BUILDING TODAY



The official magazine of the Registered Master Builders Association

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March 2023

Volume 33 Number 2



ANTARCTIC VOYAGE TO ECHO HISTORY

The four-year process to deliver the new Scott Base research station is underway

FUNDING FUTURE RESILIENT INFRASTRUCTURE

The debate starts on funding and prioritising improved resilient infrastructure

WORLD-FIRST 3D SOLAR HOME OPENS ITS DOORS

Environmentally-passive solar designed home with 3D walls a sign of the future?

ALSO INSIDE: EDUCATION: DEMYSTIFYING MICRO-CREDENTIALS

THE ULTIMATE

SEISMIC

ANCHORING ADHESIVE



BUILDING TODAY

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From the editor

As the focus turns to the recovery and rebuild from the recent extreme weather events, we ask RMBA chief executive David Kelly and New Zealand Infrastructure Commission chief executive Ross Copland what approach needs to be taken to fund and prioritise future resilient infrastructure in the short and long term.

The Westpac Economic Overview team also outlines the likely impacts of the flooding and cyclones on the construction sector and wider economy.

What is obvious is that it will take some time to put a definitive long-term plan into action, and that a serious discussion about the new buzzwords - managed retreat - will need to take place.

Elsewhere in this issue we profile a world-first, passive solar home with 3D printed concrete walls that has been built in Huia, Auckland.

And we look at RMBA company Leighs Construction's involvement in delivering the new Scott Base research station from Timaru to Antarctica — a process that's going to take almost four years.

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RMBA working with Government to ensure a rapid recovery

Registered Master Builders Association president Johnny Calley says the recovery and rebuild from the recent extreme weather events will require a co-ordinated nationwide approach like that of the Christchurch earthquakes — but will come with some different challenges.

or our members affected by the floods, particularly those in Auckland, Northland, Gisborne and the Hawke's Bay regions, we know this has not been an easy start to the year.

We are thinking of you and understand this will create some additional challenges while your areas recover.

Unfortunately, it will take a while to understand the full extent of the damage and how to go about reinstating the infrastructure.

Registered Master Builders will be working with Government through the Construction Sector Accord to ensure the recovery happens as rapidly as possible, and that the right support is available.

The recovery and rebuild from these recent weather events will require a coordinated nationwide approach like that of the Christchurch earthquakes, but with some different challenges.

Evaluation of updated overland flow paths and flood planes will be critical in the assessment of infrastructure, including housing.

This event has highlighted our reliance on internet and streaming-based communications, so having an emergency communication plan should be included in all the rebuild conversations.

Sector availability a positive

The only positive on this topic is the forecasted industry slowdown has taken hold for some businesses across New Zealand — so there will no doubt be availability within the sector once the recovery process gets underway.

These recent floods and the frequency of other major weather events highlight an obvious environmental topic. The rapidly changing global impacts of climate change are now affecting our lives more than ever and, in some cases, our ability to do business.

We must react to this changing environmental landscape when looking at ways to minimise the impacts, but not make panic decisions.

Trying to conquer the issues with wideranging changes that are administered with a blunt edge can achieve little, whereas a slower step change approach that rewards innovation will get higher levels of engagement.



An organic change in industry behaviours will happen faster if there is a production benefit to businesses without increasing cost.

The main barrier to environmentally-friendly and sustainable outcomes in construction has, historically, been the financial burden — the recent H1 reforms are evidence of that, where building code changes significantly increased the cost to build a home.

What we need to find as a sector is a balance between cost versus ambition.

The only positive on this topic is the forecasted industry slowdown has taken hold for some businesses across New Zealand — so there will no doubt be availability within the sector once the recovery process gets underway.

Good outcomes are usually achieved when the outcome is fully understood, and the pathway to achieve is mapped out and costed appropriately.

Making changes to how we build in the hope a long-term outcome will be achieved will just add to the problem.

Full consideration to the other impacts, including social, business, efficiency and an unintentional carbon footprint takes time, but we need to be patient and allow the innovation to be tested.

We can take advantage of the many initiatives the construction sector already has at its disposal, such as modular design practices and waste management solutions.

These may seem obvious and small

steps in the scheme of things, but if we all apply a little bit now it will assist in a more environmentally-sustainable industry.

If we are honest with ourselves, the biggest hurdle we face on the environmental subject is our attitudes towards integration.

Making a deliberate effort to install environmentally-friendly solutions to your day-to-day operations and project objectives needs to become a standard practice.

We are continuing to encourage all our members to stay vigilant in maintaining strong cashflow and balance sheet positions.

Without sounding like a broken record, the unpredictable economic conditions are continuing, and workloads for many have decreased significantly.

The rebuild in the flood-affected regions will offer some respite with the rebuild, but that comes at the cost of potentially prolonging inflationary pressure from the funding injected into the economy.

Stay engaged with all the available Master Builders services, and if you have any questions reach out to your regional services manager who can assist in the first instance.

We are a resilient sector, and the property market will rebound, but this could take some time, and Master Builders is here to support members where possible.

With autumn upon us we now start to get into the regular events and annual members meetings.

House of the Year entries have just closed for the 2023 competition, and I am looking forward to seeing the next round of excellence from the residential builders throughout the regional events.

Equally, the Commercial Project Awards are currently being judged, and will be announced later in May.

If you're from the South Island you're probably basking in what has been a fantastic summer with lots of sunshine. Let's hope those good weather vibes extend over the entire country to enable the rebuild of our flood-ravaged communities.



A complex and detailed build for the win

Kotuitui Development (Stage 2)

CATEGORY

Winstone Wallboards Residential Project Award

ENTRANT

Chancellor Construction

PROJECT PARTNERS

Assemble (Technical Documentation), Brown & Thomson Consulting Engineers (Engineer), Chancellor Construction (Construction Company), Crosson Architects (Architect)









Successes

Wayne Zeng, director of Chancellor Construction, was very honoured and proud of the project team after winning the Winstone Wallboards Residential Project Award at the 2022 Commercial Project Awards.

"I think this build was a real stand-out in the competition for a variety of reasons, mainly the unique design, the speed at which we delivered the project, and that we stayed within the budget.

"For me personally, the aesthetic look and feel of the townhouses was a real highlight of the build," Wayne says.







Challenges

For Wayne and the team at Chancellor Construction this build was no easy task, and the crew faced a few challenges along the way.

"The design of the build was very complex and detailed, particularly the procurement of the imported terracotta tiles (cladding material) and installations. Regardless, the team did a stellar job of the build, and to have this industry-wide recognition is great for our project team," Wayne says.





Judges' comments

This project was part two of the successful Kotuitui residential development. The vision for both developments exceeded expectations for creating something special within the community.

Rather than a "cookie-cutter" approach, Chancellor Construction took a "first mover" approach and created a unique aesthetic. This included durable ceramic roof tiles that doubled as wall cladding, double-height dormers, and framed windows to give a welcoming look to the building.















A SEAMLESS INTEGRATION FOR THE WIN

ROGER GILCHRIST BUILDING SERVICES

National Supreme Renovation of the Year























Successes

Luke Gilchrist, manager at Roger Gilchrist Building Services, was excited and extremely proud when they won the Supreme Renovation Award at the 2022 National House of the Year Awards.

"This renovation was really unique, it has so many amazing features. I think what made it stand out compared to a lot of the other homes in the competition was the seamless blend of old and new, whilst still maintaining the original character of a pre-1900 homestead.

"My favourite feature is the flow from the entrance atrium into the bright, expansive open plan living and kitchen area, sandwiched between two very peaceful outdoor living spaces," Luke says.



Challenges

This renovation was no walk in the park for the team at Roger Gilchrist Building Services, and there were a few hurdles to overcome.

"Although the integration between old and new was done seamlessly, it was very difficult integrating new modern spaces into a pre-1900 Oamaru stone structure, as we had to ensure we maintained the character and important features of the original home," Luke says.

"The renovation was a welcome challenge and our hard work paid off. This win showcases the abilities of our small familyowned business as well as our high-quality local subcontractors, and gives them the recognition they all deserve," Luke says.



Judges'comments

The owner's vision for this property was to re-imagine the evolution of this family home. The old and the new have been blended to ensure it continues to serve both the family and community by providing an oasis for reflection and inspiration.

This magnificent renovation is one to truly be admired. It's clear that all involved have worked tirelessly to fulfil the home owner's dream. The transformation of this 783 square metre home was an outstanding team effort between the home owners, architect, builder, subtrades and interior designer. The very high standard of workmanship and attention to detail makes this home a worthy recipient of the National Supreme Renovation of the Year award.

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FIRST OF ITS KIND

BRUYERE

National APL Sustainable & Environmental Excellence



















Successes

Terry Bryers, director at Bruyere, was blown away when the team took out the APL Sustainable & Environmental Excellence Award at the 2022 National House of the Year Awards.

