New Zealand Institute of **BUILDING SURVEYORS**

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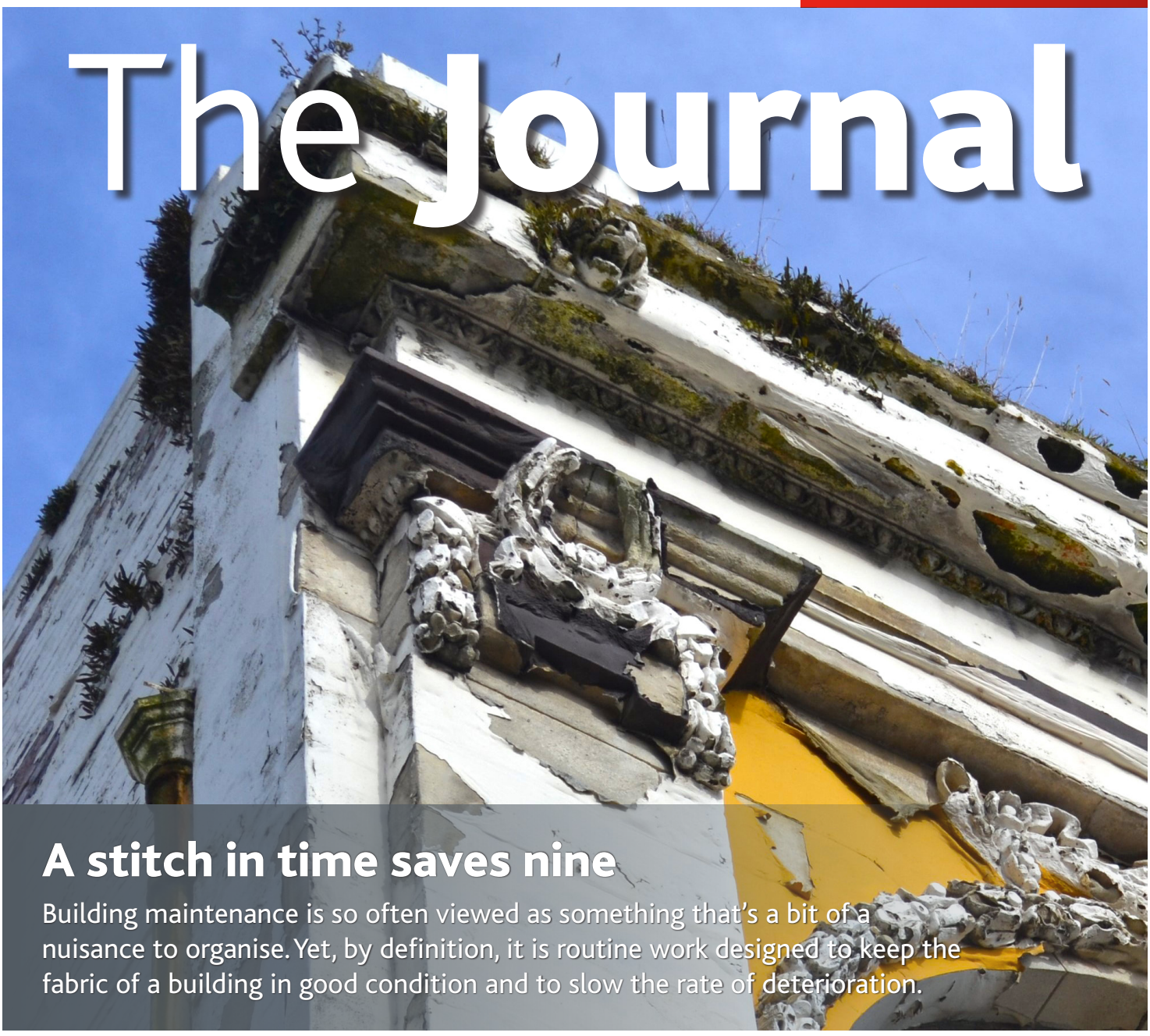
The Journal



A stitch in time saves nine

Building maintenance is so often viewed as something that's a bit of a nuisance to organise. Yet, by definition, it is routine work designed to keep the fabric of a building in good condition and to slow the rate of deterioration.

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CONTACTS

President: Heather Crilly

Executive Assistant:
Saskia Shelton
Email: office@buildingsurveyors.co.nz

NZIBS Contact: New Zealand Institute of Building Surveyors,
PO Box 1283, Dunedin, 9045

Phone: 0800 113 400

Email: office@buildingsurveyors.co.nz

Layout: Heysmartypants Design
www.heysmartypants.co.nz

Editor: Robin Miller

FROM THE PRESIDENT

NZIBS PRESIDENT
Heather Crilly

The year ahead

Well, it has been an interesting start to the New Year with COVID creating further disruption and uncertainty within the construction industry generally, as I'm sure we are all noticing across the country.

Uncertainty is still, however, making travel decisions difficult, as we have found when trying to rearrange training and executive and chapter meetings but hopefully, we are heading in the right direction now.

The good news is that now we are in Phase 3 of the Omicron response only household contacts have to isolate and only for seven days, so we can all keep functioning. But it looks like service issues as staff either get sick or are identified as a close contact and businesses face staff shortages will continue to disrupt most people's working and private lives for some time. Other restrictions that have eased are the removal of vaccine pass requirements from 4 April, and removal of restrictions on outdoor gathering limits and a lifting of indoor gathering limits to 200.

There is still help available via the Ministry of Health helpline on 0800 358 5453 for those requiring any assistance in relation to current restrictions and guidelines (I don't think they can tell you when Gib or timber framing might be readily available again though!).

Looking forward, times seem to be busy in the industry despite, or because of, all the disruption. The National Construction Pipeline Report 2021, published on 6 December, and based on building and construction forecasting by BRANZ, and data from Pacifecon NZ Ltd on known non-residential building and infrastructure intention, indicates that construction activity has held up well during the COVID-19 pandemic and is expected to continue to do so. Key findings include:

- Residential construction is expected to keep growing through to 2023.
- Non-residential activity is expected to grow over the next six years to reach 2019 levels again.
- Infrastructure activity is expected to increase steadily over the next six years

So, there should be plenty for us to do out there for a while.

As I'm sure you are all aware, the new Building Code changes come into effect in November this year, including the introduction of new climate zones, upgrade of insulation requirements for residential, small buildings and large buildings, natural light for higher density housing, and new weathertightness testing for higher-density housing. Hopefully these changes will mean vast improvements for our new building

stock, but we may expect a few headaches on the way given the extent of some of the changes.

Other new legislation of interest is the *Building (Building Products and Methods, Modular Components, and Other Matters) Amendment Act 2021* which is the first phase of a suite of reforms to building legislation, introducing mandatory minimum information requirements for building products, enabling the creation of a new voluntary certification scheme for modular component manufacturers, and paving the way for a strengthened product certification scheme.

