



Bush bound

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Salvaged and recycled timbers are front and centre in this renovated northern beaches Sydney home.

AFTER MANY YEARS OF FAITHFUL service Linda and Robin knew their ageing brick veneer home, nestled in native bush, was in need of serious renovation.

"I don't think it was built to last and we were a bit worried that our beloved house might fall down the hill!" laughs Linda.

As well as saving their dilapidated home, Linda and Robin recognised they needed more space. Linda, an artist, wanted a permanent studio while Robin, a psychologist and writer, needed an office. They also wanted a more open layout than their existing 1970s floor plan allowed. On top of that, their house lay in a "bit of a dip" amongst tall trees. Combined with the home's east-west aspect, this meant it lacked light and warmth, especially in winter.

Their initial renovation enquiries were discouraging. "The builders we spoke

to all advised us we'd need to cut down several trees at the very least. For us that was a deal breaker. Our house sits amongst this wonderful stand of Angophoras that connects through to the Landcare reserve next door."

She adds that their concern for the site extended beyond the trees to the land itself. Both her and Robin share a deep commitment to harmonious living with their immediate and wider environment. They didn't want to compromise the site for a much needed renovation.

"We didn't even want to disturb the earth, and I think for some builders that was just too much for them to deal with," says Linda.

Fortunately the pair found sustainable designers and builders Darryn Parkinson and Sharon Hamilton from Your Abode, who helped them realise their plan to rebuild without compromising their site and ethics.

Darryn devised a significant rebuild of their home. The building's footprint remains largely the same, but a small loft extension above the main living area adds space and brings sunlight and warmth into the house. A new skillion roof with highlight windows increases passive solar gain, while an exposed concrete slab provides thermal mass.

Low-e glass throughout the home helps to improve its thermal performance. Rainwater is collected into a 15,000-litre tank and provides potable water. →

