

# MODERN GREEN HOMES Sanctuary

**INSIDE ISSUE 11** 45 pages of inspiring sustainable homes; recycled kitchens; ask our experts; solar heating & cooling; greener concrete; ventilation; low-water lawns

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# Contents

## HOUSES

10

### ONCE IN A LIFETIME

For Riddel Architecture, a brief to build “the most sustainable home possible” on the Brisbane River’s prestigious south bank was a unique opportunity to prove green can be glamorous.

20

### MODEST MAKEOVER

The modest renovation of a postwar bungalow in the Melbourne’s West Preston scores a double victory for heritage conservation and for sustainability.

30

### SPREADING ITS WINGS

On a beautiful but challenging site in the Sunshine Coast hinterland, architect Dan Sparks gives a boxy concrete block home a sustainable makeover.

40

### A STUDY IN CONTRASTS

New and old, light and dark. Brian Steendyk used his own house in inner-city Brisbane to put some of his ideas about sustainability and aesthetics to the test.

48

### HEIGHT & LIGHT

On a long, narrow block starved for light in inner-suburban Melbourne, two architect-homebuilders employ inspired design to rise above their home’s space constraints.

56

### BEST OF BOTH WORLDS

An inner-city Sydney renovation preserves a Victorian-period terrace’s beauty and boomer grandeur while remedying its deficiencies by introducing light, air and stunning views.

10



20



40



48



# Contents

## IN FOCUS

64

### SOLAR THERMAL HEATING AND COOLING

A house that doesn't need active heating is "passive house" holy grail. But if that's too much of a stretch, a solar thermal system might get you over the line.

68

### THE MACHINERY SHED

Having trawled umpteen houses on Sustainable House Day for ideas, this retired couple built their green dream home using a potent mix of design and technology. Now it's time for their house to shine.

74

### GREENPOWER

PVs are not the only way. Another route to a clean energy future lies with GreenPower, a government approved suite of renewable energy products.

74



## DESIGN NOTES

80

### COOL PANTRIES

Your fridge can work better and your pantry can work like a fridge with the help of some ventilation and a little natural convection.

82

### GREENER LAWNS

Water-thirsty lawns have become the bad boys of landscaping, but they don't have to be.

84

### GREENER CONCRETE

Concrete is a great way to achieve thermal mass, but until recently this has been offset by its high carbon content. A slew of new products are promising to change this.

86

### RECYCLING KITCHENS

Save money and materials and give your kitchen that retro look by buying second hand.

88

### HOUSE VENTILATION

Effective ventilation is essential to the healthiness and thermal efficiency of your home, and the best way to achieve it is through careful whole-of-house design.

84



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## REGULARS

- 38 Subscribe to Sanctuary
- 92 Products
- 94 Directory
- 96 Ask Our Experts

## IN BRIEF

- 17 Enviro Save water system
- 17 Underground water storage
- 27 Roof gardens
- 27 Reenamelling baths
- 37 Ceiling fans
- 46 Davey Rainwater Harvesting
- 54 Central heating
- 54 Danpalon - a translucent, insulated material
- 54 Sisal carpets
- 62 Magnetite magnetic window insulation



# ONCE IN A LIFETIME

*For Riddel Architecture, a brief to build “the most sustainable home possible” on the Brisbane River’s prestigious south bank was a unique opportunity to prove green can be glamorous.*

**WORDS** DANIELLE DUNSMORE **PHOTOGRAPHY** CHRISTOPHER FREDERICK JONES



The north-south running gallery features fin windows that have been angled to permit light inside while minimising ingress of hot afternoon sun. Painted red they form a striking feature wall. To the east, high-level louvres to the courtyard permit ventilation on hot days. (The Australian hoop pine ply lightshades are by David Trubridge.)

### QUEENSLAND GETS ITS FAIR SHARE OF SUN.

Now its warmth and light have been harnessed to an extent rarely seen in an amazing new home in Brisbane's Hill End.

Designed by David Gole and Emma Scragg of Riddel Architecture (RA), this house goes to extraordinary lengths to harness and control the elements. Which is just one way in which RA realised their clients' brief "to build the most sustainable home possible".

At the time of our visit, the brand new home had had several open days over two weeks, receiving hundreds of visitors – including numerous architects and builders – keen to see some of the latest environmental design and technology brought to life.

The team spared no pains in living up to their clients' expectations, including incorporating a recycled content in the building of 80 per cent. In that and many other ways (for instance, making use of low-carbon, magnesia-based eco concrete), the project gave RA an opportunity to push the envelope in sustainable home design.

David Gole explains RA's approach to the project. "Unfortunately, the previous home had been altered and extended several times, was of no historical value and was run down." Despite this, RA and builder Rob Peagram Builders made sure very little of the old home wound up in landfill. "About 80 per cent of the old home was reused in the new one."