"I'm still adrenalised when I think about the awards night! This build is the first of its type in New Zealand, featuring the most up-to-date building technology available in the world, so to have this recognised is very special.

"My favourite feature of this build is the wood throughout the interior spaces — it seems to be the latest style. We've seen so many trends come and go over the years, from Spanish arches to Miami Vice to Minimalist, so it's nice to see wood, which is a healthy, non-toxic, and more natural product," Terry says.



Challenges

For Terry and the Bruyere team there were some challenges along the way.

"This build was to be a Certified Passive House, which means the exterior had to meet a specific set of requirements. Because we were dealing with an existing structure, a lot of time was spent assessing how to go forward with all sorts of detailing to ensure the requirements were met, such as the air tightness.

"If at the end of the job we did not get the air tightness required, we wouldn't get the certification. It was a make-or-break situation. We met all the requirements in the end, making the home the first PassivHaus-certified renovation in the country," Terry explains.



Judges'comments

Featuring an extensive range of environmentally-friendly features, and taking into consideration the minimal carbon footprint, this home is truly sustainable. The existing home was dismantled to the solid concrete core and re-instated, minimising the carbon footprint as the entire structure was theoretically recycled.

The introduction of new exterior joinery, an Austrian SmartWin Triple Glazed Thermally Broken System, a warm roof, and hot water solar panels, make this home extremely sustainable and environmentally friendly. This home was achieved through state-of-the-art computer modelling by environmental engineering and benchmarked to the most prestigious German "Green Building" standards. It is the first PassivHaus certified renovation in New Zealand.

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AGAINST THE CLOCK

CHRIS FOY

THIRD PLACE AT THE REGISTERED **MASTER BUILDERS CARTERS 2022** APPRENTICE OF THE YEAR

WAIKATO REGIONAL WINNER

Chris Foy is employed by Urban Homes and his training provider is BCITO, a business division of Te Pūkenga.





SUCCESSES

Chris was beyond happy and proud of himself when it was announced he'd placed third.

"I was proud to have done so well, as I was up against some very strong competitors. I'd worked really hard in the months leading up to the finals, but I was still very shocked and excited to place in the competition. It's such a great opportunity to have industry chats, get to know other apprentices, and create friendships with like-minded people," Chris says.



CHALLENGES

The competition is designed to challenge apprentices. The part Chris found the most difficult was the practical build.

"The practical build during the National Competition was hard work. Having all the spectators watching and the other apprentices around is a lot of added pressure, plus tackling the practical challenge with a time limit is quite stressful."



ADVICE FOR APPRENTICES

"Becoming an apprentice is such a rewarding challenge. My advice is not to be worried about making mistakes or missing out on a job — you're best just to give it a crack! Chat to other builders and apprentices on site and get to know people in the industry. There's also no harm in giving your CV out at building sites. It's a great way to make connections and get a foot in the door,"



JUDGE'S COMMENTS

Chris was the youngest competitor in this year's competition at 21 years old. However, this didn't stop him taking out a well-deserved third place.

Throughout the interview, Chris had exceptional responses that were extremely detailed and technical. Chris has a focus on the future and is open to how that may look. This eagerness shone through at the end of his interview where he took the opportunity to discuss what the judges thought about his future where he should be heading and what they would do if they were in his shoes, knowing what they know now.

Chris has a bright future ahead of him and we are excited to see where he goes.

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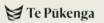
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FVFNT PARTNER





















Funding future resilient infrastructure — what

t will take some time to understand the extent of the damage and determine how best to rebuild resilient infrastructure in the region.

When the time is right, our members have broad experience that can be drawn on. We need to objectively look at the evidence of how well different buildings and infrastructure have performed.

Many new developments, including medium



Registered Master Builders Association chief executive David Kelly

density developments, have performed well. The sector, including our members, will be able to give feedback on the building systems that work, and we will need to pay close attention to the stormwater management systems in place.

While people in these communities are looking for answers, these are complex issues, and they will take time.

Decisions regarding where and how we build in the future must be carefully considered by all stakeholders — the community, council. insurers and our sector.

We know from past experience in areas such as Christchurch and Matata these are not easy decisions, and they will take time to ensure we get them right, particularly as there may be other areas impacted in similar ways in the future.

Many of our members have been impacted, and are working hard to support the clean-up. The majority were able to get back

Cyclone Gabrielle has left in its wake unprecedented devastation and upheaval to the country's infrastructure, and tens of thousands of New Zealand residents and businesses.

Building Today asked Registered Master Builders Association chief executive David Kelly and New

to work quickly, but some have been more severely impacted than others.

We have been advocating to ensure these businesses receive the support they need, and providing information as we have it available.

A real benefit of our regional structure has been our ability to bring people together, including the council and other infrastructure and building providers to help manage the local responses.

Hawkes Bay Master Builders president Chris Flude:

"Our members spent the first week providing help where it was immediately needed. Straight after that we met as a branch to understand how we were all placed and what support we, as Master Builders, could provide to rebuild our communities.

"We were lucky that most of our members were not personally affected. But mental health is an ongoing concern and, having lost four of the five bridges between Napier and Hastings, it is tricky to reach one another."

Gisborne Master Builders president Mark Van Wijk:

"Our members have been getting stuck into the clean-up throughout Gisborne. They have been working with community groups to understand where help is needed, even going door to door.

"My staff have also been using our company diggers to help clear roads and houses."

Weathering the storm — the likely impacts of the recent flooding

By the Westpac Economic Overview team

our country has been struck by two devastating natural disasters in a matter of weeks. These events have resulted in loss of life, and will have a significant ongoing impact on the lives of many New Zealand families.

There will also be economic consequences. The combined impact of January's floods and Cyclone Gabrielle have resulted in extensive damage through large swathes of the North Island.

They have had a particularly severe impact on Gisborne/ Tairawhiti, the Bay of Plenty, and Hawke's Bay, as well as in Northland, Auckland, the Waikato, and the Tararua District — regions that are home to around 60% of New Zealand's

A full assessment of the damage will take some time. The Minister of Finance has indicated that the cost could be in the vicinity of \$13 billion (equivalent to around 3.5% of annual nominal GDP).

That would make it New Zealand's second-costliest natural disaster, following the Canterbury earthquakes in 2010 and 2011.

In the wake of the storms there will be significant economic disruptions, including reduced spending by households and businesses.

Those impacts will be compounded by damage to transport networks and other infrastructure, which has hampered the recovery.

However, over the coming weeks we will see a lift in spending associated with clean-up work, as well as spending to replace damaged household items and vehicles.

And as the flooding and much of that early repair spending will occur in the March quarter, the impact on spending over the quarter as a whole may be limited.

We saw a similar pattern following the Canterbury earthquakes, with overall spending rising strongly after the February quake.

In contrast to the Canterbury earthquakes, the recent flooding has caused extensive damage to some of our key growing regions and farmland.

Hawke's Bay and Gisborne were among the worst-affected regions, and there is likely to be an especially large impact on our horticulture sector.

Some fruit crops such as apples are likely to see significant losses, given Gabrielle has hit during the picking season.

The disruptions to production in the horticulture sector and other export industries will linger for an extended period.

As a result, we've revised down our forecast for nominal exports by \$1.2 billion this year, with a small hit also expected in 2024.

approach is required?

Zealand Infrastructure Commission - Te Waihanga chief executive Ross Copland their thoughts on what approach needs to be taken to plan the investment required to fund future resilient infrastructure in the short and long term.

If reinstating infrastructure to pre-Gabrielle resilience levels is the objective, infrastructure providers will need to systematically work through asset condition assessments, the design options to restore, repair or replace each asset and their costs and benefits, select preferred options and, finally, adopt a methodology for prioritising and sequencing these projects to allow a programme of works to be created, costed and procured.

Of course, some calls would have to be made around what projects were prioritised over others, given the certainty that labour and materials will constrain their ability to "do it all", even if budgets were unlimited.

However, if the goal is to redefine resilience levels that will apply across different communities and asset classes (eg potable water may rank higher than communication equipment despite both being "lifeline utilities"), we'll need a different approach.

We will need to decide where we lift the resilience of existing infrastructure, while also ensuring that New Zealanders make a conscious choice about the level of protection they're willing to pay for, and what they're willing to forego to pay for it.

We also need to educate communities on the limits of lifeline utility resilience, and encourage them to plan for events so extreme that we simply can't afford an engineered solution.

Ideally, this would involve a nationally consistent approach to assessing natural hazards and the upgrades necessary to protect life and property.

Cyclone-related upgrades would be included in this wider mix of resilience investment options. Options considered would need to include relocating infrastructure and changing the land use, as well as strengthening what we already have (eg higher flood banks).

The New Zealand Infrastructure Strategy outlines a strategic approach to building resilience, and last year Te Waihanga led the development of the infrastructure sections of the government's national plan to help us adapt to the impacts of climate change.