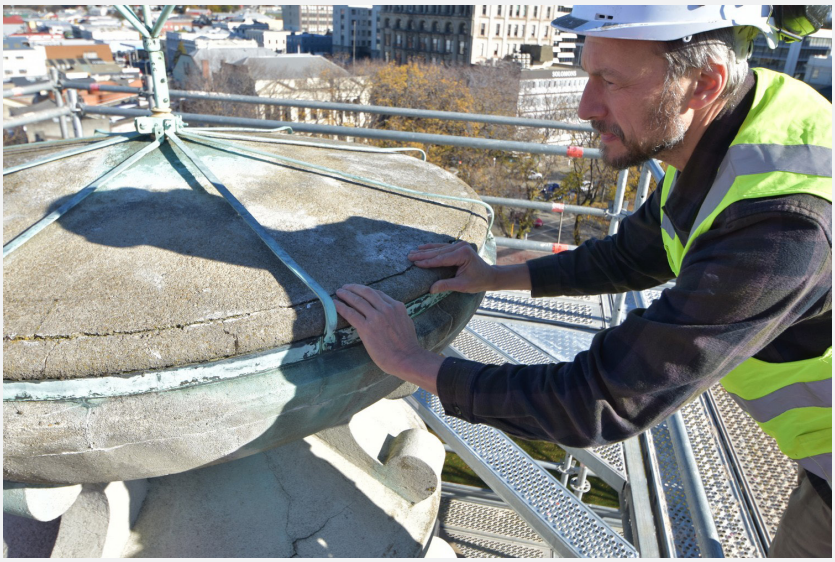
Ministry of Business Innovation and Employment have also released new guidance in relation to Tiny Houses which may be of interest to many of you. For details, visit **www.building.govt.nz/assets/Uploads/getting-started/tiny-houses/tiny-houses-guidance-mbie.pdf**.

On a more global note, amazingly Habitat for Humanity have now 3-D printed a house in concrete in just 28 hours, so who knows what changes new technology might bring to the construction industry over the coming years.

I hope everyone enjoyed our webinar series last year, which culminated in Robin Miller's Building and Heritage Maintenance just before the Christmas break – all the webinars are still available to watch online for anyone who missed them, and more will be coming this year so we can all get some CPD points while we await a face-to-face event going ahead!

In the meantime, I hope you are all keeping busy and looking forward to the Tauranga conference if things return to anything approaching 'normal'. ■

EDITOR
Robin Miller
Director of Origin Consultants Ltd
robin@originteam.co.nz



Building Maintenance

In December 2021, NZIBS concluded its 2021 webinar series with an event about building maintenance and heritage buildings.

The panel comprised Peter McGrouther (Projects and Asset Manager), Phillip Hartley (Chartered Building Surveyor), Marcus Wainwright (Heritage Stonemason), and myself. This article is based on some of the discussions that took place during the webinar and, whilst it was focused towards old/heritage buildings, many of the principles are equally applicable to the more general New Zealand building stock and, hence, are worthy of wider dissemination.

Building maintenance is so often forgotten about entirely or, at best, viewed as something that's a bit of a nuisance to organise and then only when surplus funds are available. Yet, by definition, it is simply periodic or routine work designed to keep the fabric of a building in good condition and to slow the rate of deterioration. It differs from 'repair' in that it is the process of regular care aimed at pre-empting decay and failure from which the need for repair arises. ▶

To follow the old adage, "a stitch in time saves nine". Common sense should, therefore, put building maintenance at the top of every building owner's list of priorities.

The 'quinquennial system' of maintenance has been developed overseas and has been in use for many years for church buildings in the United Kingdom. This is essentially a five-yearly inspection routine that proactively forward plans building maintenance and records what works have been carried out in the preceding period. As well as recording the condition of the building fabric, a quinquennial maintenance report will prioritise future work so that a budget can be prepared, and money can be targeted towards the most essential work to keep the building in good condition. The priorities can be tuned to meet a particular client's needs, but usually run along the lines of 'urgent', 'within 18 months', 'within 5 years', and then, those works that are 'desirable' rather than essential.

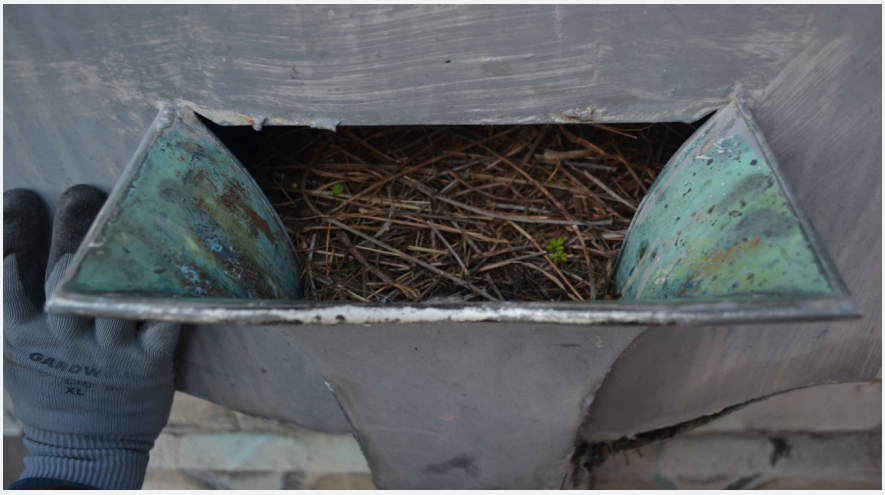
There are many benefits of the quinquennial system, including the ability to plan and budget ahead and to build up a detailed picture of a building and its repairing needs and, of course, its weaknesses that reveal themselves over a long period of time.

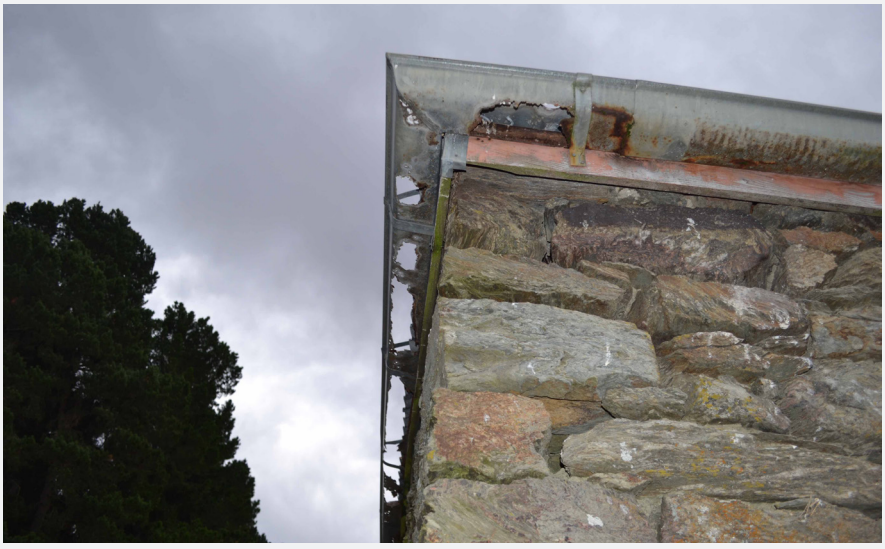
The system hasn't become common place yet in New Zealand but, as the inspection and reporting procedure requires considerable knowledge and experience of condition assessments, materials, and building defects, it is a potentially good source of work for NZIBS Registered Members when it does start being used here.

