



*An abseiler from Peter Howcroft's company Off the Ledge in action.
See box story Page 34.*

Heading for a fall?

In recent years the Australian height access industry has been grappling with serious safety issues. What does the New Zealand industry need to learn from its experiences?
JACKIE BROWN-HAYSOM investigates.

The September 2013 report from the Working at Height Association of Australia (WAHA) pulled no punches: there was a crisis in the height safety industry, and an urgent need for the country's policy makers and regulators to intervene.

The report detailed the results of a three-month safety audit, carried out by WAHA members, which identified "widespread, systemic failure" of height access equipment on commercial buildings across the land. A third of anchor bolts, two-thirds of static lines and 94% of fixed ladders had not been installed in compliance with relevant safety standards or accepted industry practice.

"Unsafe equipment installations are systemic throughout Australia, and the thousands of workers who rely on this critical equipment are unknowingly endangering their lives every day," the report concluded.

Just months later yet another problem emerged, when a number of correctly installed and commonly used commercial anchor bolts failed during the laboratory performance tests prescribed by a new Australia/New Zealand Standard, AS/NZS 5532: 2013 *Manufacturing requirements for single-point anchor device used for harness-based work at height*.

"We had two overlapping issues," says WAHA's founder, chair and Standards Committee member Gordon Cadzow. "Some anchors and other equipment hadn't been installed correctly but, even if they had been, the anchors themselves might not have been capable of meeting the test standard."

These problems might have been expected to ring alarm bells in New Zealand, given the amount of common ground between the two countries – including the use of joint height safety standards.

REGULATOR'S VIEW

WorkSafe NZ was aware of the situation because of its participation in Standards Committee meetings for AS/NZS 5532. However, more than 18 months after the initial WAHA report, and almost a year since news of the anchor failures became public, there has been no safety alert or media release to inform the New Zealand industry, and no screening checks of height access equipment.

According to WorkSafe's technical leader Stuart Wright, no equipment survey or compliance checks of installed anchors are

planned. Reports of suspect anchors will of course be investigated, but in a highly technical field WorkSafe inspectors have to rely on suppliers and installers to verify that equipment is safe.

When you look at the bigger picture, this response is understandable. Present industry standards already require all anchor points to be inspected annually by a competent person (something that is also a requirement in Australia). As well, prosecution records show no HSE Act cases involving failed anchor bolts or safety lines, and no one from the industry who has spoken to *Safeguard* can remember a fatal accident from such a cause.

There was a serious incident in early 2010, when 42 roof anchors on a Wellington apartment block were found to be unsafe after the alarm was raised by an abseiler, who noticed movement in one of the anchors when he attached his line.

The bolts had been tested and certified by a company that was regarded as an industry leader but, according to the *Dominion Post* of the time, the Department of Labour decided not to prosecute when it discovered widespread confusion in the industry as a whole about the correct safety procedures for installation and testing. Instead it worked with the industry, including the company responsible for the unsafe work, to develop best practice guidelines.

These guides – *Best Practice Guidelines for Working at Height in New Zealand* and *Industrial Rope Access in New Zealand: Best Practice Guidelines* – were published in early 2012 and are still on the WorkSafe website.

From the regulator's point of view it was a good response. For an industry that by its very nature is required to be self-regulating, it should have provided clear plans of action and allowed the development of standardised, safety compliant, and consistent procedures.

CONFUSION REIGNS

Unfortunately, three years down the track, the one word that pops up again and again in discussions about anchor bolt safety is "confusion". Different suppliers and installers seem to have different interpretations of the guidelines, and different systems for anchor installation. This has resulted in sometimes bitter debates, with one height safety company posting a notice on its website claiming that another height company has been "deliberately misleading building owners ... with incorrect standards and compliance information, for their

own financial advantage.”

Auckland-based anchor installer Lionel Woodall of Technical Rigging Services – not the company referred to on the above website – says the bone of contention in many cases is the involvement of engineers.

“There are conflicting standards, and people interpret them in their own ways,” he says. “My understanding is that there is a requirement for an engineer to be involved in the design [of the installation] and the ten-yearly re-certification, but a lot of people don’t follow that.

“Leaving the engineer out of the process will take thousands of dollars off the price, and we find we’re getting cut out of some jobs as a result.”

However cheap jobs can have unsafe outcomes, and Woodall’s company has had to condemn a lot of existing anchors, including many that had only recently been installed.

“We have to condemn about 20% of the anchors we inspect,” he says. “It’s quite a hard thing to tell people, when they’ve spent \$10 or \$20 grand only months previously – and I guess there’s always the chance that they’ll go to someone else who will say: ‘Nah, they’re all good.’”

The installation process, as described in the rope access best practice guide, is complex. A chartered professional engineer (CPEng) should be engaged to provide a PS1 (Producer Statement – design) detailing the type of anchor to be used, and the method of attachment, with applicable safety ratings, drawings of its location, and any special conditions, including things like drill-bit diameter and minimum embedment depth. The installer then provides a PS3 (Construction) stating that the work has been done in accordance with the design, and, after checking the installation, the CPEng issues a PS4 (Construction Review) confirming it is correct. A plate identifying the installer, date, design load and date of the next annual inspection is permanently fixed beside every anchor.

