

OCTOBER 2015

Better Homes and Gardens



Bright and modern finishes hide the container's industrial beginnings.



crate *idea*

A wide covered deck greatly increases the living area of the home.



Create a modern and budget-friendly abode by transforming a humble shipping container

When you are after a house that's affordable, sometimes you have to think outside the box – and live in one! Shipping containers are a great option for a home that is quick, easy to build and a fraction of the cost of a conventionally built house. The strong, weatherproof structures are simply dropped on site ready for fit-out, so they can be completed in a matter of weeks, not months. However, just like a standard home, there are a few building options to consider.

CONTAINER facts

While standardised containers for transporting of cargo have been around since the 1920s, the modern shipping container was invented in 1955. They greatly increased world trade due to the lower cargo handling costs and the concept expanded rapidly. Sixty years later, it is estimated there are about 17 million containers around the world!

Getting the go ahead

Your first port of call for a shipping container home is your local council. They will let you know what is permitted and the approval process you will need to follow. Depending upon which state you live in and the size of your block, you may not have to go through council at all as it may be classed as a complying development, which was the case here.

Buying a container

The cheapest option is to buy a used container but be prepared for dings and rust, so carefully inspect it before buying. If you are in any doubt, don't buy. A safer option is to buy a new container. It is manufactured, carries cargo on one trip and is then sold at its destination. They are more expensive but are in much better condition. Also, go for a High Cube container. They are 300mm taller than a standard container.

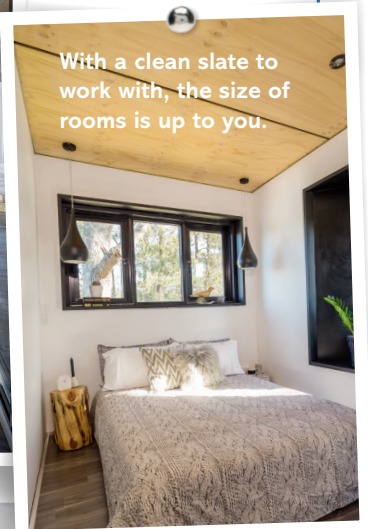


A pergola, decking and side windbreak transform this industrial box into a house.

With a few tweaks, your container home will be shipshape in no time



Different coloured interior linings take advantage of the container's long straight lines.



With a clean slate to work with, the size of rooms is up to you.



Flat-pack cabinets are another great money-saving measure.



Raising the container avoids problems with moisture

LOCATION, LOCATION, LOCATION

Building sites are rarely perfectly level, so it's likely you will need to construct support for at least a section of your container. Sitting a container directly on the ground may also cause problems with moisture penetrating the timber floor. Here, to avoid this and overcome a slight slope, block piers were constructed to an engineer's design and the container was dropped on top. The elevated position also provided the height necessary to construct a deck.

DECKED OUT

A covered deck is a quick and easy way to add extra living space to a container home. This deck is almost as big as the container itself!

1. Start by getting the level for your deck from the container floor and installing a support next to the container, here bolted to the block piers.

2. Mark your deck posts to the required height. To support the posts we used precast Handiblocks, which don't require excavation and can simply be placed where needed.

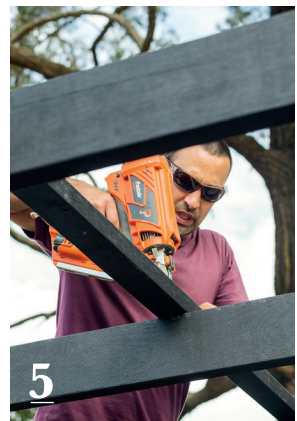
3. A normal deck frame was built. Bearers were bolted to the posts and the deck joists nailed into these.

