

Modern Vernacular

Off the grid and reworking the simple aesthetic of the rural sheds of the region, this central Victorian weekender works so well that the family's moved in full-time.

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Taking advantage of its elevated site, the simple design of the Wolveridges house explores the connection between sustainability and aesthetic.

MELBOURNE ARCHITECT JERRY WOLVERIDGE

began building a weekend retreat for his partner and himself in the small central Victorian town of Metcalfe three years ago. This year, with their two young children, the Wolveridges moved there permanently. Although he couldn't have predicted this tree change when he started building the place, Jerry is already planning an extension. "It's fantastic," he says. "The kids want to be outside every minute they can. Compared to staying in our dog-box flat in Fitzroy, this was a no-brainer."

As owner builder, Jerry gave himself free rein to explore the interweaving of sustainability concepts and aesthetic features at Metcalfe. "There's a sense that environmentally

sustainable design can be cumbersome and not aesthetically-minded. I wanted to show you can have both." The building's simple structure – a steep-pitched roof above a long rectangular living space – is a deliberate homage to traditional agricultural buildings of the region. "When I first came up this way I saw an old, Victorian-era farm shed," says Jerry. He was drawn to its "full-height panels and the windows arranged in a slightly random way" and translated these features into his new build, where the exterior panels are full height from floor to roof line, and apparently random openings are book-ended by windows of different sizes. "The effect is that it's logically ordered but looks slightly asymmetrical."



1 The house's vaulted ceilings are recycled messmate left over after milling timber into floorboards.

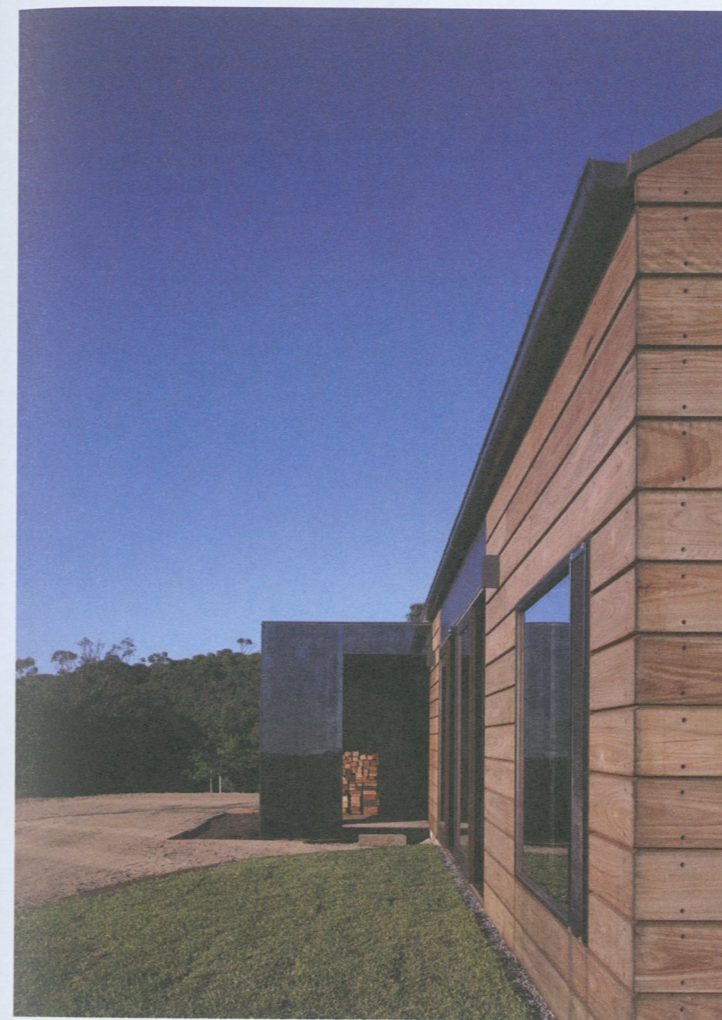
The house is outside the town centre, without connection to town water or the electricity grid. Its elevated position close to the ridgeline has stunning views to Mount Macedon but it also gets blasted by wind from the south east. Jerry acknowledges that the site posed a challenge. "The complex issue is having a view and wanting to look at it, but still trying to have the right amount of glazing so you're not living in a glass box that has so much heat loss. You need to balance the amount of glazing with stronger insulative components."

