

Photo courtesy of Francine Fleischer



Container studio home done by Maziar Behrooz Architecture. Photo courtesy of Francine Fleischer
www.mbarchitecture.com

Containing extensions

Shipping containers are popping up all over the place. We're seeing these self-supporting structures as shops, as cafes, as offices and notably, they are being used more and more as homes.

ARTICLE Carolyn Brooke

There is an ever-growing focus on space saving and innovation when it comes to building. Television shows like George Clark's Amazing Spaces certainly fuel this.

Shipping containers are becoming more popular in residential buildings. Most often they are used in new builds or as non-attached additions like sleep-outs, granny flats and offices.

Fitting out a shipping container is not too different to fitting out any building. They can be high spec or they can be simple.

People often perceive building with containers to be easier or cheaper than traditional building, but it's not always the case.

Rather the key advantages in using containers are around strength, durability, being transportable, having an existing self-supporting structure to work with, and security (containers can deter thieves).

Containers can be built off-site and delivered. Once consent is approved, the build time is much less than a traditional build, with less

tradespeople on-site. The modern design and look of containers are also attractive.

An internal timber frame is erected so that plumbing pipes, electrical wiring and insulation can be installed before walls are put in.

Heating systems, air conditioning and recess lighting can all be added. Container flooring is usually 35mm marine plywood.

It can be polished, or new flooring like carpet or vinyl can be put down on top.

Containers Direct's Mark Bohan has worked on many residential projects using shipping containers.



The first lot of containers arriving for the container studio. Photo courtesy of Maziar Behrooz Architecture
www.mbarchitecture.com

Job budgets vary greatly but he says building with containers is generally not as cheap, or as easy, as people often think it will be.

"Depending on budget, it could be a container for an office with just a door and a window, while other people want to make a statement with their container," Mark says.

An extension he was involved in used a shipping container to increase the living space of an old, small villa in central Christchurch.

A shipping container priced well on this job. The space created was significant to the small size of the house. So overall it worked well.

"Those little old cottages are quite small and it can be expensive to extend them," Mark says.

"The building extension the client was going to do would've cost about \$100,000. They were looking for a cheaper option and a container is around \$40,000."



The living area sits above the sleeping area, with panoramic windows to maximise light and the view. Photo courtesy of Hayden Spurdle. www.iqcontainerhomes.co.nz

An off-the-grid 10m² container home by IQ containers. Photo courtesy of Hayden Spurdle. www.iqcontainerhomes.co.nz

One of the container's walls was removed so it could join onto the cottage. The other walls were mainly glass and bi-fold doors.

The extension was at the back of the house so the area could be kept private, with outdoor flow.

A new roof was built from the peak of the house to align the container extension with the existing building. The new roof was needed regardless of the type of build.

Aside from the cost, another advantage in using a container for the extension was not having to do so much preparation and restoration to the existing building. This would have been needed with a traditional extension.

"The original house had a lot of issues because of its age and before doing an extension these would have had to be sorted out first," he says. "It would have been a whole lot of extra work."

The container was craned in over the cottage. Costs all up came around in at around \$2,500 per square metre.



Infiniski Manifesto House by James and Mau.
Photo courtesy of Antonio Corcuera
www.jamesandmau.com

When building with containers, money is saved around foundations. Piles are done in each corner of each container, much less than what is needed for a traditional build.

Containers must comply with the building code of compliance just like any other extension. Consents need to be obtained through council.

Currently Mark finds that there is not much consistency with consents issued.

"Recently we had four consents with council at the one time, three passed and one didn't," he says. "Sometimes it's just not understanding the method of the design."

A nationwide multi-proof design of containers is being worked through with the Ministry of Business, Innovation and Employment. A multi-proof design would aim to streamline the use of shipping containers for housing. The design would likely to be an 80 to 100 square metre, three-bedroom house using six containers. It would price around \$200,000.

Odin Madsen of Sea Containers NZ is involved in building a house in Taupaki using nine containers.

He says demand for containers runs in waves regionally around the country.

Recently he spoke with someone wanting a container for their Grey Lynn backyard for the winter months that could be moved to their bach over summer.

The transportable element of shipping containers is certainly a drawcard for many.

Another reason people go for the containers is the feel good factor, reusing something that is second hand. Others want the rustic look.

