk, but it has intensified it. "Antarctica doesn't really want people there," he says, and the line captures something important about hostile environments: they expose weak assumptions quickly. Yet they also show what durable construction can achieve. Some buildings at McMurdo dating from 1956 are still standing, even if many have leaked and been altered over time.

That tension will be familiar to experienced surveyors. Buildings rarely perform exactly as intended over decades, but some continue to function because robust fundamentals, maintenance and adaptation keep them viable. In that sense, Antarctica is not separate from New Zealand practice. It is an extreme case of the same long-term questions surveyors ask every day: what will last, what will fail first, and how should risk be managed before the answer becomes expensive?

Strip away the familiar supply chains, standard site conditions and easy assumptions, and the essentials of good building practice come into sharp focus. In the harshest environment on earth, buildings still depend on the same thing they do in New Zealand: informed people making careful decisions before conditions make those decisions for them. ■

Construction maintenance sector gains momentum across Australia and NZ

The construction industry across Australia and New Zealand is experiencing sustained growth, with repair and maintenance work emerging as a significant driver of activity.

According to the Australian Bureau of Statistics, total construction work in Australia reached AU$80,011.8 million (approximately NZ$88,012.9 million) in the December 2025 quarter, with building work rising 8.1% year on year. This expansion reflects ongoing demand for both new construction and preservation of existing building stock.

The maintenance and renovation segment is positioned for continued expansion, as property owners increasingly prioritise long-term asset protection. Mordor Intelligence projects that repair and maintenance will expand at a 4.34% compound annual growth rate through 2031 in the Australian construction market. Property managers and homeowners seeking durable exterior solutions have driven demand for specialised services, particularly those offering extended warranties and proven product systems. Homeowners often turn to render repair on the Gold Coast to address weathering and structural concerns before damage escalates.

Established providers are responding to this demand by emphasising quality assurance and technical expertise. Rocksolid Rendering Gold Coast, a QBCC-licensed operator with two decades of trade experience, offers a 10-year written warranty on exterior rendering and painting services across residential and commercial properties. The company utilises Rockcote and Dulux product systems for solid rendering, plastering, texturing, and building repairs. Coastal property owners increasingly seek renderers in Mermaid Beach and surrounding areas to maintain structural integrity against salt air exposure.

The broader economic context supports this sectoral growth, with New Zealand's service sector accounting for 73% of all GDP activity as of 2024, according to Wikipedia. Construction-related services form an integral component of this activity, particularly as aging building stock requires ongoing maintenance investment. The convergence of regulatory standards, climate considerations, and property value protection continues to shape demand patterns across both residential and commercial markets. ■

WORKSAFE NEW ZEALAND | MAHI HAUMARU AOTEAROA

New approved code of practice for roles and responsibilities in residential construction

WorkSafe is developing a new approved code of practice (ACOP) for residential construction. It will set out expectations under the Health and Safety at Work Act 2015 (HSWA), helping businesses reduce harm and confidently meet their legal duties. The draft working title is: Approved code of practice for roles and responsibilities in residential construction.

In collaboration with the sector, we're creating practical, plain language guidance to help construction businesses and others (including homeowners), to understand their duties when working together on residential construction sites. This includes builders and specialist tradespeople that work on the sites.

This new guidance reflects the strategic direction set out in WorkSafe's 2025–2029 Statement of Intent, which focuses on educating and engaging businesses.

Definition of an ACOP

An ACOP sets out standards for how duty holders can comply with the Health and Safety at Work Act 2015 (HSWA) and its regulations. They differ from other types of HSWA guidance in three ways:

- An ACOP can be **used as evidence** of whether or not a duty or obligation under HSWA has been complied with.
- WorkSafe ACOPs are **approved** by the Minister for Workplace Relations and Safety.
- Developing ACOPs must include **consultation** with people affected.

Put simply, an ACOP is a type of health and safety guidance. It may include requirements, recommended standards, and good practice information about how specific work can be done safely. Like our other guidance, businesses and workers can follow an ACOP to help keep themselves and others safe.

ACOPs aren't mandatory

It isn't mandatory to follow an ACOP, but it sets a standard for compliance. You can meet your duty another way as long as it is equivalent or better than the standard set out in the ACOP.

Why we're developing this ACOP

Construction is high-risk

Residential construction has:

- the highest volume of activity in the wider construction industry
- the highest rate of injuries, including body stressing, slips, trips and falls, falls from height, and incidents involving tools.

