

HOUSE SPECIFICATIONS

HOT WATER

- Dux 160L resistive electric hot water system
- Catch Power Green Gen2 solar diverter to heat water using solar generation

RENEWABLE ENERGY

- 6.63kW solar PV system (17 x 390W Hyundai Green Energy VG Series panels with Enphase microinverters)

WATER SAVING

- House is off-grid for water
- 40,000L rainwater tanks for household supply; 5,000L tank for firefighting purposes
- Davey Aquashield Max ASHS60-8T pump and filtration system

PASSIVE DESIGN, HEATING & COOLING

- L-shaped design with considered glazing to optimise northern sun exposure
- Cross ventilation paths designed for cooling in summer
- Highly insulated building envelope

ACTIVE HEATING & COOLING

- Nectre N60 woodburning stove

BUILDING MATERIALS

- 300mm external hempcrete walls cast in situ using Tradical hempcrete supplied by Oz Hemp
- Timber-framed internal walls lined with FireCrunch K-clad magnesium oxide board, with Villaboard and Aquacheck to wet areas
- Colorbond roofing in Shale Grey colour (solar absorptance of 0.44)
- Paulownia lining boards to ceiling
- FSC-certified spotted gum flooring
- Laundry and bathroom joinery made from flooring leftovers
- Insulation: Hempcrete external walls (R4), Knauf Earthwool batts to ceiling (R5), Earthwool Sound Shield batts to internal walls (R2.5), Kingspan Greenguard GG300 rigid extruded polystyrene (XPS) board under the floor (R0.75)
- Decking: 'wood-look' ceramic tiles on fibre cement sheet

WINDOWS & GLAZING

- Paarhammer double-glazed BAL-FZ rated windows and doors with FSC-certified manilkara frames

LIGHTING

- Mix of 240V and 12V LED light fittings

COOKING

- Bosch Series 6 induction cooktop

PAINTS, FINISHES & FLOOR COVERINGS

- Hempcrete walls finished with two coats of lime render to inside and outside
- Dulux UltraAir low-VOC paints to internal magnesium oxide board and wet areas
- Cutek low-VOC interior finish to paulownia ceiling lining boards

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The ply kitchen was made locally. A terracotta tile splashback is still to come, along with permanent benchtops.



DESIGNER

Kirstie Wulf,
Shelter Building Design

BUILDER

Chris Clarke,
CWC Building

HEMPCRETE SUPPLIER

Oz Hemp

PROJECT TYPE

New build

LOCATION

Blackheath, NSW
(Dharug and Gundungurra Country)

COST

\$450,000

SIZE

House 90m²
Land 656m²

ENERGY RATING

7.9 Stars

ENERGY ASSESSOR

Mike Purtell, Deanei

BUSHFIRE ATTACK LEVEL

BAL-FZ