

# HOUSE SPECIFICATIONS

## HOT WATER

- Sanden 315L heat pump

## RENEWABLE ENERGY

- 6.4kW solar PV system: 20 x REC TwinPeak 2 320W Mono panels, 6.6kW Fronius inverter with monitoring

## WATER SAVING

- 22,500L Polymaster rainwater tank plumbed to toilets and garden irrigation
- Stormwater management: surge tank combined with main rainwater storage tank designed to 'slow release' water to stormwater during heavy downpours
- Low flow showerheads and taps

## PASSIVE DESIGN, HEATING & COOLING

- Passive solar design with living areas facing north for maximum solar gain in winter
- Deciduous vines on pergola on north facade to block summer sun
- Temporary shadecloth awning to front entertaining area until vines mature
- Stone wall for thermal mass
- Design for good cross ventilation
- Well-sealed building envelope gives an air change per hour (ACH50) rate of 5.2, much more airtight than the typical Australian home and yet not requiring a mechanical ventilation system

## ACTIVE HEATING & COOLING

- Daikin split-system air conditioners: integrated ceiling ducted unit for the living area and main bedroom, and wall units in the bedrooms

- Nectre N60 convection wood heater
- Ceiling fans: Fanco Origin DC 56" in living room, Infinity-I Quiet DC 54" in main bedroom and study, and Fanco Eco Silent DC 48" in other bedrooms

## BUILDING MATERIALS

- High performance multi-layered construction: timber frame with microporous breathable building wrap, reflective non-combustible DCTech polyisocyanurate (PIR) rigid insulation board, and CSR bulk insulation products
- Colorbond roofing
- Concrete slab with recycled aggregate
- Insulation: foil-faced insulation blanket R1.35 to roof; CSR glasswool batts R6.4 to ceiling; batts and rigid, high performance non-combustible insulation R5.6 to external walls; glasswool batts R2.4 to internal walls

## WINDOWS & GLAZING

- Rehau 70 Series uPVC Tilt and Turn windows supplied by DoubleGlazed.com, Lonsdale SA

## LIGHTING

- Australian-designed high efficiency surface mount LED light fittings by UNIOS, supplied by LEDOutdoor

## PAINTS, FINISHES & FLOOR COVERINGS

- Dulux low-VOC paints and sealers

## OTHER ESD FEATURES

- No gas connection
- Efficient appliances
- Native, water-wise garden

## DESIGNER

TS4 Living

## BUILDER

Aria Homes

## PROJECT TYPE

New build

## LOCATION

Myrtle Bank, SA

## COST

\$625,000

## SIZE

House 240m<sup>2</sup>  
excluding garage  
Land 705m<sup>2</sup>

## ENERGY RATING

8.1 Stars

## INSIGHTS

"We benefitted from going to several Sustainable House Days, and now we are opening our home to share our knowledge."

Ben Whittall  
Homeowner



←  
Storage is tucked in everywhere, including under these window seats.



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**Sanctuary** MODERN GREEN HOMES

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# Shacking up

LOCATION Charlotte Bay, NSW • WORDS Rebecca Gross • PHOTOGRAPHY Claudia Gabriel-Lim



## At a glance

- Small footprint shack for simple coastal living, designed to suit a range of occupants
- Extensive use of reclaimed and recycled materials, including salvaged park signage and even old skis
- Facilities for outdoor living including breezeway, post-beach shower and carport that doubles as covered games area
- Rainwater collection plumbed to the whole house

**A compact, versatile and functional home on the New South Wales mid-north coast makes the most of recycled and reclaimed materials to create a cabin-like feel.**

The Shack, designed by architect Ian Sercombe, is a compact home purposefully designed to suit a range of people and their varied needs. Ian's partner Kate McLean wanted to build a small investment property that could comfortably accommodate a couple, a single, an elderly person, or a small family – over time that might be Ian and Kate themselves or extended family members, or short- or long-term tenants. They purchased a 2.5-acre block of land in Charlotte Bay on the New South Wales coast between Newcastle and Port Macquarie, and built a super functional and versatile home using local, found and upcycled materials.