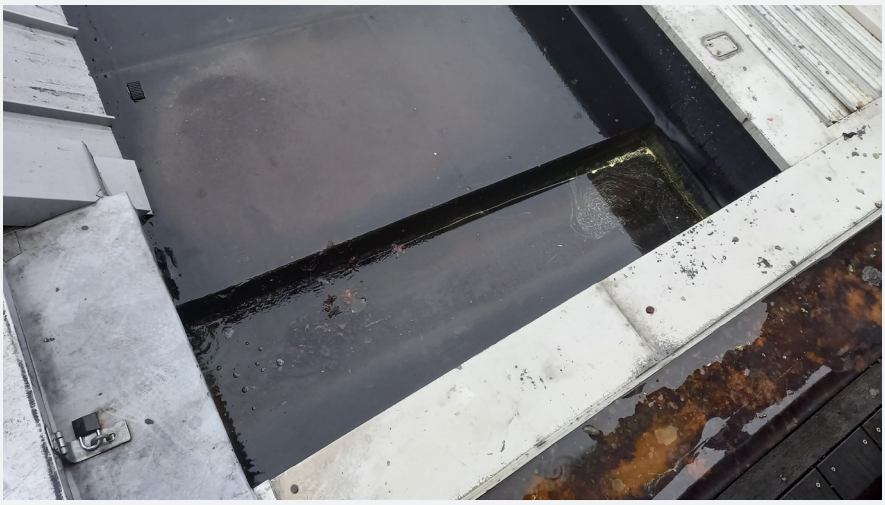
Two essential themes that came out in the maintenance webinar were (1) the need to identify, and **understand,** defects and the maintenance needs of a building and (2) the need to record what works are done. With regard to the first, it is not uncommon to see generic maintenance specifications given to contractors that do not specifically address the maintenance item in question, such as the use of the now almost ubiquitous high-pressure water blaster for any form of cleaning. Recording of what is done is a must as, if forgotten, there is the risk of having to reinvent the wheel for a maintenance item that has worked well or the risk of repeating the errors of the past if it has not. This information needs to be documented in some form of asset management register so that it is not lost and remains available to future asset or building managers and their maintenance teams.

If there is one part of a building that gets most neglected from a maintenance point of view and yet provides probably the biggest risk to the building's condition, it has to be **rainwater fittings**. Blocked parapet gutters, scuppers or downpipes are so often found to be the source of water ingress into a building. They can be difficult to see and are, thus, easily forgotten until problems manifest themselves inside the building. By this time, substantial problems of timber decay can have occurred within the concealed roof, floor, and wall areas. Problems may also only become evident some distance away from the actual source of a leak as water can run down inside walls and other building cavities unnoticed.

Much easier to see, but still often ignored, are defects to eaves guttering. There can be a multitude of these, including gutters that are blocked by leaves, etc., gutters that are poorly aligned and run water the wrong way, gutters that have rusted through, and gutters that are far too small for their water catchment







areas. It's not unusual to see sections of guttering are missing or gaps have opened up to mitred joints. Despite water staining and green organic growths on the wall cladding below, basic maintenance of these critical building components can often be lacking for years before an associated problem inside the building drives remedial action.

Downpipes have their own set of issues. They can be damaged close to ground level where vehicles have hit, or people have kicked them. If poorly affixed to the wall, they are often left hanging loosely or missing altogether. Downpipes made of lead or copper may be stolen leaving the outlet to the gutter or hopper head above pouring water down the wall. Ferrous metal downpipes often rust and split on the back face against the wall and leak whilst appearing intact from the front. And then, how many times do you see downpipes reducing in size/capacity as they come down a building, despite an added number of inlets, or a downpipe that has worked in collecting a roof's rainwater only to pour it on the base of a wall because it has not been connected up to a sewer or soak pit? That water may seep in the building via the foundations or ground floor void.

The consequences of even a small amount of water being allowed to soak into a building over a period of time can be significant. Timber decay can occur within concealed wall, floor, and roof framing and, from time to time, the right conditions can exist for some spectacular fungal outbreaks to occur. Not only can remedial works be very expensive and disruptive, but the financial implications of a maintenance issue can be exasperated by part of a building becoming unusable or unlettable and, ultimately, its capital value could be affected.

The adoption of a periodic building maintenance inspection and reporting process into the management of a building or other built asset really is common sense. A maintenance inspection routine may compromise a series of checks on the health of a building from:

- the owner or manager having a quick weekly or monthly look at certain vulnerable building components; to
- ticking off items on a simple maintenance checklist twice a year: and then
- having a Registered Building Surveyor carry out a five-yearly inspection and create a prioritised list of works needed in the next 5 years and a review of what's been done in the last.

Such a system might take a bit of initial setting up and some administration over the years, but its value in the long-term in keeping an asset in good (and saleable) condition may be substantial.

ANDREW BARSBY
BUILDING SURVEYOR
Dunedin Office Manager, Origin Consultants Ltd
andrew@originteam.co.nz

Building stone: testing for durability

Building stone, or dimensional stone, is a natural product. As such, there is a risk that it may have natural flaws, variations and defects that affect how it performs in a building.

A variation may be as minor as a slight colour difference or as major as a serious structural fault. In worse case scenarios, stone may need to be replaced in as little as 10 years. It is important to know, as far as practicable, that a building stone is going to perform as expected and is durable.

The qualities of a building stone, including its durability, are determined by how it was formed. There are three stone types corresponding to how the stone was created:

- **Igneous** – formed by the cooling of magma.
- **Sedimentary** – formed by the accumulation of existing fragments of rock, or biological material (shells, for example), or by the chemical precipitation of sediments.
- **Metamorphic** – the alteration of igneous or sedimentary stone by intense heat and pressure.

Dense stone types, such as igneous and many examples of metamorphic, are generally very durable. Basalt (bluestone) and granite are good examples of dense stone types that are highly durable. There is little concern that buildings constructed from this type of stone will suffer from extreme weathering and deterioration.

Sedimentary stone is generally the least dense stone type. This is because it is porous, having voids amongst its constituent particles due to the way in which it was formed. Being permeable means that the pores within the stone are interlinked and water can migrate through the stone relatively easily. It is the migration of water carrying soluble salts that is the main factor in a building stone deteriorating.

> **“There is usually a strong correlation between density, water absorption, and resistance to salt attack.”**

Soluble salts are ionic compounds that dissociate their constituents in a solvent such as water. In essence, they dissolve, move whilst in solution and then re-crystalise. Sedimentary limestones are inherently susceptible to soluble salts as they largely consist of calcium carbonate, which will break down when in contact with acids converting them to sulphates; these are the most common salts found in masonry. There are also many other sources of damaging salts which can find their way into a building stone: those naturally occurring in ground water; sea spray near the coast; those delivered by flooding or defective underground pipes; those that are derived from fertilisers or sands used in mortars that haven’t been thoroughly washed; pollution; acid rain; and modern cements.

There are many factors that can lead to the deterioration of a building stone, but it is the action of salts

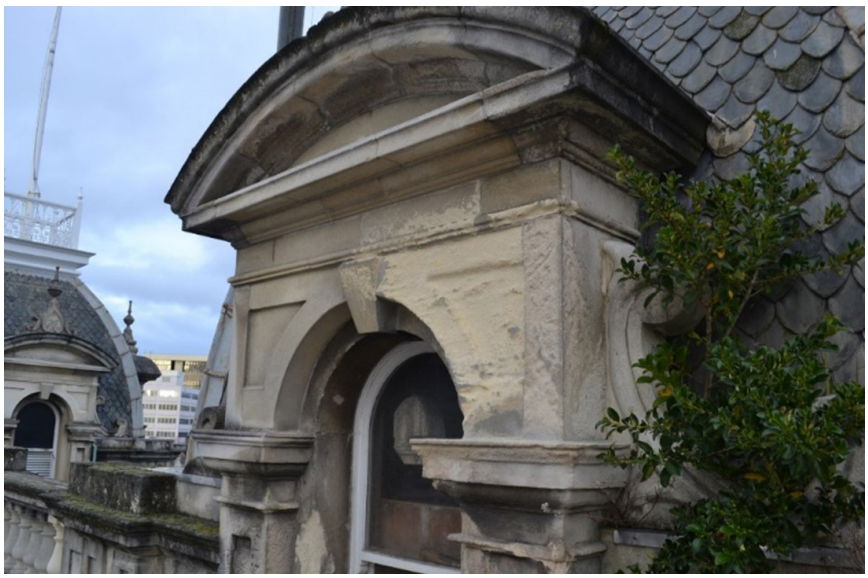
that is the primary mechanism when considering durability. At drying zones, which are typically at or just beneath the surface of the stone, salts in solution form crystals which have the ability to expand within the pores of the stone, blowing them apart. Some examples are shown in the photographs.