There are many important actions underway already, including recommendations on Resource Management Act (RMA) changes to help speed rebuild efforts, actions arising from the National Adaptation Plan, and the modernisation of our emergency



New Zealand Infrastructure Commission - Te Waihanga chief executive Ross Copland

management system, termed the "Trifecta Review".

Te Waihanga is also engaging with the Minister for Infrastructure on options for how we can best support the Government and infrastructure sector to take a strategic and systematic approach to allocating resilience investment, understanding market capacity constraints, and efficiently procuring the resources needed.

Following the events of the past few months it should be clear to all New Zealanders that the constraints placed on infrastructure under the RMA have contributed to a legacy of significant exposure to natural hazards.

Plan making in New Zealand under the RMA has exhibited a strong and growing status quo bias, embedding existing land uses rather than testing/questioning them against new information or criteria (eg natural hazard data or meeting the housing needs of population growth).

Further to this, infrastructure development in new locations has become more costly, slower and riskier, further reinforcing the land-use status quo bias.

If we are serious about relocating at-risk infrastructure or the communities it serves, it is critical that the current planning system reforms deliver on this objective. In the New Zealand Infrastructure Strategy, Te Waihanga advocates for more flexible land-use policies and more responsive planning as a means of overcoming status quo biases, and recommends that Government identify and protect future infrastructure corridors.

and cyclones on the construction sector and wider economy

The recent storms will also add to inflation. That will be seen most immediately in food prices, with the damage to crops signalling shortages of some fruit and vegetables over the coming months.

We are also likely to see a range of other storm-related price increases over the coming year, such as increases in rents, insurance premiums, vehicle prices and, potentially, increased pressure on local council rates.

Combined, we expect that those disruptions will add around 0.7 percentage points to inflation over 2023, with the bulk of that due to higher food prices.

However, those increases are not an ongoing source of inflation, so they don't require a response from the RBNZ. And in the case of fruit and vegetables, much of the expected price rises will gradually reverse over time as production recovers.

The effect on the construction industry . . .

Over the coming years, we will see a large amount of spending on repairs to roading and other infrastructure, along with repairs to damaged housing.

There will also be spending to remediate the damage to business assets, as well as replanting of horticultural stock such as apple and other trees.

While some more moderate repair work may proceed fairly quickly, large scale reconstruction and some major projects are unlikely to begin for many months.

Even when reconstruction does get underway, this work will take years to complete.

The storms hit at a time when our building sector is already stretched, with ongoing shortages of staff. That means there is limited scope for a significant ramp up in building activity.

It also means that some existing planned work is likely to be delayed or cancelled as staff and resources are diverted to essential repairs.

There will also be a more protracted boost to activity from reconstruction spending, and that could add to medium-term inflation pressures.

However, this is still a temporary boost. In addition, prior to the storms we were forecasting a downturn in home building and other construction work over the coming year.

That's due to the tightening in interest rates over the past year, and the increasingly challenging financial conditions in the building sector.

Reconstruction activity will moderate that decline, but it won't completely offset it. And that broader slowdown in construction activity will help to limit the extent of any price rises.

Concrete NZ rebuilds in wake of Cyclone Gabrielle

emand for concrete is expected to continue well into 2023 and 2024, particularly for infrastructure and non-residential construction projects in Northland, Auckland, Gisborne, and Hawke's Bay, Concrete NZ says.

Ready-mixed concrete production, a practical marker of construction and infrastructure activity and general economic health, had already increased 1.5% in the December 2022 quarter on the September 2022 quarter.

Concrete NZ chief executive Rob Gaimster says the year-on-year comparison for the December 2022 quarter reflects a "catching up" on the Covid-19 Delta lockdowns in late 2021.

"While the final quarter of 2021 stood out in terms of production, a comparison of volumes in the year to December 2021 versus the year to December 2022 shows production actually rose by 3% in the year to December 2022," he says.

Gaimster says as New Zealand



Concrete NZ chief executive Rob Gaimster

considers the resilience of its national built environment in the wake of a month of extreme weather events, he anticipates that the durability, strength, seismic performance, fire resistance, and stormwater management properties of concrete will result in increased usage across the board.

Potential alleviation of easing

While forecasting from the Ministry of Business, Innovation and Employment (MBIE), BRANZ, and Pacifecon released in July of 2022 predicts a flattening in residential construction activity, Gaimster says planned reforms to the Resource Management Act, combined with increased activity following Cyclone Gabrielle, could potentially alleviate any easing, and increase the likelihood of higher residential building consents, or create an equilibrium.

"The industry will be watching very closely to see how the situation evolves. We are aware that the Government is already taking steps to foster greater activity in the residential construction sector.

"This grows sector confidence as we prepare to weather the Reserve Bank's predictions of a 'shallow recession' in 2023.

"We also know that activity in the nonresidential and infrastructure sectors is expected to see an increase, and given the significant impact of Cyclone Gabrielle, it is likely we will see further growth in the infrastructure sector as rebuild and rehabilitation works come online."

Gaimster highlighted that commercial consents were predicted to continue at record levels over the next two years, while the total value of infrastructure projects was anticipated to increase, even without modelling to factor in works related to Cyclone Gabrielle.

"The total value of infrastructure projects in the National Infrastructure Pipeline increased from \$72.2 billion to \$76.9 billion in November 2022, a 6.5% increase when compared with the June quarter.

"This growth is encouraging for the construction sector as a whole, but also supports wider economic stability and well-being as infrastructure drives higher living standards, strengthens the economy, and results in better social and environmental outcomes.

"Pleasingly, we anticipate that this will include increased uptake of the industry's decarbonised concrete products."

Key points:

- Ready-mixed concrete production is a bellwether for construction and infrastructure activity, and general economic health.
- Demand for concrete is expected to continue well into 2023 and 2024, particularly for infrastructure and nonresidential construction projects
- Ready-mixed concrete production increased 1.5% in the December 2022 quarter, compared with the September 2022 quarter
- Concrete NZ chief executive Rob Gaimster says planned reforms to the Resource Management Act, combined with increased activity following Cyclone Gabrielle, could potentially alleviate a previously predicted easing.

Climate impact reduction efforts

Gaimster says the concrete sector is making efforts to reduce its climate impact, with a range of new "low carbon" concretes coming online that were already planned for projects, such as the Kainga Ora Bader Ventura development in Mangere.

"Between 2005 and 2018, the concrete sector has already reduced its emissions from cement by 15%. Our objective is to achieve a target of a 30% reduction in carbon dioxide emissions by 2030, and we are on the cusp of releasing our industry roadmap to be net carbon zero by 2050," he says.

"In addition to concrete's qualities as a construction material, our industry has a number of initiatives in place that will help to decarbonise concrete, and the concrete sector

"This includes replacing clinker in cement with low-carbon natural and recycled alternatives, increasing design efficiencies in the construction of concrete structures, and finding coal replacements for cement manufacture at Golden Bay's Portland cement works," he says.

 Replicating natural surface water management, Page 30



We have moved from 3 climate zones to 6. Stage 1 came into effect 3 November 2022 with stage 2 starting on 11 May 2023. And why we are introducing ThermalHeart+® windows and doors. A range of code meeting, industry leading, thermally efficient products designed and made right here in New Zealand for exactly how we live.

The future is here. Ready now. Find out more at thermalheartplus.co.nz





Education: Demystifying micro-credentials and upcoming qualification changes

Qualification System Products general manager at Waihanga Ara Rau, Construction & Infrastructure Workforce Development Council, Catriona Petrie, says they've been working with the New Zealand Qualifications Authority (NZQA) since February 2022 to make changes to qualification products. She explains these important changes which will help shape vocational education and training options on behalf of construction and infrastructure.

Micro-credentials

A micro-credential system was first introduced in 2018 by the NZQA which recognised that New Zealand needed different options to help ensure businesses could get employees with the skills they need in a rapidly changing world.

Recent changes mean that Workforce Development Councils such as Waihanga Ara Rau can now develop microcredentials. This means we can provide industry with more options for addressing their skill recognition requirements.

Education providers developing their own micro-credentials will also require the support of Waihanga Ara Rau to register a micro-credential related to our specific industries.

Providers will be able to apply to the NZQA to deliver any micro-credential, including those developed by Waihanga Ara Rau or another education provider.

What are micro-credentials?

Micro-credentials are small, standalone formal awards that recognise the achievement of specific skills, experience or knowledge. They are smaller than full qualifications (between one and 40 credits), and take less time to complete.

Complementing longer qualifications, they provide a great option for recognising smaller chunks of valuable learning.

Why micro-credentials?

Micro-credentials can be a "right-size" option for areas where a taster or a top-up is appropriate. Examples include preparation and entry to the workforce, upskilling in new areas for previously qualified people, or supporting career changers.

They may be a good choice in situations where a full qualification is not the most agile response, such as responding to areas of emerging skill needs, or introducing formal awards where there hasn't been recognition before.