Clear guidance is needed

Most of the residential sector is made up of small-to-medium operators, who typically:

- don't have in-house health and safety specialists
- sometimes assume another party is responsible for managing risks
- report uncertainty about overlapping duties – this is where multiple parties have health and safety duties in relation to the same matter.

Younger workers and migrant workers, who are common in the sector, are especially vulnerable when expectations aren't clear.

Ministerial directive for change

Through Workplace Relations and Safety Minister Brooke van Velden's 2024 public consultation and WorkSafe's industry survey, the sector expressed strong support for clearer guidance written in plain language.

In mid-2025, the Minister confirmed that WorkSafe would develop an ACOP focused on clarifying overlapping duties in construction, with a specific focus on the residential sector.

Clearer rules and prequalification guidance to support construction | Beehive.govt.nz

This new ACOP aims to make it easier for everyone to:

- understand what good health and safety practices look like
- reduce confusion about overlapping duties
- help prevent harm on site.

Timeline

We are working towards providing the completed draft code of practice to the Minister for her approval, by **30 June 2026**. This will follow drafting, testing, and public consultation phases.

ACOP scope

In scope

The ACOP will focus on roles and responsibilities in residential construction. It will apply to construction businesses including specialist trades that work on the sites. For example, plumbers, electricians, and roofers. It will address health and safety responsibilities under HSWA, focusing on overlapping duties. 'Overlapping duties' means that more than one person or business has health and safety duties in relation to the same matter.

We're also adding clarity to homeowners on what their duties are if they are building or renovating a house.

Out of scope

The wider construction sector, such as civil and commercial construction.

How the ACOP is being developed

A collaborative approach

To ensure this ACOP reflects the practical realities of the industry, WorkSafe is engaging with a broad cross-section of stakeholders. Builders, other tradespersons and industry bodies will engage in workshops, testing and consultation, to ensure that the draft code of practice reflects everyday site scenarios in the residential construction sector. We have WorkSafe subject matter experts working across all these groups.

Public consultation starts in April

There will be a public consultation to gather broad and detailed input from the sector on the draft code of practice. This consultation is being planned between **20 April and 10 May 2026**. Information on this will be published on this page as soon as it's available.

If you have any questions, please contact the ACOP Delivery Team at **ACOPDelivery@worksafe.govt.nz**

Construction sector waste management drives demand for specialised demolition services

New Zealand's construction sector faces mounting pressure to address waste management, with BRANZ (Building Research Association of New Zealand) reporting that the building and construction sector contributes up to 50% of all waste going to landfills and cleanfills nationwide.

This environmental challenge has intensified focus on controlled demolition and deconstruction practices that prioritise material recovery and proper disposal of hazardous substances.

The scale of the sector underscores the significance of these concerns. According to the Ministry of Business, Innovation & Employment, as of February 2023 the construction sector comprised around 80,613 businesses nationwide, directly employing 308,500 people for the year ended June 2023. This substantial workforce requires access to qualified **asbestos removal specialists** and environmental remediation providers capable of managing legacy materials in older buildings whilst minimising waste streams.

Specialised providers have responded to these demands by offering comprehensive services spanning asbestos removal, contaminated site remediation, and controlled deconstruction. The complexity of dismantling industrial facilities and managing hazardous materials requires detailed planning and robust safety protocols, particularly when working in sensitive urban environments. Property managers and construction companies increasingly **seek demolition in Wellington** and other urban centres where space constraints and regulatory requirements demand experienced operators.

The convergence of stricter environmental standards, aging building stock containing hazardous materials, and waste reduction targets continues to reshape service expectations across residential, commercial, and government projects. Providers capable of delivering safe material handling alongside environmental remediation are positioned to address the sector's evolving compliance and sustainability requirements.

A start-of-year catch-up on changing rules and regulations

Last year felt like a whirlwind of announcements around changing construction rules and regulations. This is a quick update on where things stand as the new year begins.

Changes to construction liability

The government will move away from joint and several liability, where one party such as a council can be left to cover the full cost of defective building work if a building company is put into liquidation. The government will move to proportionate liability, where parties will only be responsible for the costs of their own contribution. The government is planning to change the law this year and implement the changes next year. Home warranties will be mandatory for most new builds and major renovations. Architects, engineers, designers and surveyors will require professional indemnity insurance. There will be tougher penalties for licensed building practitioners (LBPs) who get things wrong.

Building Code changes

The government is moving to a 3-year cycle for Building Code updates, with the next review due in 2028. However, some work already under way will still go ahead before then. 2026 is likely to see changes to Acceptable Solutions and/or Verification Methods for clause C Protection from fire. This will also be the last year that the schedule method can be used as a deemed-to-comply pathway with H1/AS1.