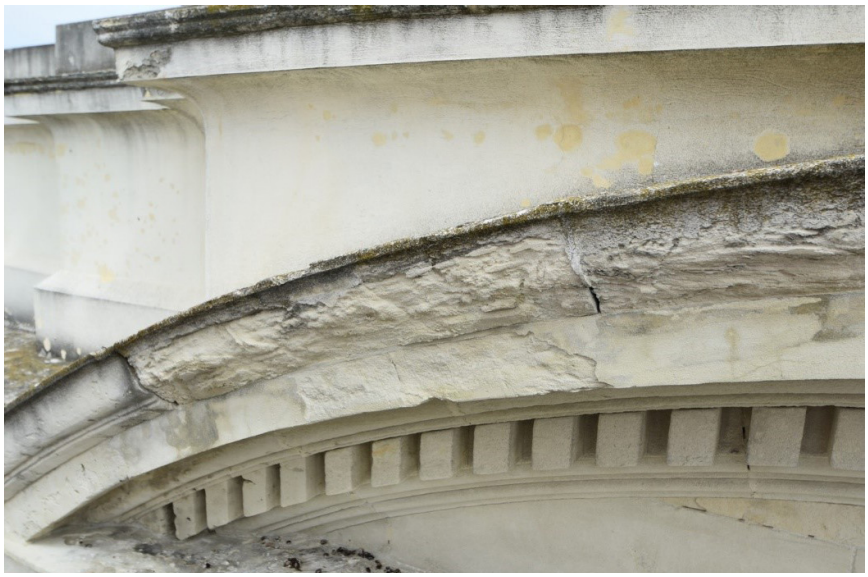
Testing for durability is done by emulating this natural process of salt attack, and is called the resistance to salt attack, or durability test. In an accredited materials testing laboratory, 50-millimetre cubes are saturated in a solution of salt and then dried in an oven. This process is repeated over 21 cycles to represent long-term weathering in a built environment. After the cycles of wetting and drying are complete, a comparison in weight is made between the cubes at the start and at the end of the process. The measurement is taken in terms of the percentage of weight loss. A weak stone will have a high percentage of weight loss (material lost by the action of salts) than a more durable stone.

There is usually a strong correlation between density, water absorption, and resistance to salt attack. Because the resistance to salt attack test requires considerable time and cost, testing for density and water absorption alone can be a quicker way of establishing the stone's durability. This can be done only after the parameters have been discovered through rigorous testing and a quality assurance programme has been set up.

Oamaru stone is a good example of a porous sedimentary stone that is susceptible to weathering and salt attack. Oamaru stone has been formed at a relatively shallow depth, without the intense pressure that creates the denser sedimentary stones. This being the case, there are examples of very durable building stones being produced from the region. To be confident that a stone is going to be durable for a building project, testing is highly recommended. For conservation work on buildings with high heritage value, testing should be considered a prerequisite. ■

Cubes of stone after resistance to salt attack testing. The stone in the centre has failed and is not considered durable.





Weathering Oamaru Stone

Carpenter puts tools to work as a building surveyor

I cannot say for sure if I would have considered a career change if untimely major surgery hadn't forced a massive rethink.

SCOTT DUNNETT

REGISTERED BUILDING SURVEYOR

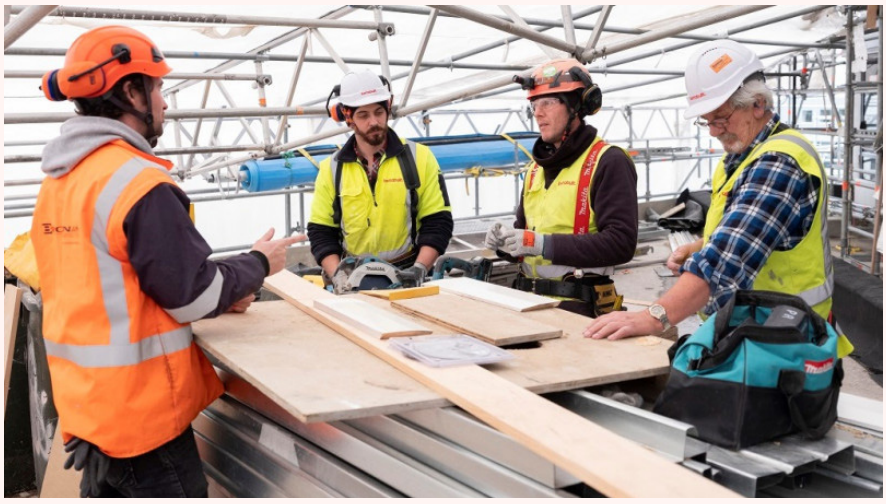
QSPEC CONSULTANTS

scott@qspec.nz

In my early forties, working physically hard on the tools and operating my own construction company in Hawke's Bay, I was forced to think about my long-term future and that of my family – which included three young daughters. As it's turned out, my transition from the outdoor building environment to an office and a computer was not as difficult as I expected. Just a transfer of skill sets.

The steep learning curve to becoming a Registered Building Surveyor was an enjoyable process, even if it involved heading back to the classroom after some 25-plus years since my apprenticeship block courses. My journey began in 2015 successfully completing the NZIBS Core Module Training, and then gaining a Diploma in Building Surveying in 2017. It did involve some financial and social sacrifices to undertake the training, with time away from my family and our building business but becoming a Registered Building Surveyor was the reward for the effort.

When I left school at the end of 1987, it was probably a foregone conclusion that I would head into the trades. My father was a craftsman builder/joiner, and I also have a string of cousins and uncles in the building industry throughout New Zealand. By 1992, I had completed my carpentry apprenticeship and obtained a Trade Certificate in Carpentry.



After completing an 8000-hour apprenticeship – and with a Trade Certificate under my belt – I headed overseas, working, and playing rugby in South Africa and Scotland. On my return to Hawke's Bay, I worked as a carpenter for a medium-sized commercial construction company before establishing my own building business. In between times, I have been fortunate enough to build a couple of homes for my family.

During my rethink after heart surgery, I initially started studying for a Diploma in Quantity Surveying, but in what has turned out to be a stroke of luck, a project manager friend suggested I should consider building surveying as a profession. Almost overnight, and after a discussion with the then general manager of NZIBS (Sally Dunbar), I changed focus.

It was really her enthusiasm. She promoted the Institute programme and two weeks later I was flying to Auckland for an interview to become a Transitional Member. For the next few years, I juggled building and running our construction company with study, attending March Training Days, CPD events, and the annual conferences.

The NZIBS Core Module Training was well suited to my learning style; the study information for the core modules is sent a couple of weeks ahead of the block course, which gave me time to study at night, then there would be between half a day to two days in the classroom before an exam.

I enjoyed the learning and the study process to become qualified a NZIBS Registered Building Surveyor. The short courses were ideal as I could

undertake them at my own pace. My background as a building contractor set me up soundly to transition into becoming a building surveyor. As a carpenter, you generally become a good problem solver.

As part of the mentoring programme to become an NZIBS Registered Building Surveyor, I was very fortunate to receive two years of support and advice from my mentor, Steve Ford, in Tauranga, who would review my technical reports. We would also catch up at CPD events and other NZIBS events and we still keep in touch regularly (I think I still owe Steve a lunch to celebrate my becoming a Registered Building Surveyor – don't tell him!).