They can also be used to recognise small chunks of full qualifications to give greater flexibility to learners and employers.

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WAIHANGA ARA RAU Construction and Infrastructure

Workforce Development Council



Qualification System Products general manager at Waihanga Ara Rau, Construction & Infrastructure Workforce Development Council, Catriona Petrie.

Skill standards

Skill standards are also being introduced this year. Over time they'll replace unit standards. Skill standards will be the building blocks of qualifications, and education providers will have to use these standards.

Skill standards improve on unit standards through a design that includes outcomes (ie, what must be demonstrated), as well as information to guide learning content.

Skill standards will give industry confidence that what is being learned and assessed will be consistent throughout New Zealand, no matter where someone completes their qualification.

In time, skill standards will become the common currency for vocational qualifications, and will support people to transfer their existing skills between programmes and between qualifications.

They will only be able to be developed by a standard-setting body (SSB), such as Waihanga Ara Rau.

New Zealand Programmes

This new product provides a single

common pathway to achieving a qualification. Only an SSB such as Waihanga Ara Rau will be able to specify a New Zealand Programme, and education providers will apply for accreditation to deliver them.

The potential benefits of New Zealand Programmes are:

• They give industry a higher level of confidence that graduates meet their expectations, and that the approach to delivery is consistent.

This may be appealing in high-risk industries or where there are many different providers.

 The development process will allow for collaboration and conversation between all interested parties. This will reduce duplication of effort and consultation fatigue for industry.

It's not compulsory to develop a New Zealand Programme for a qualification. This leaves room for this product to be used only where it will add value.

For example, the added steps involved in introducing a New Zealand Programme for a qualification delivered by only one provider may not add any benefit in terms of national consistency.

How industry will benefit

The changes to micro-credential rules and the introduction of skill standards and New Zealand Programmes mean that Waihanga Ara Rau is in a great position to shape vocational education and training on behalf of our industries.

These changes give industry:

- a wider range of options for skill recognition
- greater control over the curriculum for training and education, and
- boosted confidence that the system has the right balance between flexibility and consistency.

We'll work with you to develop the right mix of education products to meet your skills needs

We've engaged extensively with the NZQA and the wider sector over these changes during the development, and we will continue to engage as these changes come into effect.



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Structural steel focusing on more women in industry

ore than 50 women gathered at the Hilton Auckland last month for the inaugural Women in Structural Steel (WISS) event.

Hosted by industry body Steel Construction New Zealand (SCNZ), the event brought women together from different backgrounds, different industry roles and different stages in their careers to connect and learn from one another.

"SCNZ is committed to supporting diversity and inclusion," SCNZ general manager Darren O'Riley says.

"This initiative aims to encourage women into the industry by creating a welcoming and supportive environment, and showcasing the variety of opportunities within the sector," O'Riley says.

"Ultimately, we want to grow the number of women engaged throughout the industry, year on year."

Last year, SCNZ services co-ordinator Michelle Gutierrez-Smith attended a Women in Leadership summit, and was inspired by all of the women and the diversity in the room — including age, experience, background and industry.

"I looked at the structural steel industry with fresh eyes," Gutierrez-Smith says. "I want to see more women in our industry;



Women in Structural Steel (WISS) speakers, from left: Nikki Hart, Michelle Gutierrez-Smith, Kelly Jeffries, Bridget Young.

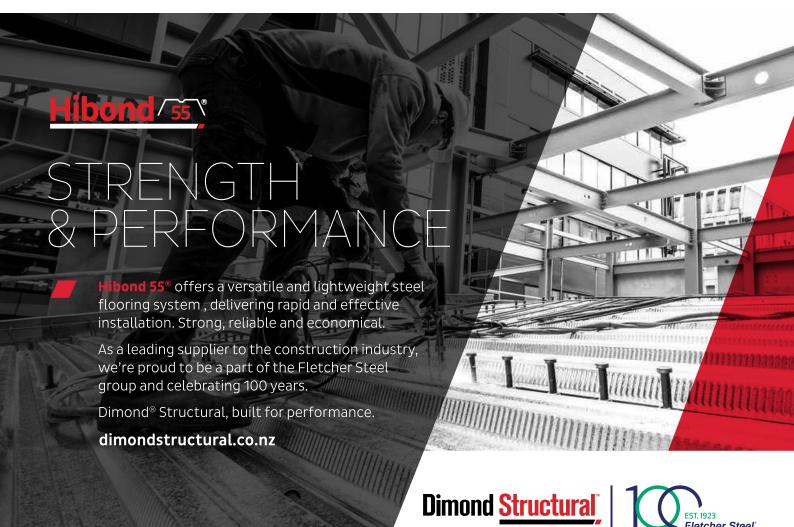
I want to see more women in leadership roles in our industry; I don't want them to be hindered because they are women. It was a catalyst for SCNZ to establish Women in Structural Steel."

Attendees at the event heard from three speakers — D&H Steel Construction's Kelly Jeffries and Grayson Engineering's Bridget Young shared their inspiring

stories of thriving in the traditionally maledominated structural steel industry.

And nutritionist Nikki Hart offered some invaluable insights into how to maintain a healthy relationship with food and drink in a busy, modern world.

SCNZ plans to build on the success of the first event and host regular Women in Structural Steel sessions in future.



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World-first passive solar home with 3D printed concrete walls opens its doors

North-facing, 3D printed concrete walls, built by Hamilton-based company QOROX, are key to the environmentally-passive solar design, with the cement substrate locally sourced in the North Island.

The first solar passive house in the world featuring 3D printed concrete walls has opened its metaphorical doors to the public.

The Huia, Auckland, house was built by Craft Homes and designed by architect Duncan Firth. Architects, builders and the wider public were invited to an open home recently.

The north-facing 3D printed concrete walls, built by Hamilton-based company QOROX, are key to the environmentally-passive solar design, with the cement substrate locally sourced in the North Island.

Built to withstand a range of environmental factors, the walls exceed seismic standards, are fire and waterproof, and transmit heat incredibly well due to its strong structure and textured finish.

QOROX director Wafaey Swelim says the Huia house would be able to reap the benefits of 3D printed concrete in all seasons for the entirety of its lifetime.

"Concrete walls are excellent at maintaining a consistent temperature to keep a home warm or cool as the weather changes, so are perfect for a solar-heated home," Swelim says.

"Concrete walls are completely waterproof so if a flood event occurs, like those that devastated parts of Auckland and the East Coast recently, the walls wouldn't need to be torn down and replaced like their timber counterparts."

The concrete walls feature curves, ridges and textures, expertly printed and custom-designed to the customer's unique tastes, Swelim adds.

"The walls were printed in only 20 hours using two staff, and installed on-site over three trips — an impressively short time frame when compared to traditional building methods.

"It truly is construction for the future," Swelim says.

3D printed concrete by QOROX is BRANZ-appraised as a replacement for masonry walls or concrete walls, and was tested and designed over a two-year period to meet all New Zealand conditions.

The walls also achieve the required acoustic performance for multi-storey buildings and townhouses, making for a comfortable living environment.

The passive solar home is built to capture maximum sunlight, warmth and





air flow throughout the day, without interrupting its impressive view.

To learn more about QOROX's

3D printed concrete applications in commercial, civil, residential and landscape construction, visit www.qorox.co.nz.



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Antarctic voyage to echo history

The countdown is on! The specialist ship that will deliver the new Scott Base research station to Antarctica has been booked for January 2027 – exactly 70 years after the original base opened in 1957.

Antarctica New Zealand and Registered Master Builders Leighs Construction Ltd are joining forces with global logistics companies BigLift Shipping and Mammoet to transport New Zealand's new research station 3720km across the Southern Ocean to the Antarctic ice.

Antarctica New Zealand project director for the Scott Base Redevelopment Jon Ager says the new base will safeguard New Zealand's world-leading scientific research programme and presence in Antarctica for another 50-plus years.

"We're delighted to be working with Leighs Construction to harness the knowledge and expertise of BigLift Shipping and Mammoet. These companies have a wealth of experience on complex projects in challenging environments", he says. BigLift Shipping will sail the prefabricated base from PrimePort Timaru, New Zealand, to Pram Point, Ross Island, on the back of an MC-Class Vessel in four years' time.

Construction will begin at PrimePort Timaru in mid-2023, allowing three and a half years to build, test and commission the new base before its journey south. The landmark voyage will echo New Zealand's Antarctic history: the original Scott Base consisted of prefabricated buildings delivered on the HMNZS Endeavour when the research station was established.

State-of-the-art heavy module carrier

The MC-Class Vessel is an ice-strengthened heavy module

Continued page 22



Mammoet's self-propelled modular transporter (SPMT).



Antarctica New Zealand and Registered Master Builders Leighs Construction Ltd are joining forces with global logistics companies BigLift Shipping (above) and Mammoet (below) to transport New Zealand's new research station 3720km across the Southern Ocean to the Antarctic ice.