Consent exemptions – 1

Stand-alone dwellings of up to 70 m² can be built without a building consent or resource consent provided they comply with the Building Code, construction is done by authorised professionals and certain other conditions are met.

Consent exemptions – 2

The government has changed the law to make it clear that roof-mounted solar PV systems do not need a building consent provided they meet certain requirements, including around size, support and fixings and wind speed/wind zone.

Earthquake-prone building system changes

Low-risk buildings and buildings in low seismic zones will be removed from the system, tiered risk mitigation requirements will be introduced, building owners may apply for deadline extensions and the requirement for concurrent fire and accessibility upgrades will be removed. A law change is due this year.

Set-back distances

The Building Act now allows homeowners to build a single-storey detached building of 10–30 m² 1 metre away from any boundary or another building without building consent providing certain requirements are met and to build a single-storey detached building under 10 m² up to the boundary or another building without building consent. Conditions apply.

Resource Management Act

Two new laws are planned this year to replace the Resource Management Act 1991. The Planning Act will focus on land-use planning and regulation and the Natural Environment Act will focus on the use, protection and enhancement of the natural environment.

Occupational licensing changes: A slew of changes to occupational licensing schemes are scheduled this year, including a new waterproofing licence class for LBPs, the introduction of codes of ethics for plumbers, gasfitters, drainlayers and electrical workers and strengthened disciplinary processes. ■

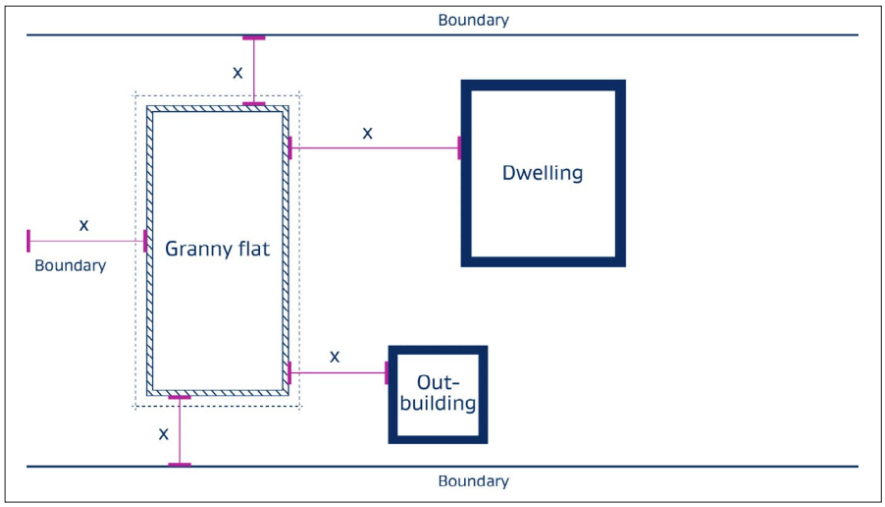
70 m² stand-alone dwellings exempt from consents

What you need to know

Since 15 January this year, construction of a small stand-alone dwelling up to 70 m² has no longer required building consent or resource consent provided that certain conditions are met. Building consent authorities may still charge a development contribution.

The requirements are set out in Schedule 1A of the Building Act and in permitted development rights such as the National Environmental Standards for Detached Minor Residential Units:

- The small dwelling must be simple in its design and comply with the Building Code.
- It must be constructed with a frame of lightweight building products, being steel or timber, with lightweight materials for the roof (roof cladding must not exceed 20 kg/m2) and wall cladding must not exceed 220 kg/m2.
- The floor must be no more than 1 metre above ground and the maximum height no greater than 4 metres above the floor level. A mezzanine floor is not permitted.
- The building must be 2 metres or more from any other residential building or legal boundary (Figure 1).
- There must be independent points of supply for electricity and gas (where applicable), and electric or gas heaters. Solid fuel heaters cannot be installed.
- Building work must be carried out or supervised by licensed building practitioners (LBPs) and licensed plumbers, drainlayers, gasfitters and electrical workers.
- There must be a record of work from the LBP, a certificate of work from the designer who carried out restricted design work and energy work certificates from registered electrical workers and gasfitters (if applicable).
- The council must be notified before and on completion of building work. The owner must apply for a project information memorandum (PIM) before building work starts. When issuing a PIM, a territorial authority may attach a development contribution notice.
- On completion of work, the building owner must provide the council with as-built building, plumbing and drainage plans.