“It is a bit of a process,” Woodall acknowledges. “That’s where the cost comes in, but it means the engineer has



not only signed off the anchor but also the building that the anchor is fixed to.

“Take a good anchor and stick it in a bad roof and you’ve achieved nothing, but with this system you’ve got your arse covered.”

He believes, however, that the height industry as a whole needs to take more ownership of safety, for its own protection.

“Anyone using anchors should be familiar with them and be able to inspect them before attaching their lines.

“I wouldn’t jump on an anchor without having a good look at it – there’s all sorts of stuff out there, and you’d be crazy to trust your life to any of it without giving it a good check out.”

Better guidance is urgently needed, he says, especially for building owners, and perhaps the creation of a pan-industry body to give height safety a stronger voice.

“Industrial abseilers already have their own association, IRAANZ, but it would be better to have a more general one because not everyone is an abseiler – you could be up there to fix the guttering or service the air conditioning.

“It’s a serious issue we’re dealing with. It’s hidden away at the moment, but it’s going to come out of the wardrobe one day.”

NZ COULD BE WORSE

Napier anchor bolt supplier and designer Nick Collins shares Woodall’s concerns. He has been in discussion with WorkSafe about the Australian situation for more than a year, and is keen for it to conduct an inspection of New Zealand height access equipment, to see if there are similar problems.

“WorkSafe tried to call a meeting about this last December, but had to cancel because too many people couldn’t get there,” he says. “They wanted to bring everybody together to discuss it, but I think they need to have a look [at access equipment] first to see what the situation really is.

“I believe we have to evaluate the situation before we get people together, because otherwise they’ll all stand round saying: ‘Oh, there’s nothing wrong with my equipment’ and we’ll resolve nothing.”

He personally believes the New Zealand situation may be worse than that in Australia and cites two cases where loads on top-fix anchors – ones that are riveted to roofing iron – have torn the iron from roofs. Fortunately, in both cases, no one was attached to the anchors at the time.

Like Woodall, Collins says varying interpretations of Standards are at the heart of the industry’s problems.

“The 1891 Standard [AS/NZS 1891: *Industrial fall-arrest systems and devices*] says that both the building and the anchorage points shall be assessed by an engineer unless it’s clear to a height safety supervisor that the anchoring system is structurally adequate.

As an example of a situation where an engineer may not be required, he says, the Standard gives an anchorage sling of adequate strength secured around a solid permanent structure, like a plant room.

“To me what that says is that every anchor that’s attached to a building by bolts or screws or whatever *must* be assessed by an engineer.”

Building owners need to understand that avoiding engineer assessments for their anchors may be an expensive option in the long term, he says.

“Not only are there much bigger fines around the corner if something goes wrong, but if you’re attaching an anchor to a structure without getting an engineer’s certificate you’re interfering with things that are covered in the Building Code and the building warrant of fitness, and could void your insurance cover.”

When, according to the rope access

“LEAVING THE ENGINEER OUT OF THE PROCESS WILL TAKE THOUSANDS OF DOLLARS OFF THE PRICE, AND WE FIND WE’RE GETTING CUT OUT OF SOME JOBS AS A RESULT.” LIONAL WOODALL

best practice guidelines, “even the best-designed [rope access] system can fail if it is inadequately installed”, Collins also questions why any “competent person” is permitted to carry out this critical task. There are no prescribed training requirements to achieve competency, with the official definition referring only to a combination of training, education and experience, through which the person acquires the knowledge and skills to correctly perform the task.

INSTALLER TRAINING

WAHA regarded the absence of formalised installer training as a major contributing factor to its poor survey results. Under present industry practices, it said, “anyone can become a fall prevention installer and issue certificates of compliance for their own work, irrespective of whether they have any expertise.”

The report went on to point out that because installers, by definition, work in

areas where height safety equipment is not yet available, they are almost continuously in high-risk environments, where they need “a great deal of skill, knowledge and judgement” to remain safe. In practice, it said, only a minority of installers actually have this capability. It called for the introduction of mandatory training and a licensing system to ensure no one works in the industry without adequate skills.

WorkSafe NZ agrees that installers need to be better trained, but says it as an issue that requires better instruction and guidance from manufacturers. The service’s frontline staff, like those of Australian regulators, do not have the technical knowledge to assess anchor point installation, or the training of its installers, for themselves, and instead – in a slightly bizarre arrangement – rely on suppliers and installers to verify correct practice.

However, while WorkSafe stays clear of the training itself, the issue of installer

competence is something it plans to revisit in future, Wright says.

“We see a potential solution of making roof anchor installation and inspection prescribed high hazard work that needs a licence, like scaffolders or commercial divers,” he says.

This is in line with WAHA’s request to Australian regulators, and Wright says another of its requests – that height industry Standards be made mandatory – is already covered by the HSE Act provision that affords legal status to best and current industry knowledge.