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Antarctic voyage to echo history

From page 21

carrier, specifically designed to operate in remote and inaccessible areas such as Antarctica.

BigLift Shipping commercial and business development manager Mark van den Berg says BigLift Shipping is pleased to be contracted for the ocean transportation of the modules for the new Scott Base

"We look forward to working with all partners of the Scott Base Redevelopment to make this interesting and challenging project a success," he says.

The 20,675mt, 173m vessel will bypass the usual offload point at the United States' McMurdo Station and sail directly to Pram Point where Scott Base is situated. It'll be the first time that a ship of this size will moor at New Zealand's only Antarctic station.

Mammoet's self-propelled modular transporters (SPMTs) will move the new base onto the ship in Timaru and off again in Antarctica.

The three interconnected buildings will be separated into eight modules (each about 800 metric tonnes), sealed, and welded onto the vessel for the journey.

Mammoet Global Segment Lead of Transport and Logistics Reinder de Haan says the installation method is as robust as possible, with the highest priority given to safety and operational redundancy.

"The versatile SPMTs have tremendous power, yet can be manoeuvred with millimetre precision so that each section of the new station will be perfectly aligned when we set it down," he says.

Supply mission complete

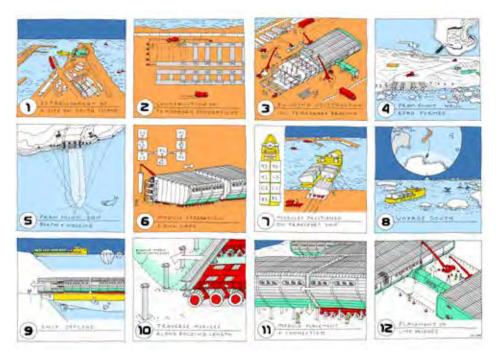
The first chartered vessel for the project, BigLift's Happy Delta, arrived in McMurdo Sound last month to deliver around 870,000kg of cargo for the redevelopment.

"Delivery of heavy plant and machinery is a major milestone for the project. After years of design and planning, it is great to be moving into the most exciting phase of the project for Leighs Construction — the physical works," Leighs Construction project director lain Miller says.

Infrastructure, machinery and equipment were offloaded at McMurdo Station with the support of the United States Antarctic Program and the New Zealand Defence Force.

A comprehensive environmental monitoring programme is underway to ensure any impacts to the environment are minimised through the redevelopment.

Find more information about the project at www.scottbaseredevelopment.govt.nz.



Scott Base Redevelopment construction and logistics methodology.



Scott Base Redevelopment CGI — final design.

Scott Base Redevelopment:

- The redevelopment of Scott Base will replace the existing base with three interconnected buildings, and upgrade the Ross Island Wind Energy system.
- The redevelopment will provide a safe, fit-for-purpose, environmentally-sustainable scientific research base that will support New Zealand's presence in the Ross Sea region of Antarctica for the next 50 years.
- The new facility will be fitted with wet and dry laboratories, science workspaces, biosecurity facilities, event staging, and storage areas. There is also an external deck for testing equipment or preparing samples for shipments, and a roof deck for science.
- In Budget 2021, Antarctica New Zealand was awarded \$344 million of funding to redevelop Scott Base and upgrade the Ross Island Wind Farm.
- The new base can accommodate up to 100 people, and will consist of an accommodation, dining and welfare building, a science and management building, and an engineering and storage building.
 - It will be built in the same location as the existing base on Ross Island.





Newly published forklift guide will bring industry into 21st Century

'Existing regulations were published almost 30 years ago and are now totally unfit for purpose'

A new set of modern, fit-for-purpose forklift operating guidelines has been developed by industry to replace the current outdated and inadequate industry guidance.

The newly published Forklift Good Practice Guidelines provides information and guidance for suppliers, trainers, employers, fleet managers, asset procurement managers, service providers, health and safety personnel, and forklift operators.

The guidelines provide safe work practices on how to select, maintain and operate forklifts. It also helps duty holders meet their obligations under the Health and Safety at Work Act 2015.

It was sorely needed as the Approved Code of Practice of Forklift Training and Operations Practice (ACOP) was developed nearly 30 years ago, NZ Forklift Industry Association chief executive Rodney Grant says.

"The current regulations are no longer applicable to the settings in which the industry operates in, and does not reflect current health and safety legislation.

"The existing regulations were published in 1995 and are totally unfit for purpose, given modern operating conditions, training techniques and equipment.

"That's why we took the initiative to develop the new guidelines, which we are confident will help keep our industry safe and professional."

Organisations defunct, Act superceded

For example, the current guidance often refers to the Department of Labour, Occupational Safety & Health Service, and the Health and Safety at Work Act 1992.

Both of these government organisations are now defunct, and the 1992 Act was superseded in 2015.

The inherent design and principles of a forklift haven't changed in decades, but

how we use them and how businesses operate has, Grant says.

"Not a lot has changed in the training of forklift operators and the safe operation of forklifts.

More information and support needed

"However, many sectors within the industry called for more information and support around forklift operations.

"The subject matter they sought guidance on was of a broader nature than what the ACOP currently provided.

"The Association did lobby regulators and government to provide further guidance, but resources, timings and the political landscape meant this was not going to happen at a speed that was suitable for industry.

"Therefore, the Association took on the task of creating an all-encompassing guideline document that better reflects current best practice."

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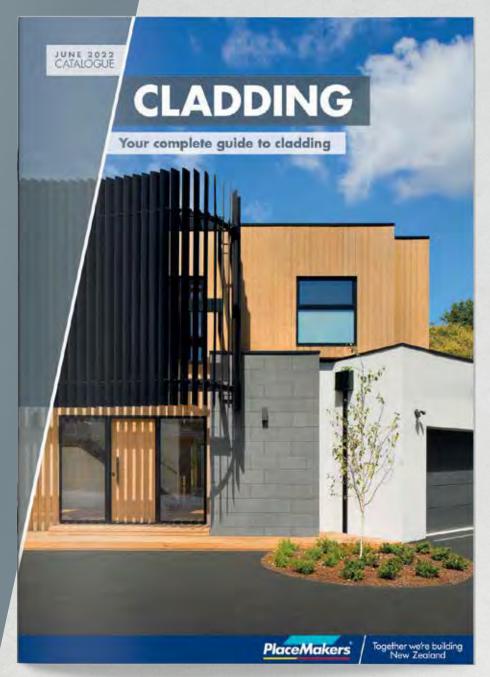
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Weathertight Concrete Code of Practice updated

Concrete NZ has published a revised 2022 version of the CP01 Code of Practice for Weathertight Concrete and Concrete Masonry Construction to help establish new standard practices.

he update of the 2014 version of the Weathertight Concrete Code of Practice was prompted by a need to improve the thermal performance of residential concrete buildings and to account for new construction systems, according to Concrete NZ chief executive Rob Gaimster.

Insulation shown in the Code's details has been enhanced and thermal images of the details themselves included, enabling a better understanding of the risk of condensation at internal surface areas and iunctions

"It has been eight years since the CP 01 Code of Practice for Weathertight Concrete and Concrete Masonry Construction was last updated," Gaimster says.

"The majority of the edits have been revisions of the detailed drawings to allow for improved thermal performance.

"The addition of acceptable surface temperature factors will help architects and designers determine a detail's climate zone suitability, while new Appendix A describes the methodology that was used to develop the detail, and provides further thermal performance information."

The Code's updated details also reflect new weathertightness systems that have become more prevalent in New Zealand over the past decade, such as double glazing and thicker thermal insulation.

Sustainable Engineering Ltd director and contributor to the 2014 and 2022 versions Jason Quinn believes the update demonstrates admirable leadership from Concrete N7, establishing new standard practices in advance of New Zealand Building Code minima.



Point Chevalier House - Ponting Fitzgerald Architects.

"An important new focus in the CP01:2022 is thermal performance, and we calculated the thermal bridging and surface temperature factors (mould index) for the various details," Quinn says.

"These calculations help architects and designers to understand the risk of mould growth, and underpin comprehensive changes to the detailed drawings of this document. When we build better, everybody benefits."

The updated Code has been prepared for use by practitioners with the appropriate qualifications, experience and professional judgement as a way to demonstrate compliance with the Building Code Clause E2 External Moisture.

Practitioners using this Code should ensure design solutions meet all the performance requirements of the New Zealand Building Code.

The 2022 version should be assessed as an alternative solution. The current 2014 version remains the cited version in Acceptable Solution E2/AS3, and should be assessed as an acceptable solution for New Zealand Building Code Clause E2 External Moisture

The new CP01:2022 - Code of Practice for Weathertight Concrete and Concrete Masonry Construction can be downloaded for free from www.concretenz.org.nz.



