Ian designed the house with a wedge-shaped plan influenced by the slope of the site. The rear southern facade sits on the contour of the land to avoid the need for excavation, and the front northern facade extends from the carport at grade, to the living area, bedroom and deck at the eastern end of the house which sits

2.5 metres above ground. Surrounded by bushland, the elevation creates the sense of being in a treehouse and provides space for the rainwater tanks to be located under the house.

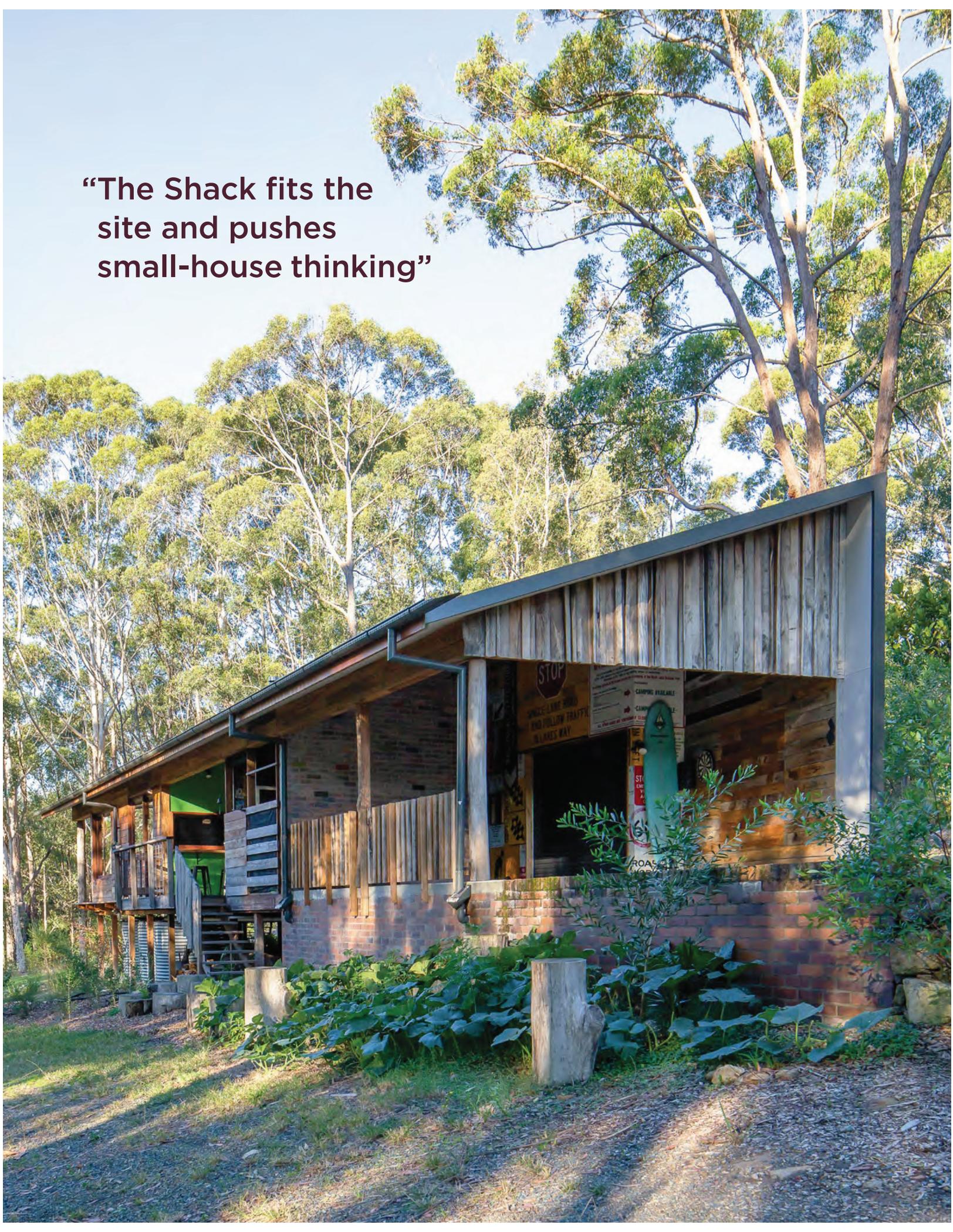
The interior rooms of the house comprise 60 square metres of the building, with the remaining 110 square metres given over to the carport, storage, post-beach facilities and decking. Everything is on one level for easy access by car and foot, and a breezeway in the centre of the house facilitates cross ventilation.