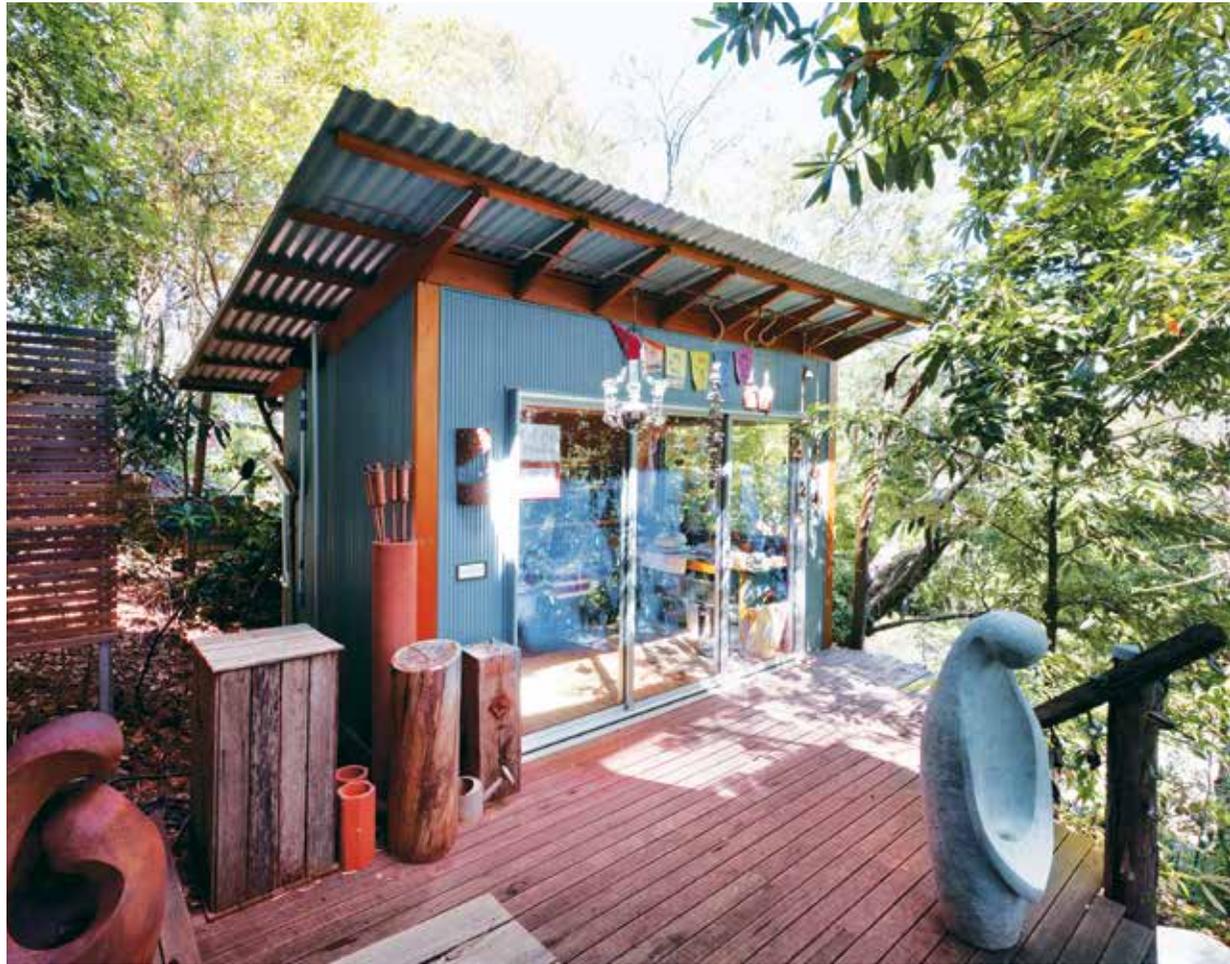


The renovated northern Sydney home sits among a stand of Angophora trees and has a similar-sized footprint to the old house to limit its disturbance to the land. All external materials were selected to comply with Bushfire Attack Level-40 and Linda and Robin's environmental ethos.

"I just love walking through our home and looking at all the materials. They already existed and many of them were going to go to waste. Now they've got a new life together amongst the trees."

Homeowner Linda

➔ Much of the furniture is homemade, secondhand or recycled, including chairs salvaged from kerbsides and refurbished, and vintage 1970s lights – even a reclaimed bowling alley repurposed as a shared desk.



A mains connection kicks in when the tank runs dry.

Darryn and Sharon were sympathetic to Linda and Robin's need for minimal impact, especially when it came to materials. Much of the house was rebuilt using reclaimed or recycled materials. The new slab contains a high proportion of fly ash, an industrial waste product, and much of the existing building materials were salvaged and reused, including granite benchtops, solid wood cupboard doors and cedar cladding. And Linda got her wish: a standalone studio sits on stumps to minimise disturbance to the site.

Timber choice was a particular concern for Robin and Linda. However, Darryn

proved to be an inveterate wood-hunter, sourcing Australian hardwoods from various unlikely places.

"Darryn would ring us out of the blue and say, 'I've got a load of Sydney blue gum and blackbutt from a highway diversion up on the Mid North Coast, do you want it?' or 'There's a load of jarrah from an old warehouse in WA, do you want that?' We just kept saying yes, yes, yes!" recalls Linda.

The jarrah forms the stair treads and handrails, while the door frames, skirting and architraves are blue gum. Blackbutt, rated as a naturally fire retardant species, suited the site's BAL (Bushfire Attack Level) and could therefore be used externally without the addition of chemical fire retardants. →

➡ The northeast-facing loft has been designed as a study for homeowner Robin who often works from home. The floor is finished with a recycled underlay and pure sisal floor covering.