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SM7-22	NO.7	22мм	190мм	135мм
SM7-25	NO.7	25мм	190мм	135мм
SM8P-20	NO.8P	20мм	457мм	381мм
SM8P-22	NO.8P	22мм	457мм	381мм
SM8P-25	NO.8P	25мм	457мм	381мм









Simpson Strong-Tie acquires deck building solutions company

Simpson Strong-Tie, a leader in engineered structural connectors and building solutions, has announced that its Australian subsidiary has acquired Sydneybased KlevaKlip Systems Pty Ltd.

Owned by Greg Doupe and Stephen Sanders, KlevaKlip offers a range of patented products for deck construction.

KlevaKlip's main product categories are composite, structural connectors, adjustable deck supports and a hidden deck fastening system.

Building decks faster and easier

These products target deck builders, enabling them to build faster and easier.

"This acquisition enables Simpson Strong-Tie to increase its breadth of line in the Pacific Rim," Simpson Strong-Tie Pacific Rim general manager Rob Lawson says

"With the strength of Simpson Strong-Tie research, development and testing, and field service and distribution, combined with KlevaKlips' quality products, we are



Simpson Strong-Tie Pacific Rim general manager Rob Lawson

adding value to our new and existing deck builder customers in Australia and New Zealand."

As part of the acquisition, Doupe and Sanders will remain with the KlevaKlip team to ensure a seamless transition as

Simpson Strong-Tie assumes customer sales and service.

About Simpson Strong-Tie Company Inc

Simpson Strong-Tie is a world leader in structural solutions products and technology that help design and build safer, stronger homes, buildings and communities.

As a pioneer in the building industry, it has a passion for problem solving through skilful engineering and thoughtful innovation.

Its structural systems research and rigorous testing enable the company to design code-listed, value-engineered solutions for a multitude of applications in wood, steel and concrete structures.

The company's dedication to pursuing ever-better construction products and technology, and to surrounding customers with exceptional service and support, has been core to its mission since 1956.

For more information, visit www.strongtie.com.





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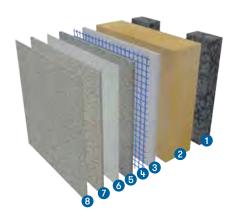
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Replicating natural surface water management

Sustainable Drainage Systems (SuDS), incorporating concrete-based solutions such as permeable paving and pervious concrete, now offer a cost-effective way to manage surface water through a process that mimics natural drainage, and at the same time helps prevent public stormwater networks from being overloaded.

s urban development increases, so too does the potential for flooding from surface water and overburdened drainage systems.

This is accentuated during severe storms, such as those recently experienced across the North Island, in particular Cyclone Gabrielle.

With extreme weather events predicted to become more common as the effects of climate change intensify, effective management of surface water as part of more resilient infrastructure is now a priority for towns and cities, one which SuDS can play an important role in addressing.

What are SuDS?

The UK-based organisation Interpave describes SuDS as the management of surface water by attenuation and filtration, with the aim of replicating greenfield conditions with natural losses and reduced discharge rates.

As a design philosophy, SuDS uses different techniques in a sequence, each delivering all three of the attributes below wherever possible.

- Quantity minimising water run-off and reducing flood risks.
 - Quality removing pollutants.
- Amenity adding societal and biodiversity benefits.

SuDS also stresses the importance of linking surface water management and development planning from the very start to:

- create chances for using space in a multi-functional way,
- enable water storage and conveyance zones to form part of the development's character, and
- provide the greatest opportunity for the drainage system to deliver multiple planning and environmental benefits.

Source control

A key element of SuDS is permeable paving which allows water to pass through to the underlying sub-base via joint filling material in gaps between each block.

Similarly, pervious concrete enables the same process to occur, but via a network of interconnected voids created by the absence of fines (sand) in the concrete.

SuDS can allow all the water falling onto the pavement to infiltrate down



Permeable paved shared space.



Pervious concrete.

through the constructed layers below and, eventually, into the subgrade.

Alternatively, SuDS can allow partial or no infiltration of the water into the subgrade. This depends on ground conditions and/or slope, as well as if the captured water is required for a purpose, such as irrigation.

The excess water is channelled to other drainage devices, such as swales, ponds, watercourses, or sewers.

Both these concrete-based solutions deal with surface water close to where rain hits the ground, which is known as "source control", and is key to SuDS. It also reduces the peak rate, total volume and frequency of run-off

They help to replicate greenfield runoff characteristics from development sites, particularly relevant on high-density schemes

In fact, they can handle run-off from



Catchment pond.

roof drainage and adjacent impermeable surfaces, as well as rain falling on the permeable/pervious area.

Both concrete block permeable paving and pervious concrete can also be effective at removing pollutants from runoff to improve water quality.

Moving forward

Concrete masonry suppliers and ready mixed concrete producers across New Zealand have a range of products that consultants can utilise in SuDS, whether that be for a paved courtyard or a car parking zone.

Decision makers involved in planning, design and construction should look seriously at SuDS as a step change in the holistic management of surface water that will ensure a more sustainable built environment for urban areas.

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Stormtech to make waves with new drainage solution

Architectural drainage designer and manufacturer, Stormtech, has launched its first aluminium grate.

Designed to provide an affordable, high performance drainage alternative for residential and commercial bathroom applications, the new Stormtech Wave Grate is a superior anodised aluminium solution designed and manufactured in Australia.

Featuring a wave pattern previously unseen in the market, Wave Grate is certified under WaterMark WMTS:-040:2021 to comply with the Plumbing Code of Australia, and exceeds Australian Building Standards for quality and safety.

To ensure Wave Grate meets the highperformance expectations of all Stormtech products, an insulator has been invented to ensure the aluminium grate and stainlesssteel channel are separated to eliminate the potential for corrosion.

Wave Grate features an easy-to-clean grate design with a silver, brass/gold or satin black finish, and is available in modular kits, made-to-length, and fixed-length units in uPVC and stainless-steel channels.

Stormtech managing director Troy Creighton says Wave Grate will change the game for modern drainage, and provides architects, specifiers and industry professionals with a solution for those looking for a high-end product at a midrange price. "It is designed and manufactured in Australia, and will give excellent performance suited to harsh environments," Creighton says.

"Everything about the Wave Grate is aimed at making life easier. It is comfortable to walk on, and more aesthetically pleasing in a bathroom as you can't see dirt in the channel, whilst maintaining high flow rates.

"It's resistant to corrosion and will never fade. The design also provides a safe wet



area finish as it 'grabs' water using surface tension and keeps it off the grate."

Mr Creighton says Stormtech has been waiting to launch a wave grate design for decades.

"When Stormtech started designing sanitary drainage solutions, extruded aluminium channel was, and still is, deemed not to be a suitable material for sanitary drainage when used in contact with cement or concrete.

"While our stainless-steel grate designs are known all around the world, it wasn't until we had the legal and technical design problems solved, enabling us to apply for the assurance of WaterMark Certification, that we could finally make the Wave Grate a reality for those seeking a mid-range product with superior performance and style," he says.



About Stormtech

Stormtech is an awardwinning, Australian-owned, family business based in the New South Wales south coast town of Nowra.

Established in 1989, Stormtech has been providing inspiring architectural drainage solutions to architects and designers for the past 30 years.

Used in bathrooms, showers, thresholds, paved areas, driveways, pools and pool surrounds, Stormtech grates and drains are known for sleek design, innovation and practicality.

For more information, visit www.stormtech.com.au.



ACO StormBrixx – Stormwater Tanks



One of the significant **advantages** of ACO StormBrixx SD and HD is their modular design, which allows for easy installation and maintenance. The modules can be connected to create a customised system. This flexibility in design makes it an ideal solution that can fit any site or project requirements.

Another advantage of the tanks is their ability to reduce the overall cost of installation and maintenance. The modular design makes the installation process faster and more efficient, reducing the time required for installation and saving on labor costs. The polypropylene material used in the systems is resistant to UV, temperature changes, and chemical exposure, reducing the need for frequent maintenance and replacements.

In conclusion, ACO StormBrixx SD and HD are innovative, sustainable, and affordable solutions for stormwater management. Their modular design, durability, and ability to store water make them ideal for various construction sites. The systems' ability to reduce installation and maintenance costs and their resistance to environmental factors make them a reliable and cost-effective option for stormwater management.

ACO StormBrixx SD and HD are innovative stormwater tanks designed to provide sustainable, effective, and affordable solutions for stormwater management in various types of construction projects.

Made of recyclable polypropylene, the system is durable, strong, and able to withstand heavy loads, making them suitable for high-traffic areas and industrial sites.

These stormwater management systems are designed with a unique structure that creates void spaces for water storage, which can be used for groundwater recharge and to mitigate the risk of flooding by regulating excess surface water. This means that ACO StormBrixx SD and HD can help in maintaining the balance of the ecosystem while also ensuring a safe and sustainable environment for communities.