AUSTRALIAN PROGRESS

Meanwhile, across the Tasman, Cadzow says the situation is yet to be fully resolved, but there has been positive progress.

A WAHA team, under the leadership of its technical committee, is working with stakeholders, including Australian regulators, to develop an industry code



GUARDIAN ANGEL SECURITY
peace of mind

LONE WORKER PROTECTION

Currently working on bringing Peace of Mind to Waikato Regional Council and Suncorp Group Australia.

Matching your risk and environment to the most appropriate hardware and processes.

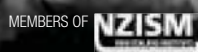
Delivery of complete lone work solutions:

- Hardware
- Monitoring
- Consultancy



Contact us now to secure your staff prior to the start of the new legislation.

E info@guardianangelsecurity.co.nz **P** 09 480 0860



www.guardianangelsecurity.co.nz



HE CITES TWO CASES WHERE LOADS ON TOP-FIX ANCHORS – ONES THAT ARE RIVETED TO ROOFING IRON – HAVE TORN THE IRON FROM ROOFS.

for anchor installations, and anchor bolt manufacturers are taking action to ensure their products comply with the new Standard.

“There are still problems around installation, but we expect to have the draft code out for public comment in about a month, and hopefully have it published not too long thereafter,” he says. “As for the [5532] Standard for bolt testing, it is generally accepted in the marketplace now. Consumers, builders and industry groups are asking for equipment to be certified to it, and manufacturers are getting on with having their products tested and certified.”

WAHA’s efforts to publicise the problems with existing bolts, including seeking an opinion from leading OHS lawyer Mi-

chael Tooma about the legal implications of retaining non-compliant bolts installed before the Standard’s introduction, should have got the attention of building owners as well. Tooma concluded that, while compliance with the Standard was not mandatory, it created a benchmark for OHS compliance. In such circumstances replacing the anchor would be a reasonably practical step under Australia’s OHS law, he said, and the consequences of failing to do so could be considerable, given the level of risk involved.

Australia’s problems aren’t yet at an end, but there have been positive developments. In contrast, New Zealand does not yet know for sure whether it has a problem. It is not because our regulator is unconcerned. Cadzow says WorkSafe NZ

has been a regular participant at Standards Committee meetings dealing with height safety issues over the past 18 months, “which shows a real commitment because it can be hard to get employers to fund overseas trips just for a couple of days.”

Perhaps the biggest difference is that we lack a cohesive industry voice such as WAHA – which represents not only the end users of height safety equipment but also manufacturers, suppliers and installers – to advocate and educate on behalf of all parties.

It may be that some issues need regulatory intervention, but without leadership from within the industry, these issues are hard to identify, much less to remedy.

WorkSafe can only respond to identified needs – and the regular incidence of falls from height where no safety equipment has been used is an obvious priority area. However those height workers who choose to work responsibly in a high risk industry need the assurance that their safety is also being provided for. ■

Will your anchor hold?

There is a lot of confusion within the height safety industry, an experienced industrial abseiler tells **JACKIE BROWN-HAYSOM**

When you earn your living hanging off the side of multi-storey buildings you want to be sure the anchor points securing your ropes have been manufactured, installed, and monitored in accordance with the highest possible safety standards.

For abseiling industry veteran Peter Howcroft of Auckland, however, it’s an assurance he doesn’t always have.

“The issue of [anchor] bolts and protection lines is really messy,” he says. “There has been huge debate amongst the industry as to what constitutes a safe permanent anchor. There is a lot of confusion around this as most of the companies don’t agree with each other, for a variety of reasons.”

Howcroft was one of the pioneers of industrial abseiling, starting out in the business in Wellington almost 25 years ago when he recalls there was no such thing as permanent anchor bolts

and certainly no controls or standards governing their installation.

“Over the next few years more companies jumped on the bandwagon and bolts started to be installed, but it was still largely unregulated. By 2000 most buildings would have had some sort of homemade anchor system that would have been installed by the maintenance crew.”

It was about this time, Howcroft says, that the Department of Labour recognised the need to implement controls. Australian and New Zealand safety standards were developed, National Certificate standards of competence for height work were introduced and, in 2012, two sets of best practice guidelines were published.

In Howcroft’s view, however, the safety issues facing industrial abseilers have not yet been resolved.

“Many engineered systems have proven compliance under testing but the

sad reality is that the anchor will only be as good as what it is fixed to.

An example, he says, is the use of top-fix anchors, which are simply riveted to the top of a tin roof and declared safe to abseil.

“If there is an inherent fault in the roof, with tin condition profiles, purlin spacing or even purlin condition, the anchor will be at risk of failure.”

Howcroft says his company did anchor bolt installation and certification at one time, but got out of this work some years ago because of the challenge of keeping up with changing requirements.

“There are systems that were installed as little as five years ago that would not comply today. In such cases a professional opinion is needed to determine whether the bolts and lines can be recertified, but you get different opinions from different companies, so it’s a hard one to call.” ■