This focus on insulation has made the house an outstanding thermal performer and helped garner its 7-star energy rating. Insulation is used both in the walls – in a clever "reverse brick veneer" structure where the high thermal mass of concrete bricks is on the inside of the timber stud frame – and in the floors. [Ed note: see p84 for more on this building technique.]

In combination with R2.5 Rockwool insulation inside the frame, the brick walls help keep the house warm in winter and cool in

summer. Jerry explains: "Like a concrete slab, the bricks absorb the ambient temperature in winter and slowly release it, and in summer, because the brick's on the inside the house doesn't heat up." As an extra layer of wall insulation, Jerry used blackbutt timber cladding 10mm thicker than usual. In summer, the timber cools down when the temperature drops. "The house is magnificent in summer. Last summer we had 42 degree days, but it was much cooler inside. The ceiling fans help too, and I was able to sit watching the cricket in complete comfort without air-conditioning!"

The floor is a concrete slab insulated around its perimeter. Jerry talks about the concept of a "thermal break" in which the ground and the slab function as a unit. "Where the slab is, you insulate around it, and continue the insulation a certain distance down into the ground, so that in summer when the ground outside heats up, its heat won't transfer to the slab. It works in reverse in winter too." In this way, the ground directly beneath the slab maintains a more



2 The exterior is clad with blackbutt, a fire resilient native hardwood, left unfinished to weather naturally.

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3 The varying size and apparently random arrangement of door and window openings is inspired by local agricultural buildings.



Ⓒ The kitchen benchtop, made of form ply normally used in construction, sits on a metal frame like a work bench. A yellow laminated box gives strong colour contrast.

stable temperature, which is drawn on by the concrete slab. The end effect is a more consistent ambient temperature inside the house.

Extra measures were taken to maintain comfort during the notoriously chilly central Victorian winters. A wood-fired boiler fed by salvaged logs heats both the water and the hydronic heating panels. The combination of solar gain, high thermal mass and rooftop solar PV means the family can “have the heater on all day, turn it off at 4pm, and it’ll still be 18 degrees inside the next morning, and we have hot water for everyone for a few days.”

Ventilation paths were factored into the design to keep the house cool in summer. Internal louvres between the bedrooms and sliding doors in the living area can be opened to let cool breezes through the house. The sliding wooden screens over the north, east and west facing bedroom windows are an ingenious design to keep out heat in summer without sacrificing light. Mounted on sliding rails, the shutters are made of leftover blackbutt cladding spaced at 30 millimetre intervals.

Jerry went all the way with the industrial concept, building the house around a stand-alone portal frame. He avoided using domestic materials like plaster and tiles, instead choosing recycled plywood, steel and mirror surfaces. The service area of kitchen, toilet, bathroom and laundry runs in a central core through the house, conveniently concentrating the plumbing in a single area, and is clad in acid-bathed mirror to achieve a dark, charcoal effect. Jerry explains, “It was a big call, but the context is key. We’re living in this building that we describe as being informed by agricultural architecture so it seemed appropriate that the interior follow that same path.”

No expense has been spared to configure the house in materials that lend a sense of quality, ease and taste to the space. If this is a shed, it’s one classy barn. Jerry agrees. “This house tries to bring a strong design sensibility to an ESD approach and we hope it’s succeeded.”