ACO StormBrixx





Building futures, one apprentice at a time

Johnny Calley is an impressive figure in the construction industry. Since leaving high school at 16 to start his carpentry apprenticeship with the BCITO, he has founded one of the largest and most respected building companies in Tauranga, and is now the national president of the Registered Master Builders Association. Calley spoke to the BCITO about his journey in the trades, and his tips for building high-performance teams.

ith a practical mindset and a passion for the outdoors, I wasn't the greatest at school. However, I really enjoyed and excelled in woodwork class," Johnny Calley says.

"I saw it as an opportunity for the future, and was fortunate enough to be offered an apprenticeship with a building company that built luxury homes on the Coromandel Peninsula."

Calley started his apprenticeship in 1998 and was qualified in 2002. Back then, training was a mix of classroom and site-based learning, much the same as what will be available for vocational learners under Te Pukenga.

After learning his craft in New Zealand, he moved to London and set up a business specialising in loft conversions and extensions.

Fast-forward 20 years, and he is now the proud owner of Calley Homes, which employs 35 staff. This includes eight apprentices alongside a host of other building, administration and project management people.

"I'm lucky enough to hire about two apprentices a year. Training them is a real win-win, with apprentices learning the practical skills needed for their career, and employers gaining experienced and loyal employees."

Calley Homes is well known for providing great opportunities for its apprentices and supporting them into leadership positions. One of its builders started as an apprentice at age 17, and has worked his way up to become a senior project manager.

"We're fortunate that most of our senior carpenters have been apprentices themselves. They dedicate a portion of their time to teaching our apprentices the skills they need, and the theory behind our work.

"Before our apprentices meet with their BCITO training advisor, we focus on teaching them what they need to know before their upcoming assessments."

Calley says he pushes apprentices to be the best they can be, through taking on extra responsibilities and challenges.

"We always encourage our apprentices to take part in the Master Builders Apprentice of the Year competition. It's a great opportunity to demonstrate their technical knowledge and building craft."

But he is keen to point out that the construction sector is not only about hard work, emphasising that it can also provide a



Registered Master Builders Association president and Calley Homes owner Johnny Calley.

strong work-life balance.

"Most people in the industry leave work at a decent time to spend their evenings with friends and family, and weekend work is rare," he says.

The BCITO needs more people to consider an apprenticeship. For more information and to learn what support is available, visit bcito.org.nz/apprentices.







The 700 pack of Camo Stainless Deck Screws.



The Camo Marksman Tool in action.

Fastener-free deck surfaces looking good!

amo Fasteners are one of the first hidden deck screw fastening system designed to easily and affordably attach pine, hardwood and composite deck boards directly to the substructure, resulting in a fastener-free deck surface.

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A star drive offers more points of contact for better performance, and reduces bit slippage and wear.

An aggressive lower thread pattern provides superior holding power, while the reverse upper thread pulls the board tight to the joist, and provides a clean, finished entry.

A unique trimhead design provides a less visible point of entry. The Camo Marksman Tools automatically establish spacing between boards, and direct CAMO Edge Screws into the edge of the board, leaving a smooth deck surface.

They are available from Senco NZ.

www.senco.com



We've got another great prize to give away to the lucky winner of this month's Building Today Trivia Question — a Camo Marksman Tool and 700 Camo Stainless Deck Screws worth

\$440

Visit www.buildingtoday.co.nz, hit the Competitions link and correctly answer the Building Today Trivia Question to go into the draw to win this fantastic prize!

BUILDING TODAY

Congratulations go to Tony Clark of Whangaparaoa, who won last month's Starrett recip blade set, barbecue knife set and hole saw set prize, worth \$690

Ensure you have a plan in place when disaster strikes



Disasters can strike at any moment, and they can be devastating to small businesses. Andy Burrows

— aka The Trades Coach — outlines the process of putting a Disaster Plan in place for your business
to ensure you're prepared for when the worst happens.

At the time of writing, we had just emerged from the worst storm to affect New Zealand in decades.

Although we had some warning of this event and had time to prepare, often disasters can occur quite suddenly.

The construction industry is particularly vulnerable to disasters because of the nature of the work, which often involves working with heavy equipment, hazardous materials, and unpredictable weather conditions.

A disaster plan can help minimise the impact of disasters on your business and keep your team safe. The following outlines disaster planning for small construction businesses.

Identify potential risks

The first step in disaster planning is identifying potential risks. Some of the common risks in the construction industry include natural disasters such as tropical cyclones, floods, accidents on construction sites, and theft or vandalism.

Once you have identified the potential risks, you can start developing a plan to mitigate their impact.

Develop a comprehensive disaster plan

A comprehensive disaster plan is essential for any small business, including construction businesses. The disaster plan should include the following:

- Emergency contact list: The emergency contact list should include the contact information for all employees, clients, suppliers and emergency services. Ensure this list is up to date and easily accessible.
- Evacuation plan: If you are working on a big site, an evacuation plan is crucial for ensuring your team can safely evacuate the premises in case of an emergency. The evacuation plan should include a map of the building and the surrounding area, evacuation points, and meeting points.





STRESS

Is that what you went into business for?

If not, call Andy 027 688 6721 www.tradescoach.co.nz

- Communication plan: A communication plan is necessary to ensure that everyone is on the same page during an emergency. The plan should include a chain of command, communication channels, and back-up communication methods.
- Business continuity plan: A business continuity plan outlines how you will continue to operate during and after a disaster. The plan should include a back-up location, alternative suppliers, and a plan for how to resume operations as quickly as possible.
- Data protection plan: One of the most valuable assets in a business is your data. Ensure you have all documents, plans, customers and supplier details securely backed up. Consider a physical back-up and also a cloud-based back-up.
- Insurance and financial contingency plans: Insurance and financial contingency plans are critical for ensuring your business can recover after a disaster.

Ensure that your insurance coverage is up to date, and that you have enough funds to cover the cost of recovery.

Train your employees

Once you have developed a disaster plan, it is essential to train your team on how to implement the plan.

All team members should be familiar with the emergency contact list, evacuation plan, communication plan, and safety procedures. Regular training will ensure everyone knows what to do in case of an emergency.

Secure your property

Securing your property is essential to prevent theft or vandalism. Ensure all tools and equipment are properly secured when not in use.

Additionally, you can install security cameras, fencing and lighting to deter potential thieves.

Review and update your disaster plan regularly

Your disaster plan should be reviewed and updated regularly to ensure it is up to date and effective. Review the plan annually and after any significant changes to your business operations, such as a change in location or new team members.

In conclusion, disaster planning is essential for small construction businesses. Identifying potential risks, developing a comprehensive disaster plan, training your team, securing your property, backing up your data, and regularly reviewing and updating your disaster plan are crucial steps to ensure your business can recover after a disaster.

Remember, disasters can strike at any moment, and being prepared can make all the difference.

Insolvency and the Construction Contracts Act (CCA) 2002

Greenwood Roche Projects Lawyer Jordan Ropati focuses on whether the pay now, argue later provisions continue to apply and are enforceable when the party that issued the payment claim has become insolvent.

Summary of pay now, argue later under the CCA

The pay now, argue later provisions of the CCA require the recipient of a CCA compliant payment claim to pay the amount claimed if the recipient fails to issue a CCAcompliant payment schedule within the time frame required under the CCA/the contract.

If no payment schedule is issued within the time required, the amount claimed becomes a statutory due debt under the CCA

Section 79 of the CCA prevents the recipient asserting counterclaim, set-off, or cross-demand as a reason against paying the amount claimed in the payment claim.

The effect is the recipient must pay the debt and only subsequently seek to assert the counterclaim, set-off, or cross-demand in a later payment schedule, or refer the matter to adjudication for resolution — hence pay now, argue later.

Where there is no insolvency, the courts have taken a strict approach in enforcing the CCA provisions, and have rejected merit-based arguments as a reason to not enforce payment claims.

Party issuing payment claim becomes insolvent

The insolvency of the company issuing the payment claim will commonly result in the insolvent party being treated in breach of contract, and the other party seeking to resist paying an amount otherwise to the insolvent party.

Where debts are due under the CCA, this can result in insolvency practitioners taking enforcement action to recover the debt on the basis of the pay now, argue later provisions of the CCA (which can include issuing a bankruptcy notice/statutory demand, or going further and launching bankruptcy/winding up proceedings).

The approach of the courts has been mixed as to the applicability of the prohibition against raising counterclaim, set-off, or cross-demand in the CCA where the party issuing the payment claim has become insolvent:

(a) The Court of Appeal held in Laywood & Rees v Holmes Construction [2009] (Laywood) that prohibition in section 79 of the CCA applied in respect of bankruptcy



Jordan Ropati

notices under s 19(1)(d) of the Insolvency Act 2006 (Insolvency Act) and statutory demands under the Companies Act 1993 (the Companies Act).