“When it rains, it pours,” says Ian of the NSW mid-north coast, so the covered carport doubles as a games room, with a brick wall and high ceiling allowing for cricket, tennis, darts and netball. The bricks are locally produced, and glazed bricks add a pop of colour. The colour continues in the old signs, given away by the local National Park office, that clad the adjacent storage room. Beyond the brick

→

Ian and Kate's modest shack was designed to be flexible in its use to suit a range of potential residents. A load of salvaged timber Ian sourced from a local mill was used for cladding.

**“The Shack fits the site and pushes small-house thinking”**





↑ The covered breezeway provides plenty of space for outdoor living, with a servery window through to the kitchen and views to the surrounding bush. A large sliding door on the southern end can be closed in bad weather.

wall there is a surfboard rack, basin and semi-outdoor shower, making it easy after a surf.

A 4.2-metre-wide covered breezeway separates the carport from the house proper. It is open to the north, and a large sliding door on the south wall closes it off during inclement weather. Lounging and dining areas allow for outdoor living year-round, and a servery window slides across to connect the breezeway with the kitchen.

Inside the house, the kitchen, living and dining areas are along the north, and two bedrooms and a bathroom along the south. The main bedroom has a desk and north-east facing deck, and louvres between the bedroom and living room open for light, breeze and views. “There’s an intimacy in a small space, and I wanted to keep as much connection between the primary spaces as possible,” says Ian.

Two lofts above the bedrooms make use of the roof space. One above the main

bedroom looks down into the living area and is large enough to be a study, sewing room or kids’ sleeping space. The other projects over the kitchen, creating a lower ceiling height above the entrance. The curving wall adds a softer geometry to the space, and the rough-sawn timber cladding has tactility and contributes to the cabin feel.

Ian used reclaimed and recycled materials where possible, while still meeting the requirements of BAL29 bushfire zoning. Only three trees were cleared from the site for construction, two of them used as posts at the north-east and north-west corners. Ian sourced hardwood from nearby mills for the structure and cladding, using it vertically and horizontally across the facade. “A local mill had a stack of timber from a deal that fell through,” he explains. “They were unable to offload these particular lengths, so they sold it to me at a good rate and I designed the facade to suit.”



↑ The curved wall of the loft above the kitchen is clad with rough-sawn timber for a tactile, cabin-like feel.

The roof and southern elevation are dark grey steel. “It’s like the colour you see if you’re standing in the Australian bush and look amongst the trees,” says Ian. He used timber floorboards on the interior floor, ceiling and side walls, and black-painted plywood on the end and internal walls. The black finish helps these walls to visually recede, drawing the eye to the view, while still allowing the texture of the ply to be visible. The kitchen island with reclaimed timber benchtop doubles as the dining table; Ian found the pantry advertised on Gumtree; and an external fence is built partly with old snow skis.

These recycled and upcycled elements give The Shack its character, while timber, brick and dark steel embed it in the wooded landscape. “It fits the site and pushes small-house thinking,” says Ian. “It feels beautiful and, like a cabin, everything is within an arm’s reach.” 📍