

# SCAFFOLDING DOWN UNDER



They say that if you stop learning, you stop growing. I've decided that I want to stop growing horizontally, but I do want to continue to grow mentally.

I've always been an advocate of asking questions – the most frequent being, "Why are we doing this?" If the answer is, "That's the way we've always done it," that's not good enough. There's got to be another way.

Those of us (myself included) who have been in this business for an unspecified number of years, tend to think of ourselves as the experts. We think we know just about all there is to know about our kind of work.

When the opportunity came for me to visit Australia and New Zealand, I had to find out what they were doing as far as scaffolding was concerned. I discovered that we have a lot to learn from them!

The first thing I became aware of when I looked into Scaffolding Down Under is that all workers on scaffolds must hold a "Certificate of Competence." What a great idea! That means that everyone working on scaffolds must have at least a certain minimum amount of training.

Without a certificate, a worker can build Frame Scaffolds and System Scaffolds up to 2 lifts high. (Sort of like our PAT limitation, but without really getting into height-to-base ratios). Workers without certificates can work with "Competent Workers," to build taller structures, but cannot lead the work.

A Trainee in Australia/New Zealand must maintain a logbook listing the names and addresses of each employer, description of the types of work performed with dates, the type of equipment used, formal training ses-

sions, the supervisor's name and certificate number, and the supervisor's signature for every day the work is done.

Competency is determined by Assessors who determine the extent of Practical Skills held by the Trainee, evaluate the worker's knowledge based on completion of a written "closed book" examination, and an acceptable written assignment consisting of a total of seven separate tasks including: estimating quantities, calculating live and dead loads, load distribution, tie construction.

The requirements for a Basic Certificate state that a worker who has at least 100 working days' experience in erecting and dismantling scaffolds (of which at least 50 days involved modular scaffolds) does not require assessment for scaffold construction and ties.

A Basic Scaffold Certificate is required to erect any modular system where a person or object could fall more than 4.0m.

A Basic certificate enables a person to erect any modular scaffold, such as aluminum mobiles, steel modular, kwikstage and cuplock.

The maximum height to which a basic scaffolder may build a modular scaffold is the maximum height specified by the manufacturer of the particular scaffold being used.

Topics covered in the Basic training program include:

- Inspection of equipment
- Fibre ropes, splicing, bends & hitches
- Scaffold construction – steel and aluminum
- Erection and dismantling skills
- Tie construction
- Scaffold inspection
- Calculating loads
- Estimating equipment
- Basic scaffolding knowledge questions

Once they have their "Basic Scaffolding Certificate," workers can: construct a tower scaffold with outriggers, install a barrow hoist, build a modular birdcage scaffold, install a safety net, construct a mobile frame scaffold. A worker with a Basic certificate cannot construct any of the following: cantilevered scaffold, barrow ramp, tube-and-coupler scaffold, swing stage, mast climber, personnel or material hoist.

An intermediate scaffolding certificate enables a worker to erect tube and coupler scaffolds.

Topics covered in the training course include:

- Measuring and marking
- General scaffold construction
- Sloping platform construction
- Spur construction
- Use of compatible equipment
- Lashing of planks
- Scaffold Design
- Equipment quantities
- Intermediate knowledge questions

With an "Intermediate Scaffolding Certificate, workers can: install a cantilevered crane loading platform, construct a barrow ramp, build a single-pole tube-and-coupler scaffold, construct a tube-and-coupler covered way or gantry, erect a mast climber, and carry out all work covered by the Basic Certificate. The "Intermediate" worker is not allowed to: construct a personnel or material hoist, a hung scaffold, a boatswain's chair, or a swing stage.

A worker who has recorded at least 50 working days experience erecting and dismantling tube-and-coupler scaffolds does not require practical skills assessment for Intermediate Scaffolding.

The written assignment for Intermediate consists of an information sheet, a drawing sheet, and a list of ten tasks to be carried out. Knowledge assessment is determined by correct answers to the majority of the questions in three categories.

The Advanced Scaffolding Certificate encompasses the elements for the basic and intermediate scaffolding certificates. It is necessary that an applicant for the Advanced Scaffolding Certificate already holds basic and intermediate scaffolding certificates.

The assessment tests the applicant on:

- Use of safety harness
- Hung scaffold construction
- Hung scaffolding work practices
- Fixing flexible steel wire rope
- Inspection of chains

An "Advanced Scaffold Certificate" allows the worker to carry out all work covered by both Basic and Intermediate certificates as well as constructing hung scaffolds and suspended scaffolds.

As with Basic and Intermediate, the assessment for Advanced requires successful completion of specified tasks.

This year, my daughter received a Post-Graduate Diploma in Design from one of the New Zealand Universities. Of course, Dad and Mom had to attend the Graduation ceremony. On this visit, I arranged to take an offshoot trip over to Australia to meet in Sydney with Adrian LaManna, Project Manager, Standards Australia and Doug Crawford, Chairman of the Scaffold committee, to discuss their standards compared with ours.