During a three-year transition phase, I remained on the tools, training apprentices, and completing a range of building projects while gradually developing my reputation as a building surveyor.

The knowledge and experience I gained from industry professionals who presented at courses and conferences was invaluable. The support from the Institute and the people I met along the way has been amazing. Some of the people I met have remained friends.

My advice to others considering the switch to building surveying is to look at what's involved in the training. Once you get into it, you may stumble a few times but like any profession, it's about surrounding yourself with good people. I was lucky enough to have good people in the Institute that I could call up and ask for advice.

As a building surveyor, we must be impartial and independent. Often, we have to deliver bad news to our clients, but solving their problems is definitely rewarding. I look forward to giving back to the NZIBS membership in reciprocation of the support I received.

CHRIS WRIGHT
HEAD OF HUMAN RESOURCES
BAKER TILLY STAPLES RODWAY (AUCKLAND)
chris.wright@bakertillysr.nz

Employers and COVID-19 – what happens if staff are infected?

We are now well advanced in Phase 3 of the Government's response to Omicron, and there has been a myriad of changes to isolation and testing requirements.

Here we have put together some general guidance for employers around managing self-isolation in the workforce at this phase and what government assistance is available. It is important that businesses continue to manage the potential impact of isolation on their workforces.

What are the current rules around isolation?

The current requirements are:

- If a **person tests positive for COVID-19** they will be required to isolate at home for seven days while they recover and must be symptom-free before being released.
- **Household members of a positive case** are required to isolate for seven days from the day the first positive case received their test result, and must take a test on days three and seven. If all tests are negative, they can leave isolation at the same time as the positive case. If they test positive at any point, they must continue to isolate for a further seven days. Household contacts who have already had the virus ("recovered cases") will not need to isolate if they become a household contact within 90 days after having the virus.
- If **someone is in contact with a positive case** (or who would have been a close contact previously) but does not live with that person, there are no isolation requirements. They should however monitor their symptoms.

What government support is available?

Employers have access to the following two government support schemes to help pay employees who are required to isolate. In doing so they have to complete a Declaration which requires they meet certain obligations.

COVID-19 Short-Term Absence Payment

This scheme changed recently with the use of Rapid Antigen Tests (RATS) being adopted as the primary means of identifying positive cases. In short, you cannot get the Short-Term Absence Payment when your employee takes a RAT because the results are almost immediate (approximately 20 minutes). If your employee tests positive, you will be able to apply for the Leave Support Scheme.

So, eligibility for this payment ($359 for an affected employee) is now very limited.

COVID-19 Leave Support Scheme

The following is based on the scheme as it stood on 29 March and employers should keep checking **here** for changes.

The Leave Support Scheme provides a weekly payment of $600 for full time employees (20-plus hours per week) and $359 for part time employees (less than 20 hours per week) who are required to isolate for at least four consecutive days due to:

- Testing positive for COVID-19, being a close contact of a positive case, being the parent or caregiver of a dependent who is isolating, being in or having household members in the category of people most at risk of severe illness from catching COVID-19; and
- Being unable to work from home

We notice the above criteria from the Work and Income website is confusing as it refers to 'contacts' but our understanding is that only those who are household contacts of a positive case are required to isolate.

What are the employee entitlements to leave and pay?

It is important to remember that these schemes are there to help employers retain staff and when applying you do have to be conscious of the commitments you make when signing the declaration. They include that you will, for the period you receive the subsidy:

- Use your best endeavours to pay at least 80 per cent of each named employee's ordinary wages or salary; and
- Pay at least the full amount of the subsidy to the each named employee; but
- If you pay the named employee less than the amount set out in their employment agreement, you must retain written evidence of the amount you and the employee have agreed. Please check the declaration as there are a number of caveats to this.

There are some general "rules of thumb" that employers should consider:

- The Leave Support Scheme is a subsidy for the employer to use provided the commitments in the Declaration are honoured
- There is a question about sick leave entitlements being applied to cover an isolation period when an employee is not actually sick. There are different opinions from employment lawyers on this question however the key argument is that sick leave is for a specific purpose – that is when the employee or someone who is dependent on them is actually sick
- If the employee has COVID-19 during the isolation period or they are the parent or caregiver of a dependent in their household who has COVID-19 and meet the eligibility requirements, then sick leave would normally apply.

When it comes to the use of leave to cover any part of the isolation period the Declaration does set parameters on what you can do. The most relevant commitments are:

- You will not make any changes to your obligations under any employment agreement, including to rates of pay, hours of work and leave entitlement, without the written agreement of the relevant employee
- You will not unlawfully compel or require any of the named employees to use their leave entitlements for the period you receive the subsidy in respect of those employees

In essence you can agree with your employee whether they use annual leave or other leave, but you cannot compel them to do this outside of any legislative requirement. Every situation can be different, so we recommend you get advice about the approach you take.

What is included in the Declaration?

As mentioned above, employers must sign a declaration as part of their application for either of the support schemes. By signing the declaration, you acknowledge and agree that:

- Your business meets the eligibility criteria, is not currently receiving a subsidy through any other COVID-19 support schemes for the same employee, and your application is made within eight weeks of the employee's self isolation period ending
- The employee(s) named in your application are eligible to receive the payment
- You have an obligation to use the subsidy to retain employees
- You have discussed the application with the named employee(s) and have their consent, in writing if practicable, to information sharing

For more detail, links to each of the declarations are below.

Short-Term Absence Payment Declaration

Leave Support Scheme Declaration

It is important you do not breach any of the Declaration requirements.

New LBP Code of Ethics

The following is a direct extract from the LBP Code of Ethics:

On 26 October 2021, a Code of Ethics was introduced by the Government for Licensed Building Practitioners (LBPs). There will be a one year transition period before it becomes enforceable.

The Code of Ethics will ensure high standards are maintained in the industry, while giving the public more confidence that Licensed Building Practitioners are reputable and operate ethically. The majority of Licensed Building Practitioners already meet these standards, but the Code of Ethics will hold those who do not to account.

From 26 October 2022, the Code of Ethics becomes enforceable by the Building Practitioners Board.

This provides Licensed Building Practitioners a year to understand their obligations. The Ministry of Business Innovation and Employment (MBIE) has developed guidance which includes explanations and practical examples of how the Code of Ethics can be applied. Additional resources will become available over the next year.

Summary of the Code of Ethics

The Code of Ethics is made up of nineteen standards, sitting under the following four key principles:

1. Work safely

- Take responsibility for health and safety.
- Report unsafe behaviour by others on a building site.
- Avoid harming the environment.

2. Act within the law

- Comply with the law.
- Report breaches of the law.

3. Take responsibility for your actions

- Know what building work you are allowed to do.
- Explain risks to your client.
- Inform and educate your client.
- Be accountable for building work carried out by you, or someone under your supervision.
- Advise clients of any delays as soon as they become apparent.
- Act in your client's interests.
- Generally, you should follow your client's instructions, unless the instructions are dangerous, are contrary to contracts or consents, or would mean you would not be acting within the law.

4. Behave professionally

- Behave professionally.
- Act in good faith during dispute resolution.
- Price work fairly and reasonably.
- Declare and manage actual or potential conflicts of interest appropriately.
- Maintain confidentiality of client details unless there is good reason for sharing information.
- Acknowledge and respect the cultural norms and values of your clients and colleagues.
- Conduct your business in a methodical and responsible manner.

Code of Ethics Guidance

This guidance document helps to navigate the Code of Ethics by providing more detailed explanations and practical examples of how a Licensed Building Practitioners behaviour aligns with their obligations. **See Code of Ethics guidelines** and **Summary Code of Ethics poster** for more information.