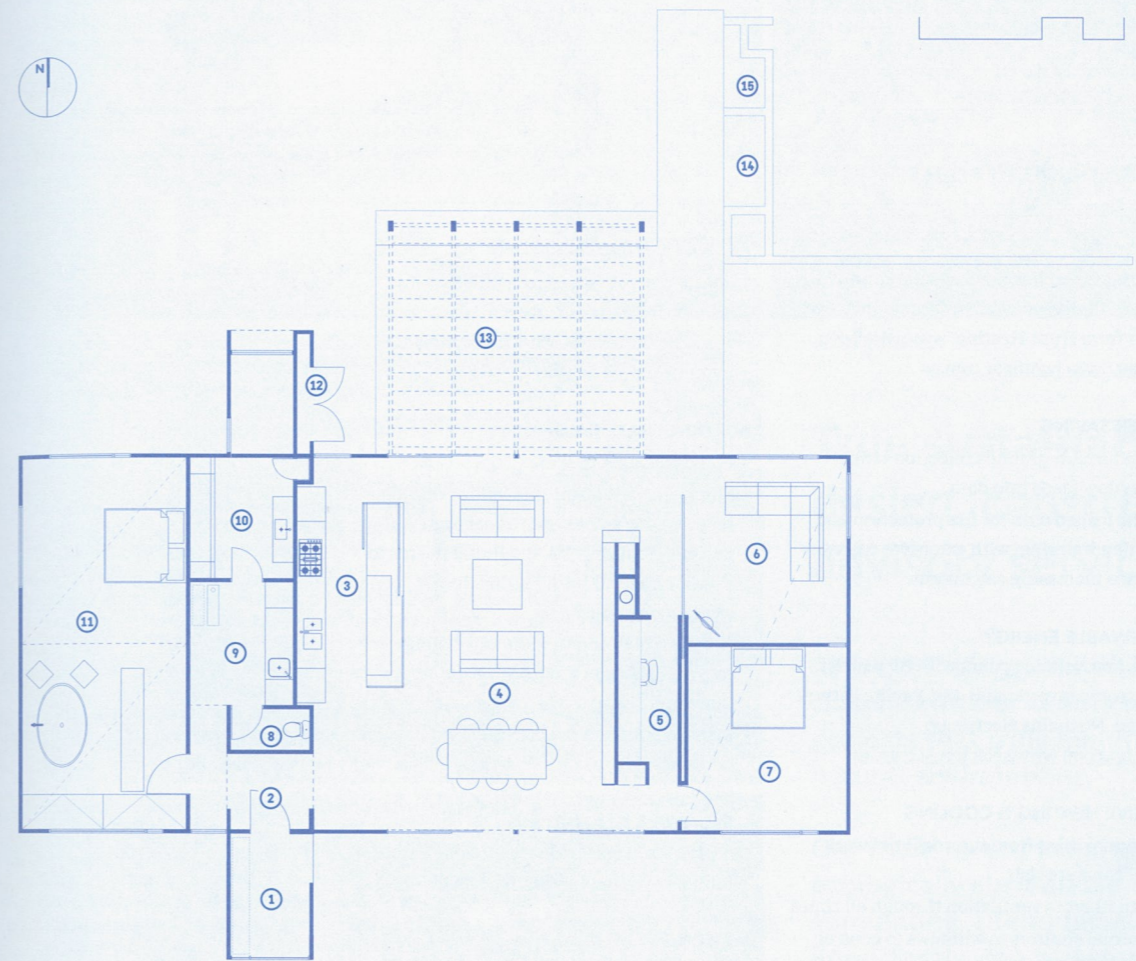
Ⓒ “Agricultural architecture in central Victoria: the Wolveridges’ home is a homage to the humble shed. In summer, sliding screens are drawn over windows to keep the heat out while letting light filter through the



1 An extensive pergola to the north provides much-needed shade in summer. The shower is enclosed in a futuristic cube of charcoal mirror.



2 The use of mild steel cladding instead of tiles gives a strong industrial aesthetic to the bathroom, completed with concrete benches, vintage taps and a yellow rubber floor.



FLOOR PLAN

- 1 Porch/Wood store
- 2 Entry
- 3 Kitchen
- 4 Living/Dining
- 5 Study
- 6 Lounge/Guest bedroom
- 7 Bedroom
- 8 Toilet
- 9 Laundry & Boiler room
- 10 Bathroom
- 11 Master bedroom
- 12 External store
- 13 Terrace
- 14 BBQ
- 15 Outdoor fireplace

3 A feature wall above the fireplace and panel is made of recycled wood bearer, cut to different lengths to create texture.

4 The living room fireplace is a double sided unit with a cabinet made from form ply above.

