



The container doors were left in place and act as moveable external shading for the bedroom windows when the family is using the house; when they're away, the doors are closed to help secure it and protect against possible bushfire.

# Shipshape retreat



Working with a modest budget, architect Matt Elkan transforms four salvaged shipping containers into a stylish, low-maintenance getaway on the NSW south coast.





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### **ECONOMY, SIMPLICITY AND ENERGY**

efficiency were the driving principles behind Simon and Elise Byrne's family getaway, near the coast, two hours from their busy Canberra lives. "We had a very small budget, but we wanted to produce something noteworthy," says Simon. "I don't buy the idea that good architecture is only for the wealthy." He found a good match with sustainable architect Matt Elkan, who was happy to "talk about how cheaply we can build something cool."

Tailored for the gently sloping block with the street to the west, good north aspect and bushland views to the east, Matt's design centres around one 40-foot and three 20-foot shipping containers. One of the small ones forms a separate guest



pod; the other two host modest bedrooms and are arranged to form an L-shape with the long container, which houses a bathroom, bunkroom and kitchen. A sunken lounge nestles into the corner of the L, and is surrounded by an extensive covered deck providing extra living space to the north and east.

Shipping containers, their design optimised for protecting goods on the high seas rather than housing humans, have limitations for architecture. "It's all about using them for areas where they work," explains Matt. "The space available inside is okay for bathrooms and even bedrooms, but pretty pokey for living spaces."

The layout of Simon and Elise's house allows the containers to take care of the

smaller spaces and service areas, and steps down to take advantage of the fall of the land to create generous ceiling heights for the living room and decks.

"If a shipping container is to be a good strategy for a building, it needs to really pull its weight. For this build, the containers minimised the need for structural walls and posts for three-quarters of the home, and allowed us to keep the roof structure pretty simple." He explains that using the containers also reduced the build time and associated costs.

Other strategies for keeping costs down included a minimal footprint – the house and guest pod together are only 94 square metres, plus 40 more of decking – and a focus on structural efficiency





⬆️ The roofed deck wraps around the east and north sides of the house, extending the living space. It steps down, hugging the slope of the block, which allowed for a simple subfloor structure.

⬆️ It was sometimes a fiddly job to integrate the containers with the rest of the building, but Matt has more than one good word to say for the builder, Luke Price of Total Building Solutions. "It's hard to imagine a more perfect fit for the job. Luke's skill and engagement with the job went well over and above expectations. I'm looking forward to getting another project in the south coast area so I can work with him again."

and a restrained form. Material choices were inexpensive, like the structural ply used for floor, wall and ceiling linings, and there's a certain roughness to the finishes; for example, screws were left exposed. Designing the house to follow the slope of the land allowed for a simple subfloor structure and no excavation, also a significant cost saving.

One area where money was spent, though, was on the double-glazed windows and doors. They were custom made from recycled timber by Architectural Hardwood Joinery, which declares a commitment to 'carbon negative joinery'. The company chooses to fill nail holes and other

imperfections in the timber with black epoxy to celebrate rather than discard damaged sections, resulting in considerably less waste. "I love the doors and windows," says Simon. "They are just so beautifully crafted."

Simon, Elise and their two young kids get down to the house every other weekend. "We wanted a place where we could escape from the busyness of everyday living, pare things back, unclutter and unplug," says Simon. "With its small bedrooms, the house encourages interaction in the living spaces. And it's quite amazing how you just don't need as much space as you think. The house can accommodate 10 people

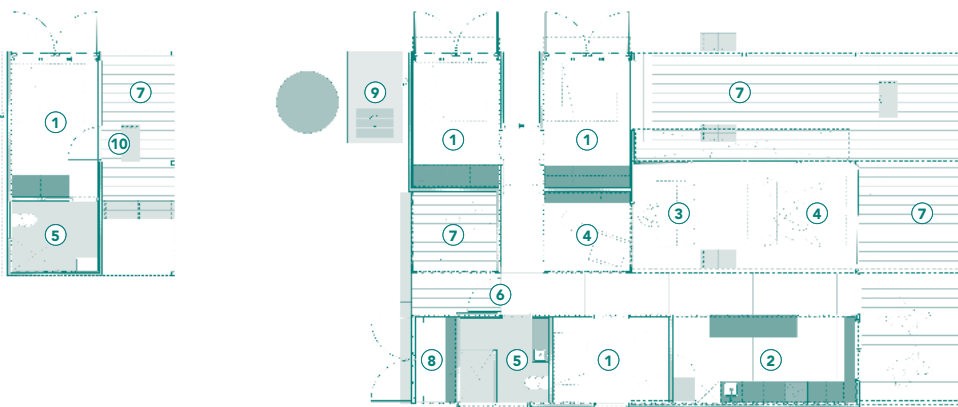
comfortably in its very small floor area, and it's full of clever little spaces that you can move around and enjoy. It's surpassed my expectations – and I have fairly high expectations!"