"We reused the old VJs (tongue-and-groove wall panelling), the ceiling and floor joists, the floor boards, decking and the weatherboards," says David. "Rob stockpiled useful materials onsite, sorting out what was reusable and what wasn't. We were very lucky – Rob and his team really believed in the project."

Recycled materials were used in the wall frames, floor and roof frames, steelwork, linings, cladding, concrete floors and tiling. The mix of old and new gives the home character, and has obvious environmental benefits.

"We even avoided bringing in a portaloos during construction – because of its associated chemicals – and instead simply built an outhouse using the old toilet suite."

Outdoor entertaining areas are strategically shaded, while indoor areas are designed to capture and direct breezes, expelling or retaining heat as required. External venetians deflect the heat from outside, while concrete (make that eco concrete) floors help regulate internal temperatures.

The home works around a grassy courtyard, allowing the sunlight and breezes into every room as required.

The front half of the home houses the garage and plant room, with two bedrooms, and a bathroom upstairs. Connected by a wide, open gallery to the home's riverfront section, you can go upstairs to the master bedroom suite, stay ground level in the kitchen and living areas, or descend to a fabulous underground suite that any teenager would give their right arm for! This fabulously cool subterranean room has a skylight upstairs to the living area – positioned "just so" to capture daylight and winter sun.

Either side of the open kitchen are two living areas: one for summer that faces the river and is open to the cooling southerly breezes; and the other for winter, with concrete floors to store the heat of the winter sun.

The separate areas are all connected by generous partition doors and breezeways. To economise on floor space, many of the rooms allow multiple uses. A bedroom can convert to an office or to a visitor suite.

"We needed to connect to the river in every way possible. All the rooms look through to the water – almost from the front door."

The social aspect of the home, both inside and out, was also a major consideration. "We wanted this house to look no different to any other in the street. Very unpretentious, friendly and inviting with no front fence and the gates set back. The garage you can look into: it's open and not a solid wall, or a barrier into the home."

The fabulous site, on the southern bank of the Brisbane River, is prime real estate, and even though sustainability was a priority the home still needed to be at home in such a premium address. "The value of the land requires a commitment to high quality design and finishes," says David Gole.

"We wanted to prove that you could build a sustainable home, with architect and quality builder, for the same price, around \$3500 per square metre, as a home of similar quality without any sustainable credentials."

Certainly with a massive 80 per cent recycled content, passive solar design, underground water tanks, solar power, no air-conditioning, and low fuss, hardwearing materials, only a handful of houses Australia-wide could tick as many environmental boxes as this one.

But when you combine design smarts with drop-dead gorgeous looks and "location location" you have a once-in-a-lifetime, see-it-to-believe-it house. No wonder people are queuing up to see it.

.....  
 For more information about eco concrete see  
 Design Notes – Greener Concrete, p84



↑  
 The kitchen cabinetry is built completely of plantation hoop pine ply with water-based stains and clear finish. Feature door handles are of brushbox and the benchtops are reconstituted stone.

→  
 The timber-floored living/dining room blurs the lines between inside and out by combining a light filled indoor room with a partially shaded river terrace. The concrete blockwork wall provides bracing and thermal mass.



# MODEST MAKEOVER

*The modest renovation of a postwar bungalow in Melbourne's West Preston scores a double victory for heritage conservation and for sustainability.*

**WORDS** VERITY CAMPBELL **PHOTOGRAPHY** RHIANNON SLATTER

◉ Brenton's roof garden-topped garage is a multi-functional space offering the family an outdoor workspace, storage space and additional gardening opportunities. All up to build it cost him around \$1000 with plenty of free labour from friends and family. Installation of the roof garden cost the same again, with a working bee of all available hands lifting the soil system up ladders in one long day.

**WEST PRESTON IS A MELBOURNE SUBURB BRIMMING**

with postwar brick bungalows and a mix of long-time residents and young families lured to the area by its roomy houses and large backyards.

It's a familiar story in Melbourne's inner north, and one which has led to not a few unsympathetic renovations and boxy additions. But what makes this story unusual is that instead of modernising the home and extending its footprint, architect-owner Brenton and his family chose to retain and uncover the home's original features and layout, creating a comfortable home on a modest budget. Not only does it preserve the architectural heritage of a suburb, but from an environmental point of view it has resulted in significant savings by reusing and revitalising the home's existing materials. It's a modest project, but it speaks volumes for sustainable development.

Brenton began with the kitchen. He decided to keep the room's original configuration, which had served the house well for decades, and the fireplace.

"We chose not to knock down the original kitchen fireplace. Lots of the houses around here have the fireplace knocked out for more space, but we think it adds to the charm of the room."