What the law says

To understand what the law says, see **Building (Code of Ethics for Licensed Building Practitioners) Order 2021**.

More resources to come

MBIE will develop additional educational resources to help ensure everyone understands what they will need to do.

What happens if the Code of Ethics are breached?

If Licensed Building Practitioners do not comply with their obligations, a complaint can be made against them which may result in disciplinary action by the Building Practitioners Board. Details on these grounds and a complaint form can be found under **complaints and past decisions**.

The Code of Ethics is not enforceable by the Building Practitioners Board until 26 October 2022. This means that complaints about someone breaching the Code of Ethics can only be made if the breach took place from 26 October 2022.

(NZ Government, 2021) **https://www.lbp.govt.nz/for-lbps/code-of-ethics/**

TONY DAVIDSON
CHARTERED AND REGISTERED BUILDING SURVEYOR
BABBAGE CONSULTANTS LIMITED
tony.davison@babbage.co.nz

Asbestos – fabulous but can be fatal

Asbestos is a contradictory mineral when used in building materials. Whilst banned in many western countries, New Zealand and Australia included, many Asian countries including China and India still produce and use asbestos containing materials (ACM) for use in construction and building materials as well as other products such as brake pads and gaskets etc.

Though importation is banned into New Zealand, materials containing asbestos do sometimes find their way into the country.

So why is asbestos fabulous? On one hand, it is an amazing natural mineral for use in construction materials and can enhance people's lives. Its fibres are virtually indestructible, fireproof, and allow the shaping and forming of complicated curves than otherwise fragile cementitious products, and it has an almost indefinite lifespan. On the other hand, should asbestos become friable, starts to break down or is damaged by drilling and scraping resulting in the release of asbestos fibres, then it becomes a huge risk to life and can be fatal.

Asbestos and the building surveyor

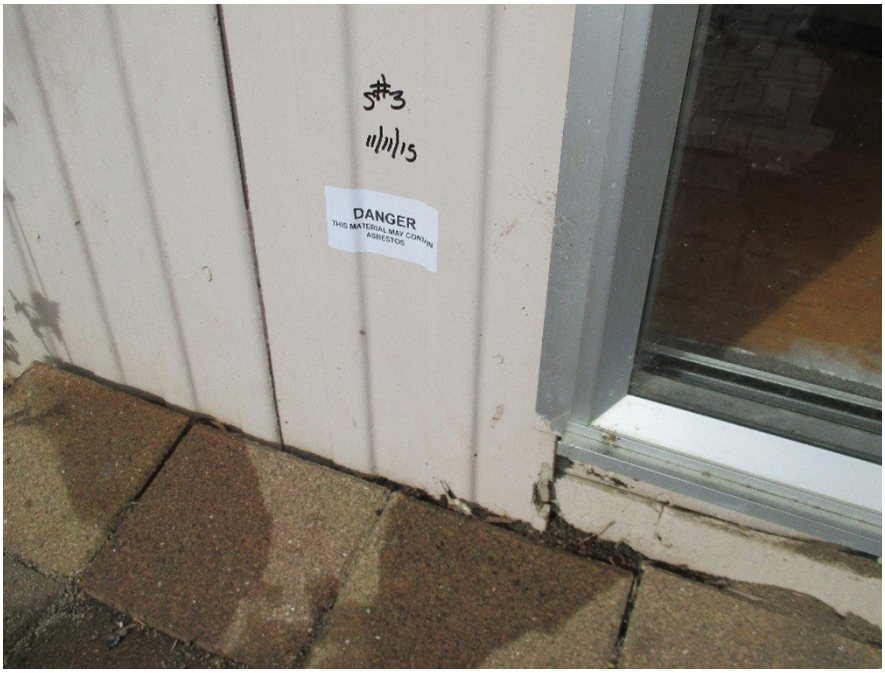
Sounds nefarious? Well, it can be, by putting the surveyor in direct conflict with the client and the Health and Safety at Work (Asbestos) Regulations 2016 (HSWAR 2016). I often hear the questions "why are we talking about this again?", "do we not already know that it's dangerous?", "do we know our responsibilities to identify and manage the ACM in our buildings?". Apparently, not! And why is this? I am yet to see a single asbestos register for review and signing on site or at the sign-in area of a building, where it should be. I regularly hear "we have one, but we don't know where it is", "it will follow shortly" (and it doesn't), or am told "it is in the process of being done". Yeah, OK!

Implications

The unfortunate effect is that when the presence of asbestos has not been investigated and recorded, the building surveyor is put at real risk of uncovering or encountering ACM or dust and causing contamination and potential exposure to a carcinogenic substance which could result in closure of the property.

The only person at greater risk from exposure to asbestos is the unwary builder/maintenance contractor.

So, remind me again, what's the worst that can happen? Let's say there is a hypothetical exposure, the building will probably have to close with the resultant loss of business earnings, an insurance claim, a WorkSafe investigation, litigation resulting in fines and possibly imprisonment, your loss of earnings and reputation, professional indemnity insurance claims (PI) increased premiums and lost clients. Worst-case scenario, the surveyor and any other potentially exposed persons develop lung cancers or mesothelioma resulting in death and the obvious consequential effects on family life. Your client will be lost, and they will be unconcerned as it will be your fault that you surveyed



the building knowing that there was no asbestos management plan.

Why is it so important to comply with the Asbestos Regulations?

There is a probability of exposure to asbestos when the person in control of the business or undertaking (PCBU) has not complied with their obligations under the HSWAR 2016.

Duties imposed by the Regulations

What does a PCBU have to do to comply with the asbestos regulations? In brief, and for any building constructed pre-2000, they have a duty to:

- Locate and identify all accessible potential asbestos containing materials (PACMs) within the identified area of proposed work (Regulation 10)
- Undertake bulk sampling or swab testing of a selective/representative number of suspected PACMs as deemed necessary to confirm the presence or absence of asbestos (Regulation 10)
- Send samples of suspected ACM to an IANZ-accredited laboratory for analysis (Regulation 11)
- Prepare a detailed report including the identification, photographic appearance, location of all confirmed ACMs for each site listed on this proposal (Regulation 12)
- Report to include material condition hazard assessment of all confirmed ACMs in accordance with HSE (264) algorithm (Regulation 12)
- Create and issue an Asbestos Management Plan (Regulation 13)

Prior to commencing any refurbishment or demolitions works, under regulation 19 and 20 of the HSWAR 2016, the PCBU has a duty to determine whether asbestos or ACM is fixed to, or installed in, the structure or plant before commencing any works. This type of survey is intrusive and usually requires the area to be vacant or put out of use, although there are safe methods of surveying which allow the building or area to remain occupied after the survey works are complete. It is also worth noting that the probability of identifying asbestos in buildings constructed post-2000 is very low and therefore asbestos surveys and management plans are not mandatory for buildings constructed after this date.

What should a surveyor do if they are requested to survey a building where no asbestos management survey or management plan is available? The surveyor should have a meaningful chat with the client and explain their obligations. If the surveyor is qualified and/or experienced to survey for asbestos, provide the client with a fee proposal to undertake the survey prior to commencing any other services. If they are not qualified or otherwise classed as competent, then the property owner will need to engage somebody who is.

Supply chain congestion: a bird's eye view

HARRIET SHELTON

Harriet has worked in transport planning and policy for over 20 years, mostly within local government, and recently made the move to central government. In her current role at the Ministry of Transport, Harriet leads a policy team focussing on strategic freight and supply chain issues including rail, ports and shipping.

About this time two years ago, New Zealand emerged from a nationwide lockdown. The general consensus was that while there might be a few hiccups ahead, the worst was behind us. Little did we know that the scene had already been set for some of the most significant and widespread supply chain disruption the sector will ever see.