About the first topic that came up was Duty Ratings. Australia has done away with Light Duty, Medium Duty and Heavy Duty scaffold ratings as we know them. They are concerned with Bay Loading, which makes a lot of sense to me. When you consider it, we are asking our workers to do quite a bit of mathematical work before they even start to perform their jobs. Of course, they're supposed to be able to do that. But why not take out some of the drudgery?

Do we really expect our workers to calculate platform loads on a square foot basis? Take an aluminum/plywood deck, for example. We slap a label on the side that says its capacity is 75 psf. How much load can we place on the deck? Who, on a jobsite, is going to measure 19", divide it by 12 and multiply by 7, and then by 75 to get 831.25 lb? Why don't we just label it as an 825 lb deck? Then everyone readily knows that, if you want to set a 1,400 lb valve on the deck, it'll be overloaded.

Similarly with planks. We talk about the maximum load on a platform spanning 8 feet being 50 psf. Why not just say that, because planks are 9¼" wide and the span is 8 ft, we can place a maximum load of 300 lb on each plank? Wouldn't that be easier for the workers? And so much less likely to end up as a mistake?

Going in that direction, we can eliminate the idea of 25 psf, 50 psf, and 75 psf as light, medium and heavy-duty loadings. For most of our jobs, we are using 5 ft, 7 ft and 10 foot braces. So our bay widths are those dimensions. On that basis, can't we say that 5 ft bays can be loaded to 300 lb per plank (based on 75 psf), that 7 ft bays can be loaded to 275 lb per plank (based on 50 psf), and that 10 ft bays can be loaded to 200 lb per plank (based on 25 psf)?

I mentioned previously that Certificates of Competence are determined/issued by Assessors. I met with Kent Fisher, owner of The Scaffold Training Company outside Melbourne.



Kent told me that the Assessor function was being done away with in Australia and that training was going to be carried out by RTO's (Registered Training Organisations). One of the problems he sees with that is that what he presently covers in three days will be spread out over 5 days. He regards that only as a decrease in productivity and an increase in costs.



I had planned to meet with a representative of Worksafe Victoria while I was in Melbourne to get his ideas on reciprocity of recognition for competency certificates. Unfortunately, he had to be out of town during the time I was there. However, his last comment to me was that the WorkCover organization (at least in Australia) had decided that they would not recognize overseas qualifications – period. I plan to get back into discussions with him to find out what it might

take for them to accept, say, the SIA Competent Person certification.



In New Zealand, I met with David Crowley of Scafit, Inc. We discussed some of the topics I had gone over in Australia. He gave me contact info for various people involved in Scaffold Standards in his country. I'll be writing more on NZ after I've had a chance to communicate with these folks. It seems to me that Kiwis just might be more amena-



ble to reciprocity than the Aussies, but I'm told that scaffold workers' pay in New Zealand is considerably less than in Australia.

While I was Down Under, I didn't see much in the way of frame scaffolding in use, except for some Acrow Shorbrace shoring frames. In Australia, it seemed that Waco pretty well had control of the scaffold market with their KwikForm. I did see quite a bit of Tube-and-Clamp in use, and in New Zealand I saw a lot of Layher Allround.



The folks Down Under seem to be somewhat more safety conscious than we are. Fall Protection is required at 2 metres [6½ ft]. WorkSafe Victoria issues a weekly emailed newsletter, *Safety Soapbox*, which includes the *Bodgey Scaffold of the Week*. If you wish to receive a copy, simply email [construction@workcover.vic.gov.au](mailto:construction@workcover.vic.gov.au) and provide your name, organization, position, telephone contact and preferred email address. WorkSafe Victoria is a division of the Victorian WorkCover Authority.

A/NZ Standards are not as much "our way or the highway" as ours seem to be. The Aussies and Kiwis are ready to accept that products meeting other countries' standards may be suitable for use in their own. For example, "Couplers that meet the performance requirements of BS1139/EN 74 for similar type couplers are deemed to comply with this Standard without the need for type testing."

#### Acknowledgements:

Details of scaffold training programs and photo of Kent Fisher "borrowed" from his website [[www.scaffoldtrainingcompany.com.au](http://www.scaffoldtrainingcompany.com.au)].

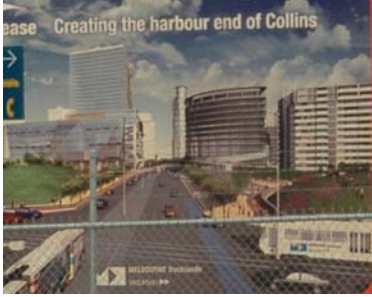
Awapuni Racecourse scaffold photo from Layher NZ Featured Job, photo by David Crowley [[www.layher.co.nz/assets/projects/awapuniracoursegrandstand.pdf](http://www.layher.co.nz/assets/projects/awapuniracoursegrandstand.pdf)].



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