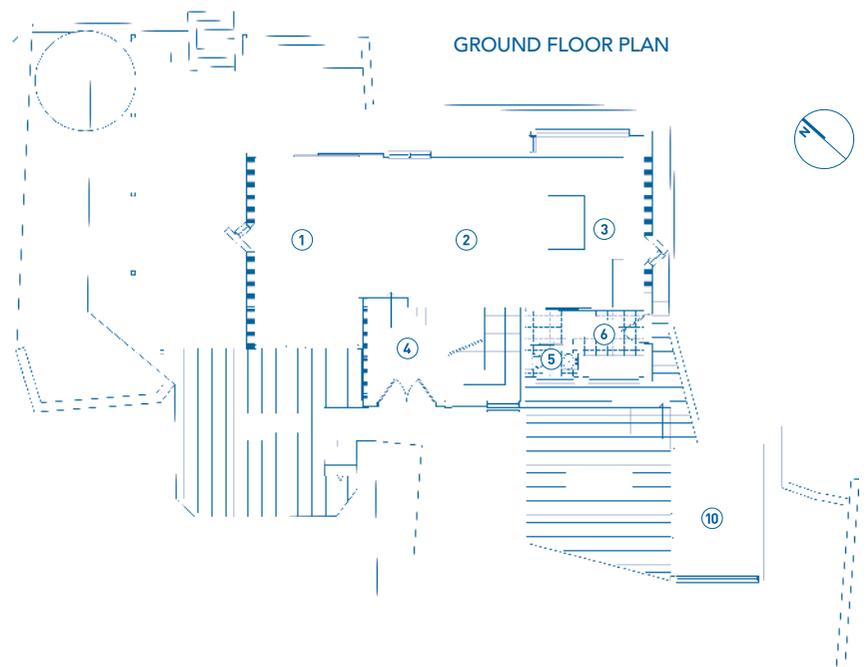


⬆ Stairs climb up through a triple-height void to the bedrooms and loft above. Clerestory windows at the top of the void help vent warm air out of the building in summer. Recycled jarrah was used for the stair treads and handrails, recycled tallowwood for the first-floor floorboards.

➡ The home's existing brick walls and timber wall frames were left in place but modified, including the addition of insulation and Colorbond cladding, to suit the new design.



The new kitchen looks out to the northeast into the surrounding Angophora trees. Kitchen cabinetry was made with super E0 low VOC Austral marine grade hoop pine plywood. The cabinets were hand-finished with super low VOC Murobond Woodwash and a low VOC Murobond Murothane clear finish.



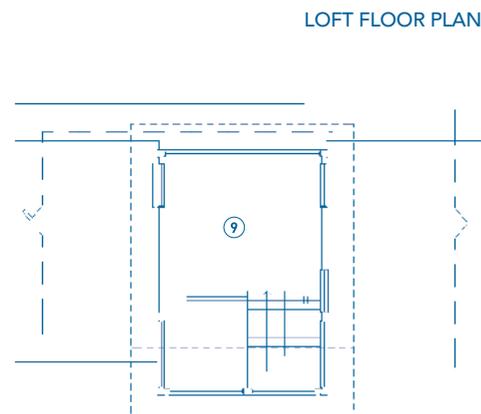
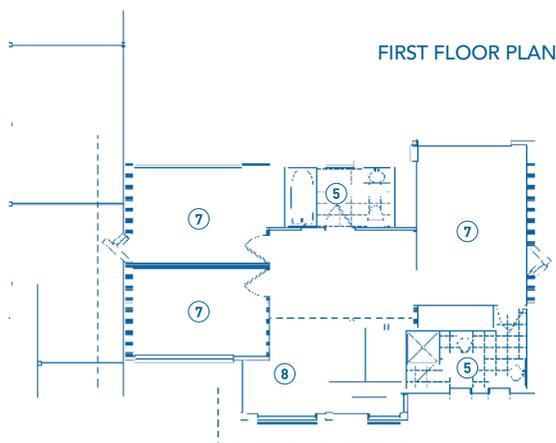


↑ Western red cedar cladding and solid timber kitchen doors from the old house were recycled to manufacture the two bathrooms' vanity units.

The melange of local Australian timbers complements an 'unvarnished' aesthetic that Linda loves. "We loved Darryn and Sharon's ethos about honesty in materials. We've not tried to cover anything up with extraneous finishes, so you can see what the house actually is. Native hardwoods sit against unpainted fibre cement cladding and that fits well with an Australian beach aesthetic. So it sits well with the surrounding bush, but also the neighbourhood, too," says Linda.

A life cycle assessment of Linda and Robin's home found it saves 54 per cent of carbon emissions compared to a standard house. But for Linda the outcome is more tangible.