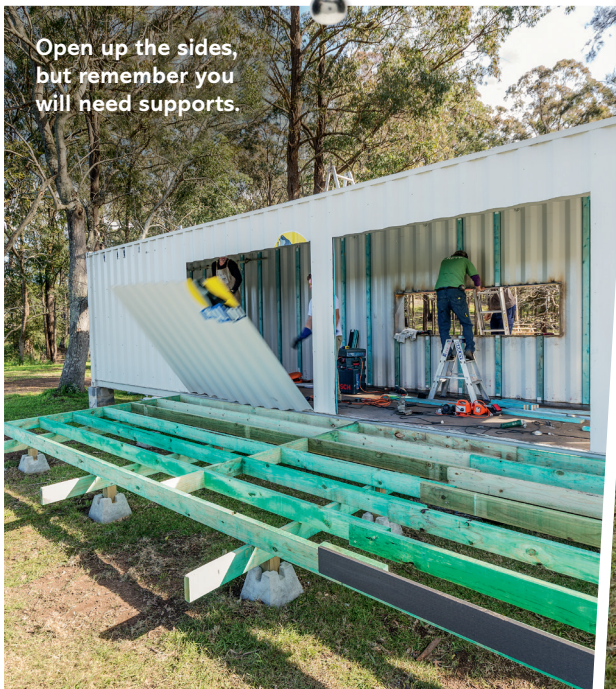
4. A composite decking called Ekodeck was used. It comes in 5.4m lengths. To

reduce wastage, the deck is 2.7m wide so one length of decking cut in half provides 2 whole boards for the deck. A hidden fastening system was used so there were no nail or screw holes on the face of the deck.

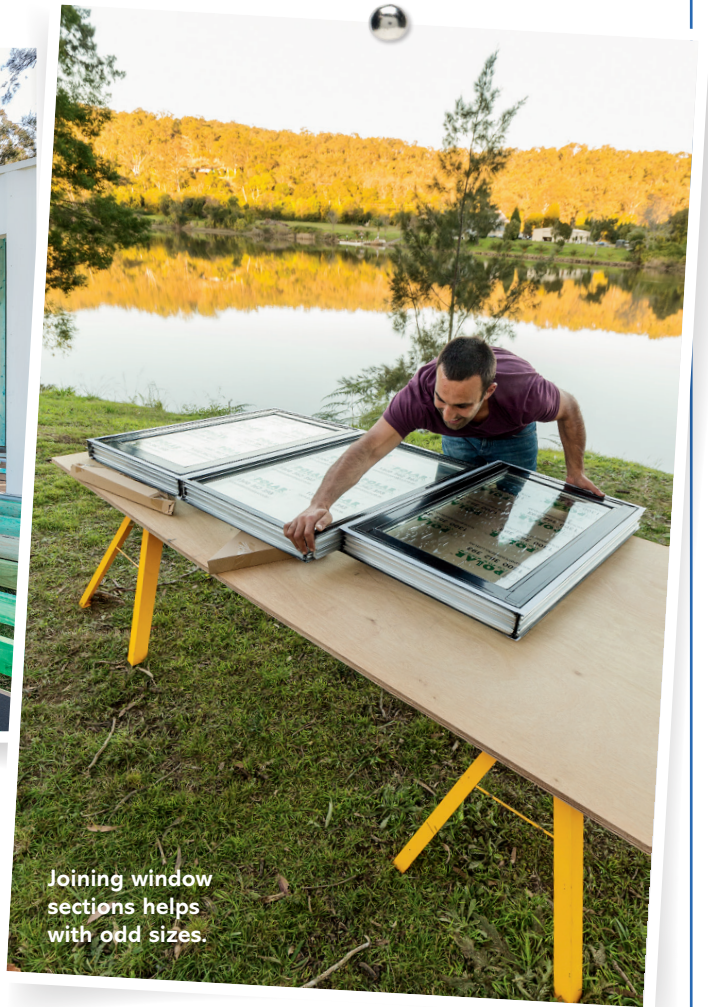
5. A simple pergola running from the container out to a beam set on posts is covered with corrugated steel roofing. It provides loads of shade and shelter for the deck.

6. To act as a wind break, a simple timber frame was built at one end of the deck. Corrugated steel roofing was then added to maintain the industrial feel.





Open up the sides, but remember you will need supports.



Joining window sections helps with odd sizes.



1



2



3



4

WINDOWS AND DOORS

Shipping containers are a blank canvas so you can position doors and windows wherever you like. Making the window and door openings to suit standard sized windows also reduces costs. The long walls of containers are load bearing so you will need to install reinforcing steel sections for large openings like the doors. Discuss your design with an engineer to find out what size steel you need.

1. An angle grinder with a metal blade was used to cut out the openings in the wall of the container.

2. Box sections were made out of plate steel to fit inside the window openings. As well as providing a firm base for the windows, they also added a bit of architectural interest to the outside of the container. These boxes were welded to the walls.