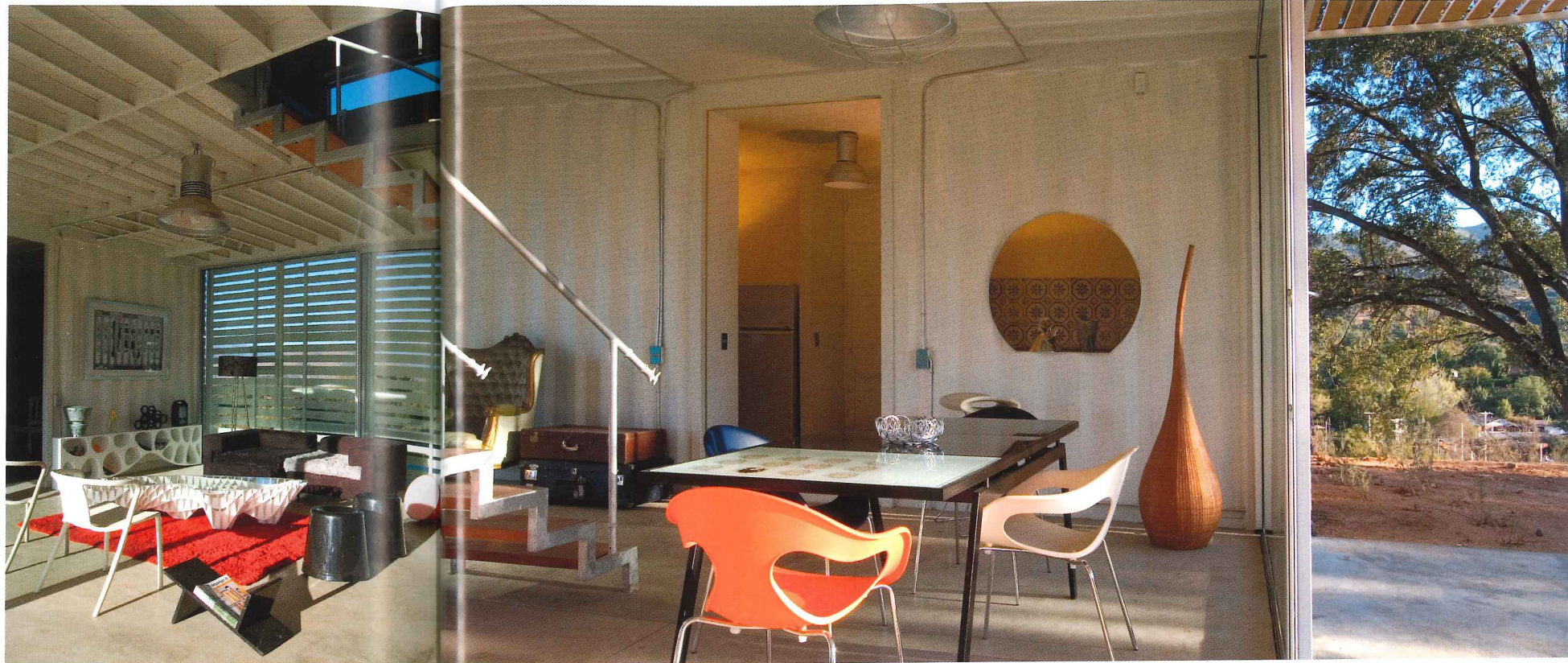
He says the strength of containers effectively makes them earthquake proof.

"They're so strong, at our depot we load about eight containers high, they weigh about 2.5 tonnes each so the bottom one is taking a huge amount of weight."

A key to a job well done is to have containers professionally designed and to have the work done off-site by people who know what they are doing.

Popular container ideas

- Bi-fold doors, aluminium joinery and plenty of grass to open up containers for an attractive, sunny finish
- Marine ply is the standard flooring in containers, this can be polished or it can be covered
- Open side containers are a popular options (one whole side of the container pulls out)
- Recess lighting
- Cavity or sliding internal doors to save space
- Pull-down beds inside to save space
- As an office or sleep out
- Use for a garden structure like a freestanding gazebo



The finish is so much better than when people go DIY with containers.

"When you start cutting into them, like with a large ranch slider, the wall of the container can flex in the wrong environment," he says.

"It's so much easier and safer to have it cut properly off-site and covered, away from the elements; a container needs to be kept dry and straight when cut."

Airflow is important in containers just like any building. He recommends a 20mm space behind insulation. People often opt to install a whirly bird proof ventilator to help with ventilation.

Use marine paint if the container will be near the ocean, to protect the surface from damage from sea spray and/or sand.

A popular container option is an open-side container, where one whole side pulls out. Most often people fit them with bi-folds and aluminium joinery. Another option is where one wall can be lowered to open the container up and the wall becomes a deck.

Cavity or sliding doors also work well in containers. As do pull-down double beds and anything compact; generally space saving is a focus.

Although people are often surprised at how much space there actually is in a container. Containers make a great talking point for people who live in them or work with them.

"There is really big interest in containers, people often say they have always thought about doing a container build themselves." ■

The benefits in a nutshell

Brenda Kelly from IQ containers states that the main advantage of containers are their structural integrity; in addition to their transportable nature and need for minimal foundations, a properly designed and constructed container home can withstand the harshest of conditions; strong and durable, recognised as earthquake, fire and hurricane resistant, providing a solid practical base for a safe, sustainable, low maintenance home.