"Yes we're living more comfortably now, and our house isn't falling down! But I just love walking through our home and looking at all the materials. They already existed and many of them were going to go to waste. Now they've got a new life together amongst the trees." ⑤



LEGEND

- ① Living
- ② Dining
- ③ Kitchen
- ④ Entry
- ⑤ Bathroom
- ⑥ Laundry
- ⑦ Bedroom
- ⑧ Void
- ⑨ Study
- ⑩ Studio

Avalon house

—Specifications

Credits

DESIGN

Your Abode

PROJECT TYPE

Renovation

PROJECT LOCATION

Avalon, NSW

SIZE

House 160 sqm,
land 700 sqm

BUILDING STAR RATING

6 Stars

Sustainable Features

HOT WATER

- New 6 star Rheem continuous flow gas hot water system – significant tree cover meant solar hot water or PV were not viable.

WATER SAVING

- The house is self sufficient for water. A 15,000 litre steel rainwater tank provides filtered potable water to the kitchen, bathrooms and laundry.
- Rainwater is collected from the roof and filtered through first flush diverters and a multi-filter system prior to use in the house
- All gutters are leaf screened with Leafstopper
- Water-efficient fixtures and appliances.

PASSIVE DESIGN

- Stack effect ventilation designed into the stair void allows excess heat to rise to help heat the upper floors in winter or be vented outside in summer
- Eaves prevent heat gain in summer while allowing solar access in winter. Sliding external timber screens or shutters have been fitted over exposed west-facing windows.
- A manual retractable shade system over the western pergola reduces summer sun exposure.

ACTIVE HEATING & COOLING

- In-slab gas hydronic heating
- Ceiling fans.

BUILDING MATERIALS

- Kitchen cabinetry, loft shelving and joinery made with super E0 low VOC Austral marine grade hoop pine plywood
- Recycled/reclaimed timber used extensively throughout, including:
 - Western red cedar cladding

from the old house that was recycled to manufacture vanity units

- Recycled tallowood flooring used for the first floor
- Recycled jarrah used extensively internally in stair treads and for handrails and externally
- Reclaimed blue gum used for door frames, skirting and architraves.
- Reclaimed blackbutt used for the construction of the external deck areas
- Front door handcrafted from recycled tallowood floorboards
- Solid timber doors from the old kitchen recycled as vanity units and internal doors.
- Oregon salvaged from the old floor joists crafted into storage units.

- The old kitchen’s granite benchtop was recycled to make vanity and laundry benchtops
- Existing external brick walls and timber wall frames retained and modified to suit the new design
- Insulation: Greenstuf polyester batts and Tyvek wall wrap used in walls, ceiling and under floors
- Boral Envirocrete slab on ground floor
- Stainless steel fittings to ensure their long life
- New external cladding: Colorbond corrugated steel sheeting and fibre cement sheeting.

WINDOWS & GLAZING

- Breezeway louvre windows above the stairwell
- Low-e coated glass in all windows
- All external doors and windows fitted with seals to tighten building envelope.

- Anodise coating applied to window frames.

LIGHTING

- Compact fluorescent light (CFL) fittings.

PAINTS, FINISHES & FLOOR COVERINGS

- Zero VOC Murobond natural paint used for walls and ceilings
- Kitchen cabinets hand-finished with super low VOC Murobond Woodwash and a low VOC Murobond Murothane clear finish
- Synteko Natural zero VOC floor oil used on timber floors
- Pure sisal floor covering with a recycled underlay lines the loft floor
- Murobond low VOC Murowash applied to existing external brick walls.

OTHER ESD FEATURES

- All external materials selected to comply with Bushfire Attack Level-40 requirements and the designers’ sustainability requirements
- Efergy energy monitor installed provides real-time energy use information
- No preservative or termite treated timbers used
- A life cycle assessment was undertaken of the building’s embodied carbon impact, which demonstrated that the building has a 54 per cent carbon saving over a ‘standard’ house.

OUTDOORS

- Drought tolerant local, native low water species
- Recycled bricks used to pave the external courtyard.