The kitchen cabinetry was also kept, but a new bench top was necessary. Brenton sourced stone offcuts, but in hindsight would have preferred a laminate – "the stone benchtops that we have are quite irritating because they are very 'clacky'. I feel like I am always about to break my glass when I put it down." They built new joinery around the stove, and found taps at the Coburg Trash and Treasure market. The cabinetry handles came from a friend's old kitchen which was being demolished. All up the family spent around \$6000 on the kitchen, including new appliances – about two thirds of the minimum cost estimate in Archicentre's 2009/10 *Cost Guide* (Archicentre prices kitchen renovations at between \$10,400 and \$31,100). Brenton is quick to point out that such a low budget relied on being able to retain the existing cabinetry and to undertake pretty much all the work himself (apart from service connections and new joinery). "I would never want to clean the inside of an old chimney from 60 years of fatty cooking again," he says. "And the two years that we lived with half finished tiling were not really an advertisement for 'architecturally designed lifestyle choice'".



According to Brenton, "The utensil rail is a standard towel rail with hooks we bought from an Asian grocer on Victoria street. The shelves came from a friend who had them sitting on his balcony for two years and never got around to making what he was going to fit them. The shelves are lit with one fluorescent bulb, and we 'gapped' the shelves off the wall to give the light more effect."

# SPREADING ITS WINGS

*On a beautiful but challenging site in the Sunshine Coast hinterland, architect Dan Sparks gives a boxy concrete block home a sustainable makeover.*