The rationale for the court's decision is that not giving effect to s 79 of the CCA in the context of an application to set aside a bankruptcy notice or a statutory demand would undermine the efficacy of the enforcement process under the CCA and the purpose of the CCA (irrespective of hardship to the counterparty).

(b) The High Court held in Concrete Structures Ltd v NMHB Ltd [2020] (Concrete Structures) that an owner could raise counterclaims and set-off in liquidations proceedings pursuant to s 310 of the Companies Act.

The court also held that a court may, at its discretion, refuse to adjudicate the debtor bankrupt (s 37 Insolvency Act).

The High Court distinguished this scenario from Laywood on the basis that:

(i) this case concerned the question of setting aside a bankruptcy/winding up order rather than setting aside a statutory demand/bankruptcy notice (the High Court noting that Laywood was specifically concerned with the latter and not the former);

(ii) with a company going into liquidation, the claim of the creditor is applied in opposition with the claim of the company against the creditor, producing one single net obligation and extinguishing and replacing the earlier separate causes of action by one single obligation between the company and the creditor;

(iii) the pay now, argue later policy of the CCA is purely procedural, and does not bar a claim by the payer against a payee but simply defers it to be dealt with in a later proceeding;

(iv) the procedural pay now, argue later arrangements of s 79 of the CCA are trumped by the substantive effect of s 310 of the Companies Act.

The case law appears to be divided on the ability to raise counterclaim, set-off, or cross-demand at the liquidation/winding up proceedings.

It will be interesting to see whether higher courts will adopt the High Court's approach in Concrete Structures or extend the approach in Laywood to liquidation/winding up proceedings.

To avoid having to consider this issue, it is important to ensure that payment schedules are issued in a timely and efficient manner to guarantee your ability to argue a payment claim.

Note: This article is not intended to be legal advice (nor a substitute for legal advice). No responsibility or liability is accepted by Greenwood Roche or *Building Today* to anyone who relies on the information in this article.

Dealing with that tough 'informal' chat

Tradie HR director Leigh Olsen says if tough conversations with employees need to happen then they need to happen sooner rather than later.

A common phone call I receive from my clients is, "Leigh, my team member's been stuffing up for a while. I've tried so many things, but I just don't know what else to do."

My reply is always the same — it's time for a chat with the employee. It might feel tough for both sides, but it's a conversation that needs to happen, and soon!

Putting off 'the chat'

For many of us, having the tough chat is not something we're keen to do, and we spend many nights leading up to it tossing and turning, and losing a lot of sleep over it.

A lot of business owners sit on it for too long, letting it impact their daily lives.

At the same time, this delay can often impact the rest of their team as they have an increase in their own level of frustration at you and the employee, becoming increasingly annoyed that the behaviour is not being dealt with.

First up, these reactions are normal! We often view a difficult conversation as having so many pieces to the puzzle that it instantly overwhelms us, and so we just sweep it under the carpet.

However, it's not going to go away, and the sooner we can find the courage to take on this conversation the better. The key is to know how to take on the conversation.

Before the conversation

There are key things you can do in advance to lessen how tough the conversation is going to feel:

• Prepare: Stop and ask yourself what specifically do you want to give them feedback on? What evidence do you actually have?

Often these answers provide clarity on exactly what's going on, and filter out what's not relevant to the conversation.

One team manager discovered in their preparation that their issues with their team member had been building up for

so long that, suddenly, it had become quite hard to articulate exactly what they wanted to say.

By asking these questions, this manager could identify the one key issue that was the catalyst for everything else — not turning up on time each day.

This one piece of feedback was the key part of the tough conversation, but kept it focused, and made it identifiable and attainable for the team member receiving the feedback.

• Plan to make it safe: Often when something has been on your mind, and it's been building up for a long time, we may suddenly think, "right, let's do this!" You gain a burst of courage, and decide to head straight into the conversation.

Pause in this moment and take the time to consider if it is safe for both you and the person receiving the feedback. Are there others around that may listen to this conversation? If so, find a quiet place that provides a respectful environment where you can actually hear each other, and is private.

Pause to take the time to look at what's been happening recently for them and you. Check in with your employee to see where they might like to meet, and let them know that you would like to have a chat with them.

Pausing and catching your breath is key to lessening the toughness to any conversation. It is also really important for managers to ensure they are acting fairly and reasonably in all dealings with their staff.

I've seen managers let behaviours go for some employees and yet not address it with others — fairness and consistency are the key here.

Having the chat

Once you're in the chat, there's a few key things to actively demonstrate to keep it on track in a respectful way that empowers you and your employee.

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• Be specific and simple: Say clearly and as simply as possible exactly what you see as the issue. Keeping to the facts and stating it in just a couple of statements is all you need, and often removes the added emotion and fluff that we often want to add.

But remember, we're adults too, and by challenging ourselves to keep it specific and simple, we keep away from any child-like behaviour.

• Listen: Sounds like an obvious one, but often when we want to give tough feedback, we expect the person to receive it, nod in acknowledgement and walk away and apply it.

Quite simply, that's not fair. This is possibly the first time they've heard of this feedback, so get ready to listen to their response, and really listen to their response.

What you may find in this are some aspects to your own conclusions that you hadn't considered. You might also receive some feedback that is challenging for you, so remember to check your own emotions and stay calm.

One client actively listened to their employee, and what they discovered were issues at home that they were completely unaware of. The result was a complete change in their own assumptions. Together, they re-worked a better solution to reduce the issue of lateness, allowing the employee to start and finish one hour later.

• Confirm what's next: Never leave the chat hanging. Always come to a conclusion on what's going to happen next, and when you're planning to check in about any agreed change. This keeps both sides accountable and also helps to keep the trust between both of you.

One conversation doesn't create change in behaviour — it takes a series of conversations.

Often, heading into a tough chat can increase the nerves. So if you need some extra help, grab your phone and start with an easy chat with us at Tradie HR to settle the nerves, and help you come up with a successful plan on how to tackle the conversation.

Note: This article is not intended to be a replacement for legal advice.

Building Consents Information

For all authorisations, January 2023

Dwellings	\$1,312,918,149	Total All Buildings	\$1,802,791,659
Domestic Outbuildings	\$14,877,363	Non-building Construction	\$30,988,852
Total Residential	\$1,327,795,512		
Non-residential	\$474,996,147	Total Authorisations	\$1,833,780,511

Number of new dwellings consented

	Jan 2023	Dec 2022	Jan 2022
Far North District	30	47	21
Whangarei District	39	32	49
Kaipara District	10	12	13
Rodney District	106	63	67
North Shore/AlbanyWards	314	140	120
Waitakere Ward	134	168	204
Auckland Wards	150	391	372
Manukau/Howick Wards	165	315	196
Manurewa-Papakura Ward	144	165	193
Franklin Ward	51	60	50
Thames-Coromandel District	23	25	19
Hauraki District	6	9	10
Waikato District	40	52	86
Matamata-Piako District	35	26	21
Hamilton City	75	110	60
Waipa District	35	60	65
Otorohanga District	5	3	0
South Waikato District	2	1	7
Waitomo District	0	1	1
Taupo District	24	33	33
Western Bay of Plenty District	31	27	28
Tauranga City	56	53	63
Rotorua District	7	31	26
Whakatane District	4	5	4
Opotiki District	6	7	0
Gisborne District	13	8	12
Hastings District	16	25	19
Napier City	62	15	32
Central Hawke's Bay District	4	7	8
New Plymouth District	104	16	34
Stratford District	2	6	5
South Taranaki District	0	5	10
Ruapehu District	3	0	2
Whanganui District	13	9	10
Rangitikei District	1	3	1
Manawatu District	11	9	10

	Jan 2023	Dec 2022	Jan 2022
Palmerston North City	17	23	11
Tararua District	3	7	5
Horowhenua District	57	40	29
Kapiti Coast District	49	39	13
Porirua City	8	5	16
Upper Hutt City	27	43	31
Lower Hutt City	23	169	62
Wellington City	66	192	26
Masterton District	28	8	10
Carterton District	3	9	8
South Wairarapa District	7	11	0
Tasman District	25	30	27
Nelson City	24	25	30
Marlborough District	15	30	7
Kaikoura District	2	0	2
Buller District	6	6	3
Grey District	3	2	6
Westland District	1	2	1
Hurunui District	24	22	5
Waimakariri District	32	80	66
Christchurch City	287	436	270
Selwyn District	129	136	126
Ashburton District	26	31	25
Timaru District	21	4	19
Mackenzie District	3	2	10
Waimate District	5	1	4
Waitaki District	9	12	9
Central Otago District	28	17	15
Queenstown-Lakes District	53	76	63
Dunedin City	52	22	53
Clutha District	3	5	5
Southland District	10	13	6
Gore	3	2	1
Invercargill City	12	18	17
Area Outside TA	0	0	0
Total	2777	3457	2833

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