Matt's pleased with the finished result too. "It turned out one-third of the cost of the next cheapest house we've ever designed: I'm proud of that. That's where my heart is at – I'd love to think that architecture has more relevance to more people by being less expensive. This project is part of a broader story for us, about how to do better things cheaper." 📍



① The kitchen is tucked into one end of the 40-foot shipping container that runs along the south side of the home; it overlooks the main living area where the sunken floor creates a higher ceiling. “Matt’s design style is pared back, simple, elegant, clever, with honest use of materials without trying to hide anything,” says homeowner Simon. Interior linings are of structural ply to keep costs down.

FLOOR PLAN



LEGEND

- ① bedroom
- ② kitchen
- ③ dining
- ④ living
- ⑤ bathroom
- ⑥ entry
- ⑦ deck
- ⑧ storage
- ⑨ outdoor shower
- ⑩ guest pod



# South Coast container house

## DESIGNER

Matt Elkan Architect  
(project team: Matt Elkan  
& Daina Cunningham)

## BUILDER

Luke Price,  
Total Building Solutions

## ENGINEER

Bruce Delprado

## PROJECT TYPE

New build

## PROJECT LOCATION

Long Beach, NSW

## COST

\$360,000

## SIZE

House + guest pod 94 m<sup>2</sup>  
Decks 40 m<sup>2</sup>  
Land 881 m<sup>2</sup>

## BUSHFIRE ATTACK LEVEL

BAL 29

## RENEWABLE ENERGY

– 2 kW solar photovoltaic system  
(underway).

## WATER SAVING

– 5000 L corrugated Zinalume  
tank for outdoor shower, garden,  
toilets and clothes washing.

## PASSIVE DESIGN / HEATING & COOLING

– North orientation  
– Decks to north, east and west  
can be used according to  
prevailing conditions  
– Windows located to allow cross  
ventilating breezes  
– Large north overhangs to  
prevent unwanted summer sun  
– Use of container doors as  
operable external shading to  
bedroom windows.

## ACTIVE HEATING & COOLING

– Hunter Pacific Concept 2 ceiling  
fans in bedrooms and living  
area  
– Provision for efficient, reverse-  
cycle AC to be fitted once PV  
system is installed  
– Nobo electric convection wall  
panels.

## BUILDING MATERIALS

– Structure and internal walls  
from re-used shipping  
containers (1 x 40-foot  
container + 3 x 20-foot  
containers)  
– External cladding: BlueScope  
corrugated custom orb in  
Colorbond ‘Monument’  
– Insulation: walls insulated  
using 2 layers of Autex 55 mm  
foil-backed insulation blanket  
separated by 30 mm air gap +  
Kingspan Aircell layer behind  
cladding; roof insulated with  
55 mm Autex foil backed  
insulation blanket + R4.0  
natural wool ceiling batts  
– Roofing: BlueScope corrugated  
Klip-Lok in Colorbond  
‘Monument’  
– Internal ceiling, wall and floor  
linings: Structalam 12 mm pine  
CD ply.

## WINDOWS & GLAZING

– 100% recycled hardwood  
external doors and windows  
(spotted gum, blackbutt and  
tallowood) by Architectural  
Hardwood Joinery  
– Toughened glass double-glazed  
units throughout.

## LIGHTING

– Actwell Lighting ‘Cyril’  
surface-mounted LEDs  
throughout.

## PAINTS, FINISHES & FLOOR COVERINGS

– All internal timber finished  
in Osmo Oil Poly-X Hard  
Wax Oil (raw and satin-matte  
finish)  
– All external hardwood  
(doors/windows/decking)  
finished in Cutek CD40  
Rustic Gold.

## OTHER ESD FEATURES

– Recycled antique furniture  
from ‘Revival’ in Milton  
– Concrete driveway formwork  
constructed out of container  
wall offcuts  
– Small footprint, sleeps 10  
people  
– Flexible undercover outdoor  
spaces with built-in seating  
– Modularised construction  
for ease of disassembly and  
potential for offsite re-use.



Matt opted to insulate and clad the containers externally, maximising the internal space. The resulting exposed metal walls are an aesthetic that wouldn't suit everyone, but both designer and clients love it. "There was a fantastic unanticipated acoustic benefit to the corrugated metal internal walls, too," says Matt. "They soften the sound far better than flat walls."