Months later, the challenges continue. It is only due to the hard work of people across the supply chain that the wheels have not fallen off completely.

Containerised supply chain congestion appears likely to continue for at least a while yet. The passage of freight around the world and throughout New Zealand is beset with delays and uncertainty. Ships queue outside congested ports, container yards are full, and transport and storage costs are increasing. The reasons for this unprecedented worldwide congestion are complex, and so are the solutions.

As the Government's lead transport advisor and steward of the transport system, the Ministry of Transport is one of the few organisations that is able to take a bird's-eye view of the supply chain system. While we are well-placed to draw the pieces together and make connections across what is a highly complex and dynamic network, we rely on operators and cargo owners to tell us what's going on the ground.

We recently brought together a range of industry representatives from all parts of the supply chain to share their views on the core issues and to generate ideas for solutions. The atmosphere was positive and constructive, and many issues and possible mitigations were identified. Three key themes emerged: resilience and capacity, information visibility, and optimisation through better coordination.

Resilience and capacity

New Zealand's supply chains are optimised for efficiency, as they are the world over. Networks and infrastructure have been designed to minimise costs, with 'just-in-time' having become the dominant logistics model. This works well under stable market conditions, but a lean system is not designed for volatility and is poorly placed to cope with shocks and disruptions.

The lack of resilience in our supply chains became painfully apparent as COVID-19 lockdowns drove up global consumer demand just as port productivity fell due to social distancing measures and COVID-19 infections. In New Zealand, reduced productivity at Ports of Auckland resulted in shipping lines diverting some Auckland-destined cargo to other ports. Returning this cargo to Auckland required extra rail and roading capacity – fixed infrastructure that cannot be scaled up quickly to meet demand surges, particularly in the case of rail.

An obvious solution to this problem would be to simply build extra capacity into the system, whether infrastructure or labour, or both. But it is much less straightforward to agree on where additional capacity is best provided, given that every shock will be different and may place demands on different parts of the system. Extra capacity also comes with a high price tag, which may be difficult to justify if the need for it only exists during sporadic disruptions.

The workshop participants agreed that it was not cost effective to build in lots of idle capacity to guard

against shocks, but suggested other ways to improve resilience such as better information visibility and mechanisms to enable more effective coordination.

Data and information visibility

International supply chain commentators frequently point to a lack of information visibility as a key barrier to better resilience and risk management. Our supply chain workshop participants reinforced this view.

As supply chain networks have become more complex over the last few decades, they have become harder for operators to control and predict. The ability to see from one end of the pipeline to the other is crucial, especially when conditions are volatile and uncertain as they are right now and will likely be in the future.

Access to real-time data enables operators to react to changes and adapt more quickly, and information sharing provides a powerful platform on which to build collaborative working relationships across the supply chain.

Achieving these things will require a culture shift towards more openness and data sharing, a commitment to more continuous monitoring (as opposed to 'predict and provide'), more willingness to use technological solutions even if they appear costly, and more investment in innovation.

Optimisation and coordination

Supply chains operate as a delicately balanced ecosystem. With so many inter-connections and inter-dependencies between all the moving parts, there is an ever-present threat of contagion risk; the possibility for a failure in one part of a network having a knock-on effect across the whole network. This has occurred on a massive scale over the last 10 months, with multiple factors causing reverberations across the entire global system.

The recent Suez Canal blockage is a classic example; in less than three days more than 500 ships started backing up, disrupting already-constrained shipping schedules all over the world and creating flow-on impacts for landside operations.

A complex problem like this can only be solved through all components of the system playing their part. For example, reducing container congestion at ports needs to be managed while shipping lines' schedules remain unreliable. This relies on the combined efforts of rail and road freight to carry imports away in a timely fashion while also avoiding too-early delivery of exports to ports. This in turn requires off-site container yards, distribution centres and depots to be open to receive and dispatch cargo whenever needed.

Extending depot opening hours was suggested as a short-term mitigation at our workshop, but achieving this will require alignment among shipping lines, rail and road freight operators and cargo owners. ▶

The challenge for New Zealand

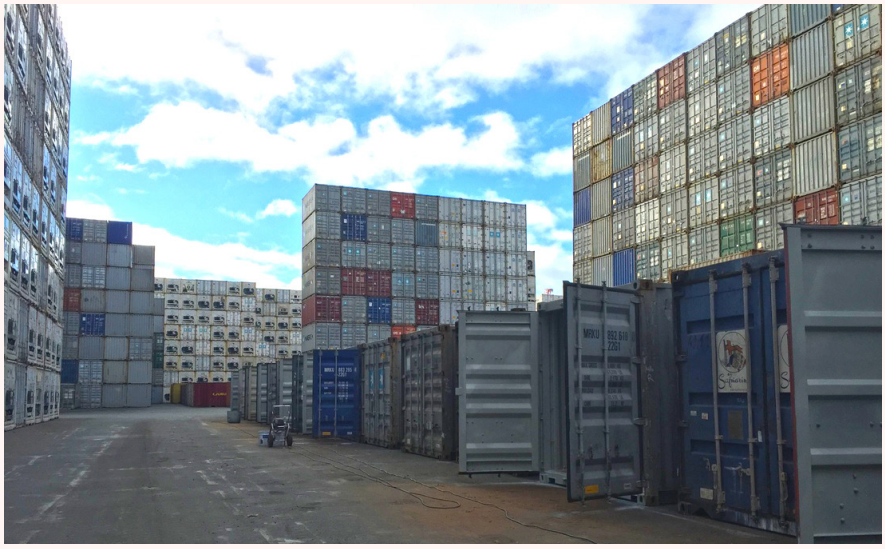
Whatever New Zealand does to address its own domestic congestion issues, there will continue to be delays and disruptions as long as the global congestion and disruption continues. Our small, remote country is the final stop at the end of the world's supply chains, and as an island economy we are heavily reliant on sea freight for our imports and exports. A blockage in one part of a supply chain on the other side of the world can quickly cascade through to the South Pacific, where the impacts may be felt more strongly because of our small size and geographic isolation.

New Zealand has limited influence over the international drivers of supply chain disruption, but we can try to alleviate the pressures domestically. What we can also do is organise ourselves to ensure that we are better positioned for future shocks and disruptions.

This longer-term planning task is a better fit for Government in an environment where supply chains are primarily market-driven and the appetite (and likely success) for centralised coordination is low. It does not make sense for Government to intervene in the day-to-day operations of the supply chain. Voices from across the freight sector are supportive of the Ministry of Transport's plans for an inaugural national freight and supply chain strategy.

Last year we began scoping a comprehensive work programme that will take us to all the corners of the supply chain system over the next two years and beyond. Our strategy will consider issues as diverse as climate change, resilience, and efficiency.

The Government intends for this strategy to provide a context for longer-term multi-modal planning and infrastructure investment, as well as a framework for collaboration and coordination between industry players. We need a system-wide and inter-generational approach to help make better decisions about where to focus our efforts within the freight system and to provide more certainty for the sector. Because it has not been done on this scale before, it will take time to get it right.



In the meantime, most of the short-term mitigations to the current supply chain congestion rest with industry. Our workshop participants came up with great ideas, but these will require market players to collaborate with each other – a challenge for a sector that is fragmented and naturally competitive.

Depot and yard opening hours, for example, need to work for the market and are not something the Ministry can lead. But our door is open to facilitate and support the sector to respond.