3. A modular window system was selected so that when a single window wasn't

suited to a desired opening, several windows could be joined to make one the right size. This was done using a joining strip that slides into the side of each window.

4. A timber frame was cut to fit around the window and screwed together. This whole assembly was then slotted into the steel boxes in the sides of the container and sealed.



A bare box is transformed into a living area.



LINING THE INTERIOR

To live in a container home you will need to insulate and line the interior. Insulation is one of the most important aspects of turning a container into a comfortable home. Without it, the building would be like an oven in summer and freezing in winter. Insulation is also essential to preventing condensation, which can corrode the container and cause mould.

1. To start lining the walls, timber battens with a damp-proof course behind them were attached to the sides of the container. The partition wall to create the bathroom was also installed. To save space, which is always important in a container, a cavity sliding door was installed in the wall.

2. Foam insulation was sprayed on the walls and ceiling. This provides an airtight seal and prevents condensation from forming on these surfaces. A further layer of earthwool insulation blanket was put on the walls and held in place with horizontal battens. A ceiling frame was built and electrical

cables run throughout. The walls were then lined with plasterboard and the ceiling with plywood panels.

3. Foam underlay was used to cover the floor, followed by laminate flooring, which simply clicked together.

4. In the bathroom, a waterproof membrane was applied and the floor tiled. Instead of tiles on the walls, high gloss acrylic panels were used. To attach them to the walls, double sided tape was stuck to the back followed by beads of silicone. Then, they were simply pressed onto the walls and a long straightedge used to ensure they were flat.



High-gloss acrylic panels create a light-filled space.

FITTING OUT

Electrical and plumbing fittings were installed, then the final touches including installation of wardrobes, kitchen cabinets, and finishing off in the bathroom.

1. Flat-pack cabinets

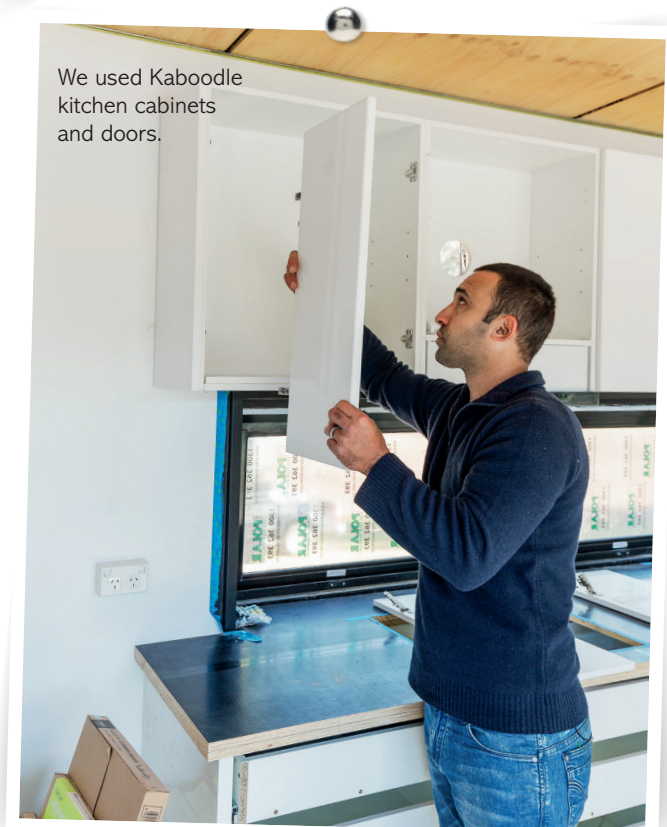
were used for the kitchen and wardrobe rather than custom units. The wardrobe cabinets were set across the container to create a dividing wall between bathroom and kitchen and living area. More cabinets were placed on the living room side of the wall to create storage.

2. To maintain an industrial feel

in the kitchen, benchtops were made using two layers of 17mm formply. The ply is hard-wearing, while the gloss face is easy to clean. Doors and drawers were finished in gloss white to keep it nice and bright and carry the theme through from the bathroom.



Flat-pack units are versatile and come in a range of sizes.



We used Kaboodle kitchen cabinets and doors.

With insulation and lining your new abode will be cosy in winter and cool in summer!



