

# Modular special

Modular and prefab construction cuts down on waste, time and money with factory-controlled production for guaranteed performance. What role does it play in sustainable housing?

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**PIONEERED AS EARLY AS THE 17TH CENTURY**, rolled out as employment for returned soldiers and post-war housing in Europe, and perfected in Japan for fast, cost-effective urban living, prefab housing is finally gaining traction in Australia.

Australia has been relatively slow to embrace the premade dwelling, but in its latest guise, prefab and modular systems are seen by many as at least part of the solution to a more sustainable built environment.

In this incarnation, housing is a product; factory-made and highly controlled panels or fully formed modules are easily transported and assembled onsite, sometimes in a matter of days and often with non-professional labour. Buildings can be constructed in weather-independent environments, with no need to stall for heat or rain. Their lightweight, portable structures can also be suitable for rocky or difficult to access sites.

Those embracing premade housing in Australia say the benefits are multi-fold. "As a way of minimising resource use and waste, prefabrication is an important element of sustainable housing of the future," says *Your Home* author and Sustainable Futures director for UTS, Caitlin McGee.

"It can deliver benefits on a number of fronts:

resource efficiency, affordability (due to economies of scale), and flexibility (allowing households to add to their homes as their needs change, rather than creating extra space upfront 'just in case')." And crucially, the gap between a designer's sustainable specifications and a building's performance can be avoided, with digitised, controlled manufacturing of all components.

Most manufacturers offer bespoke designs or add-on options to a selection of standard models for a range of occupants and locations. Modular sections can also be added to traditional brick and mortar homes.

A growing number of designers are offering prefab alternatives in an effort to meet the demand for affordable and hassle-free housing. Here, we look at the stylish array of offerings on home soil.

See more detail on these and global modular innovations at [sanctuarymagazine.org.au](http://sanctuarymagazine.org.au)

We would also love to hear your thoughts and experiences with prefab – send us your pics and ideas via [sanctuarymagazine@ata.org.au](mailto:sanctuarymagazine@ata.org.au) on Twitter (@sanctuarymag) or Facebook (/sanctuarymagazine).



Material selections for the prototype modular dwelling were selected for low embodied energy and low toxicity. Weathertex and Radial timber cladding were used for the exterior and BlueScope steel for the roof. Image by Warren Reed.

## 8 Star living

### Ecoliv

#### DESIGN & BUILD

Ecoliv Buildings

#### LOCATION

Inverloch, VIC

**THIS FUNCTIONAL 8 STAR PREFAB** modular design has a suite of sustainable features inside and out. There's a vertical garden at the entry, a surrounding dry-tolerant garden fed with an energy-efficient greywater recycling system, a 2kW grid-connected solar system, solar hot water system, electric car charging point and high-efficiency appliances internally.

All materials were carefully selected, preferring local manufacturing and those

with low embodied energy, including low-VOC plaster made with recycled product and FSC timber joinery.

The modules are designed to work within standard building measurements to avoid any offcuts. Ecoliv also has a commitment to recycle anything that cannot be re-used.

Stormwater is also funnelled through a channel to the garden beds in further resource efficiency.