There are opportunities to leverage too. The experience of the past year has highlighted the importance of freight to people's everyday lives. In times of stability, freight operations are almost invisible to the general public. Supply chains operate smoothly and seamlessly, providing producers and consumers with all the things they need, whenever they need or want them. Most people only interact directly with freight when they momentarily get stuck behind a slow truck on the open road.

Last year's lockdown and subsequent disruption brought freight closer to the forefront of people's minds. They discovered that they might have to wait longer for their stuff to arrive. This is a good thing; it is important that people don't take freight for granted.

The need for better freight literacy was a common aspiration amongst participants at the supply chain workshop. When freight only operates below the radar, customers assume there will always be capacity to meet demand whenever or wherever they require it, whether that is on a truck, ship or train, at a port or on the shop floor.

But customers and consumers are also part of the supply chain system, and their decisions and requirements influence the way the system operates. This can create unreasonable pressures, particularly when times are tough.

Greater awareness of the important role that freight plays in the economy has many benefits; for supporting public decision-making on tricky trade-offs, for investment in essential infrastructure, and even for boosting the attractiveness of freight as a career option – particularly important for some parts of the sector currently facing skills shortages and an ageing workforce.

New Zealand's supply chains are not broken; they can be very adaptable, and operators have coped admirably with the multiple challenges that the last year has thrown at them. We have an opportunity to use the learnings from these experiences to create a better system that benefits everyone. Let's not waste it.

RORY CROSBIE
DEPUTY CHAIR AT PRENDOS
rory@prendos.co.nz

Technical Due Diligence: key to a well-informed investment

Technical Due Diligence (TDD) is often adapted by the industry and can be referred to as a building survey, building condition assessment, pre-acquisition survey or vendor survey. In some cases TDD can also apply to the monitoring of development work for certain stakeholders.

According to the current RICS professional standards, the official definition of a TDD is "the systematic review, analysis, discovering and gathering of information about the physical characteristics of a property"*. RICS also states that the purpose of a TDD should be to enable a prospective purchaser or occupier of the property to "make an informed assessment of the risks associated with the transaction, from a technical perspective"*. To achieve this, the review must be undertaken independently.

Prendos Director, Rory Crosbie says "It's important to give clients a completely impartial, balanced, professional opinion of the condition of a property. Our inspection may establish defects or deficiencies in the property that could have an impact on the asset or the life safety of the occupants - whether in the short, medium or long term."

"To decide which survey type will best suit the situation, we need to have a clear understanding of our client's requirements," says Rory.

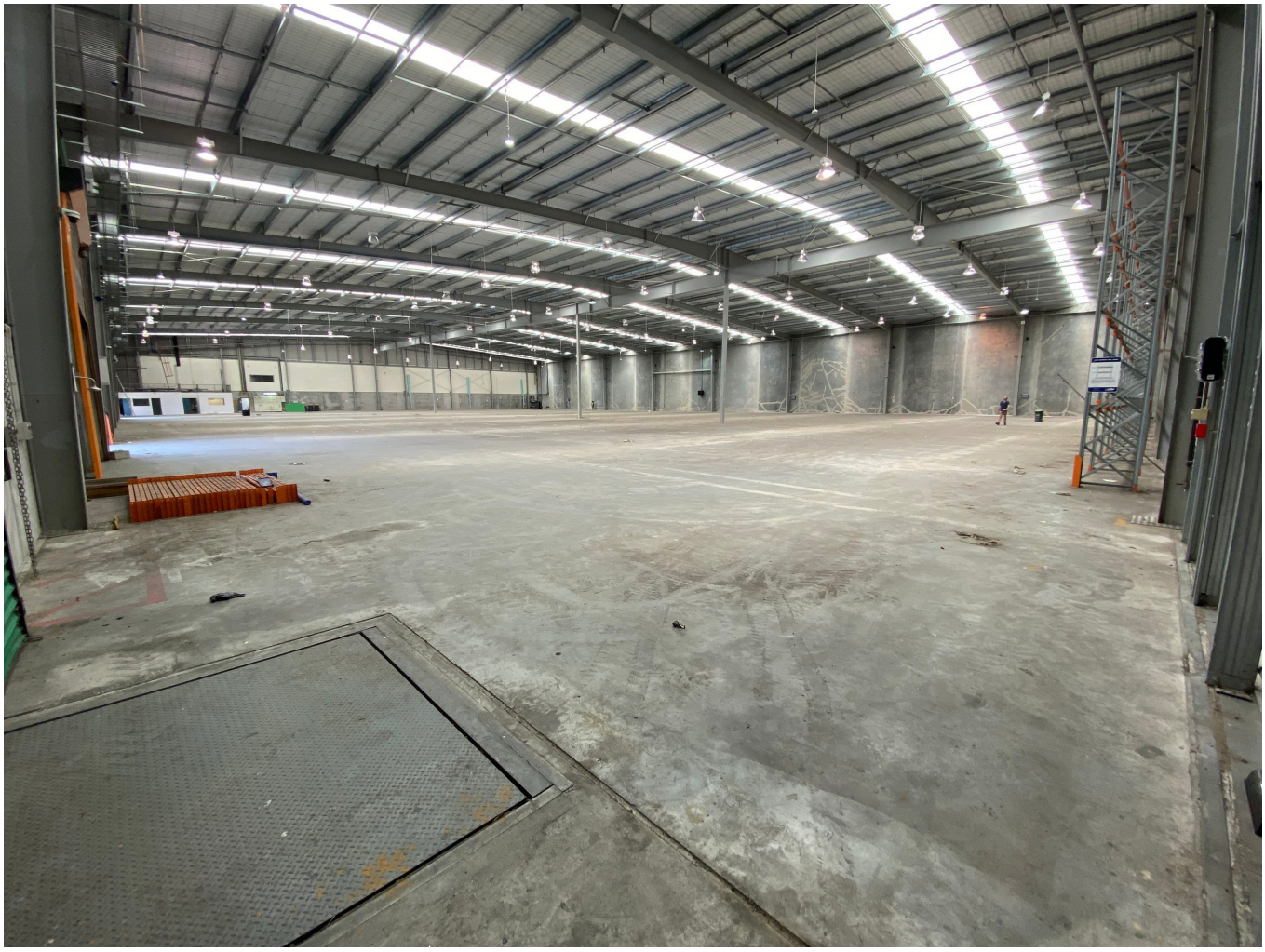
There are five main types of TDD inspection: Acquisition, Occupation & Operation, Disposal (vendor surveys), Refurbishment and Development Monitoring.

> **"Our inspection may establish defects or deficiencies in the property that could have an impact on the asset or the life safety of the occupants - whether in the short medium or long term."**

"One thing we establish before we start the job is why the client requires the information: what are their main concerns; how do they look at risk; how long do they wish to hold the asset for."

Getting other property specialists involved is also key to responding to the client's brief. ▶

* RICS Professional Standards and Guidance, global, technical due diligence of commercial property, 1st edition, January 2020



Having good relationships with specialist consultants will ensure the client's requirements are met. An independent coordination lead will ensure tight deadlines are met and clear communication is always provided to the client's representatives.

Technical Due Diligence reports need to be detailed, yet simple to interpret, ensuring a clear understanding by all parties of what exactly is required.

Rory points out that local knowledge is key. "It's important to understand specific environmental conditions affecting a property's condition. What affects a property's performance in Auckland, for instance, will differ greatly from what may play a part in Wellington, Queenstown, or Rotorua".

"Overall, using an experienced, independent building surveying company to survey your building is the best approach to take".

Prendos has been providing expert Technical Due Diligence (TDD) transaction advice to the commercial property market for the best part of 30 years and has undertaken surveys on some of the country's largest property assets and portfolios for both New Zealand and international clients.

www.prendos.co.nz
prendos@prendos.co.nz