A generous covered deck and outdoor spot with a fire pit is the perfect spot to relax and take in the view

LANDSCAPING

With the inside of the structure complete, it's time to move outdoors. A little bit of landscaping helps blend the new addition with its surrounds. There's even a piece of art inspired by the Australian bush that you can make yourself.

1. The soil around the site has been compacted with all the activity so use a mattock to break it up and make further planting easier. Add improved garden mix to all the plant beds to add nutrients to the soil. Finish with your plants (see below) then mulch.

2. Excavate about 80mm of grass and soil for deco granite. Fill the area with

brown deco granite so it is about 100mm thick, then run a plate compactor over it until it reaches your desired level.

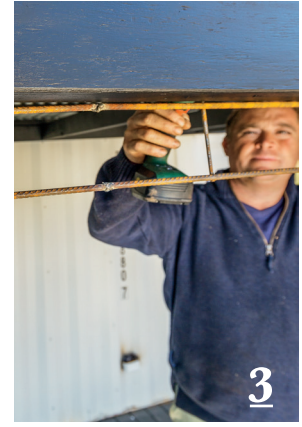
3. Soften the look of the pergola with a climber like this Bougainvillea. Steel reinforcing mesh attached to the posts is an inexpensive trellis for the colourful plant to grow on.



1

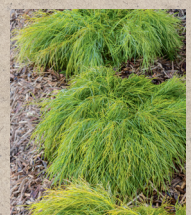


2



3

WHAT WE planted



Acacia cognata 'Limelight'



Correa alba



Dianella 'Silver Streak'



Leucadendron



Cast iron plant and raphiolepis



A BRUSH WITH BUSH ART

Convert the blackened and weatherbeaten story of life in the Australian bush into an individual piece of personal art. Even in death and decay, there's beauty in every part of the natural world. These hardwood logs, broken by wind, fallen from trees, scorched by bushfires can be the raw materials for a simple but striking hanging artwork you can make in a just a few hours.

Gather your supplies

- Found, weathered logs. We used 7. Aim for similar thickness and lengths, though they can be cut.
- Roll of nylon rope at least 30m in length. We used 8.2mm thickness and chose a bright, contrasting colour
- 10mm auger drill bit
- Roll of electrical insulation tape

You'll also need

Power drill; drill bit for the screw size; bugle head wood screws

You need to assemble this in situ, so get a friend to help with stringing and tying

steps



STEP 1



STEP 6



STEP 2



STEP 6



STEP 3



STEP 7



STEP 4



STEP 8

Here's how

STEP 1 Cut 30m roll of rope into two 15m lengths then make a loop in 1 end of each length.

STEP 2 Drill pilot holes in the supporting beams for the screws. Position these so distance between them is less than length of shortest log. Hang looped rope from screws.

STEP 3 With assistance, hold first log where it is to hang and mark spot where each hanging rope touches log. Drill a 10mm hole at each of those marks.

STEP 4 With assistance, hold log in place, thread rope through hole and tie a knot on underside. Repeat at other end of log, levelling it up by eye.

STEP 5 Wrap rope tightly, a few times, around each end of log.

STEP 6 With assistance, position next log, mark spot where each hanging rope touches log then drill a 10mm hole at each of those marks. Return log to its position, thread rope through and tie off as before.

STEP 7 Wrap rope around each end of log as before.

STEP 8 Repeat Steps 6 and 7 for other logs then tie a knot under each end of final log to secure in place.



STOCKISTS

Brown Deco-granite, \$62/tonne; garden soil, \$58/tonne; forest fines mulch, \$45/cubic metre; 200mm Trench Mesh, \$27/6m, **ANL**, anscape.com.au Power tools, **Bosch Australia**, 1300 307 044. 8.2mm Grunt fluro orange rope, \$18.50/30m; large Brevil terracotta pot, \$199; steel fire pit, \$299; Vistelle acrylic bathroom panels, \$395/sheet; Kaboodle kitchen cabinets and doors; Handiblock precast foundation blocks, \$18.95 each; Formica Modena Oak laminate flooring; R3.5 timber, **Bunnings bunnings.com.au** or stores nationally. Greystone composite decking, \$61.83/5.4m, **Ekodeck ekologix.com.au** Eco-view windows, **Polar Windows** 1300 362 393, polarwindows.com.au Shipping container, **Royal Wolf** 1300 064 503, royalwolf.com.au

PROJECT PRICES ARE APPROXIMATE AND INTENDED AS A GUIDE ONLY