Since 15 January this year, construction of a small stand-alone dwelling up to 70 m2 has no longer required building consent or resource consent provided that certain conditions are met. Building consent authorities may still charge a development contribution.

BRANZ is currently preparing a bulletin with details of the exemptions and the requirements. Note that there will still be cases where a building and/or resource consent is required, such as for earthworks or for building on land where a natural hazard exists. ■

Roofspec Viking

Taking care of detail

Viking Ecostar – Treating Architectural Conservation with Respect

Architectural conservation is important to a country's identity. Up until recently, New Zealand's track record in preserving historic places has generally been underwhelming, although some towns and cities have tried harder than others. Fortunately, these days the demolition of old buildings is a lot more difficult to get away with…for good reason.

One of the challenges with preserving old buildings is future proofing while where possible, refurbishing them with the same materials with which they had originally been built. An example of this is managing future seismic activity. The re-build of Christchurch City saw many damaged period buildings; both residential and non-residential with slate tile roofs; being grudgingly re-roofed in long-run iron for safety and cost reasons, despite their new appearances being completely different and, in most cases, 'compromised' from how they once looked.

Viking Roofspec has placed a lot of resource in this area so that period building owners can have their beloved buildings refurbished with roofing materials that significantly enhance durability for the long-term, while still respecting the original architect's design intent.

One of the pitched roofing systems that achieves this is Viking EcoStar.

The EcoStar system involves tiles made from recycled rubber and plastics which have been injection moulded to emulate Welsh slate. For one of the several profiles available, 68 x moulds have been developed to reflect the imperfect nature of slate tiles. Just as importantly, these tiles are installed on a sarked substrate which braces the entire building as one diaphragm so that in the event of a quake, no individual tiles are flung like deadly projectiles as would otherwise be the case. NB: a fully installed EcoStar roof weighs approximately 24kg / m2 (including the sarking substrate) putting less pressure on the building's structure versus 40+kgs for slate, concrete or clay.

Additionally, Ecostar tiles have a successful history-in-use in New Zealand; having withstood our harsh conditions (including UV) over the last 25+ years across the country. Reference projects include fabulous old homesteads through to schools; churches; and Government buildings.

As per Viking Roofspec's mantra with any of its roofing; decking or below-ground waterproofing systems, the Viking EcoStar roof tile system has been officially engineer-assessed to demonstrate Code compliance and just as importantly, is installed only by qualified members of Viking's Approved Applicator network.

For more information on the Viking Ecostar system, visit **HERE**

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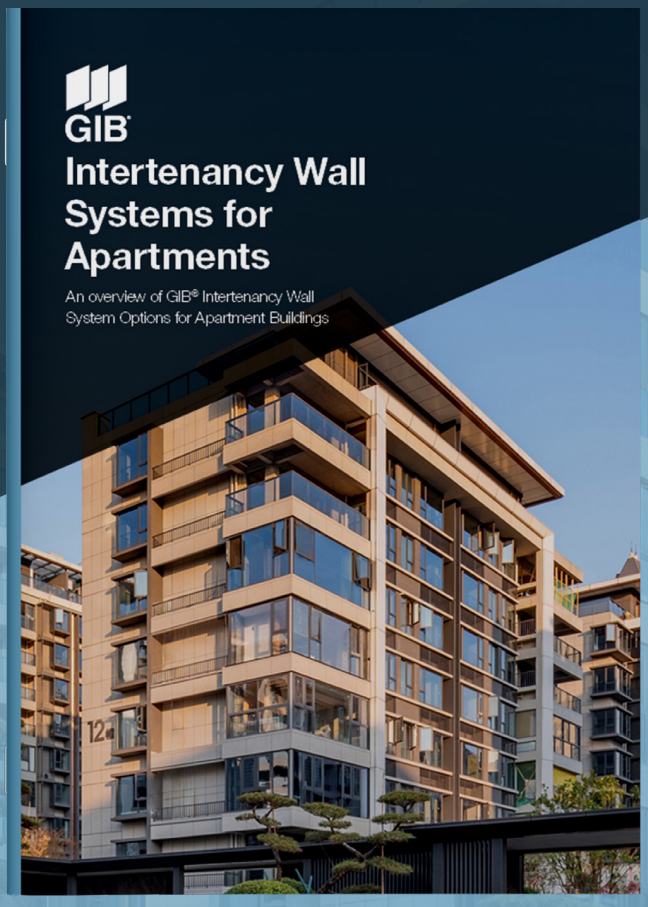

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