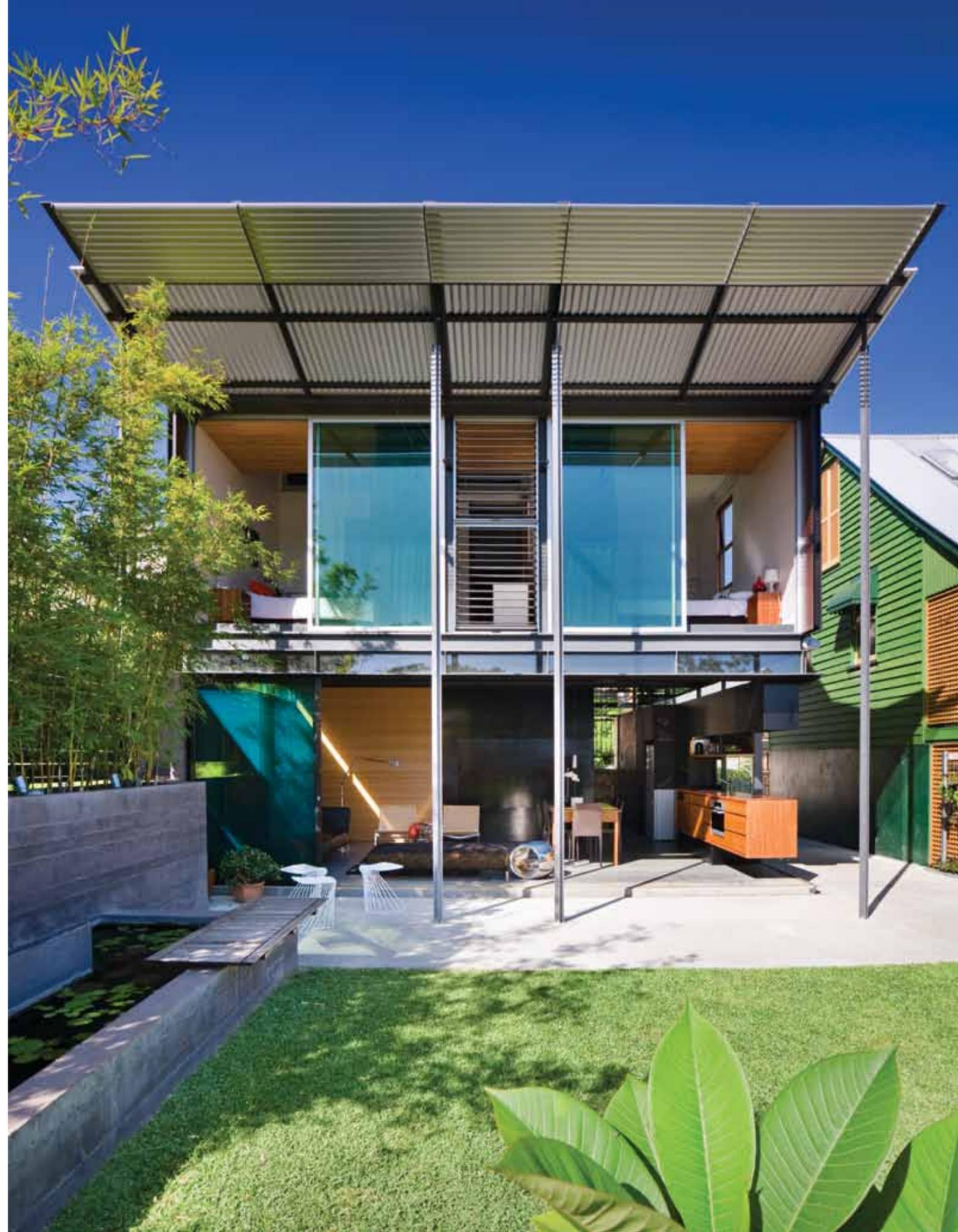
**WORDS** FIONA NEGRIN **PHOTOGRAPHY** CHRISTOPHER FREDERICK JONES

➔ At the rear of the house, the bedrooms and living spaces enjoy an ideal north-east aspect. Beneath the garden are 14,000 litres of rainwater tank modules. On hot, dry days a water feature helps pre-cool air entering the house through evaporation. The water feature and garden beds are part of a concrete retaining wall set against the adjoining property.

*New and old, light and dark.  
Brian Steendyk used his own house  
in inner-city Brisbane to put some  
of his ideas about sustainability  
and aesthetics to the test.*

WORDS DANIELLE DUNSMORE PHOTOGRAPHY CHRISTOPHER FREDERICK JONES

# A STUDY IN CONTRASTS



# HEIGHT & LIGHT

*On a long, narrow block starved for light in inner-suburban Melbourne, two architect-homebuilders employ inspired design to rise above their home's space constraints.*

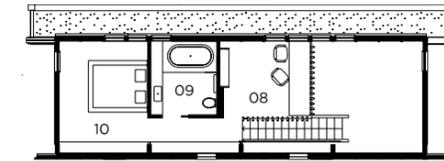
WORDS FIONA NEGRIN PHOTOGRAPHY SONIA MANGIAPANE



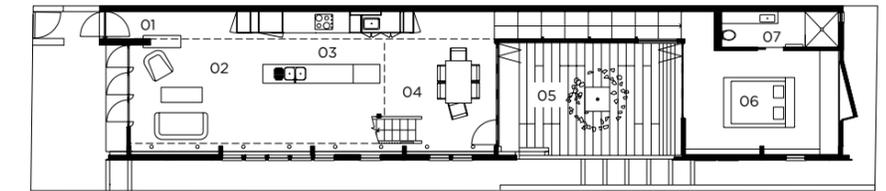
The northern side of the block is faced by a four metre high boundary wall, blocking northern light in the winter. In response, the designers created "sunshells", built higher than the neighbour's wall, to capture northern light and draw it into the building.



The main bedroom opens onto the courtyard and is accessed via a stairway running along the northern boundary. This room was designed to be a retreat, yet is connected to the main living areas via the courtyard when the bi-fold doors are opened. The carpets are made from natural fibre, sisal.

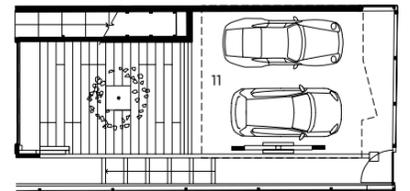


FIRST FLOOR PLAN



GROUND FLOOR PLAN

- 01 Entry
- 02 Living
- 03 Kitchen
- 04 Dining
- 05 Courtyard
- 06 Main Bedroom
- 07 Ensuite
- 08 Study
- 09 Bathroom
- 10 Guest Bedroom
- 11 Car Port



CAR PORT PLAN

ⓘ The formerly box bookcases are designed as multifunctional storage, and can be relocated and reconfigured as needed. Here they're placed under the staircase to utilise this traditionally challenging space. The kitchen cabinetry is plywood.



# BEST OF BOTH WORLDS

*An inner-city Sydney renovation preserves a Victorian-period terrace's beauty and boomer-era grandeur while remedying its deficiencies by introducing light, air and stunning views.*

WORDS JUDY FRIEDLANDER PHOTOGRAPHY SUE STUBBS

➔ The rear doors and feature windows at the eastern end of the house maximise views and amenity while employing a pergola (over which will be grown a deciduous vine) and external blinds to minimise unwelcome summer sun.



**IT'S A SIGN OF A GOOD RENOVATION**

of an old period terrace when it brings out the very best of the original heritage features while providing present-day panache.

Thanks to architect Caroline Pidcock, this little terrace in Sydney's inner western suburb of Glebe is now showcasing its boom-period Victoriana through a 21st century lens.

Says Pidcock: "While the house is not heritage listed, it contributes to the area.

"We aimed to retain the best of what is there in the public realm, while ensuring the new work is well designed so it contributes positively to the heritage of the future."

In the front half of the house, two original fireplaces framed by crisp white walls, high ceilings, plaster cornices and ceiling roses seem to invite the visitor or lucky inhabitant to repose with a good book and a glass of wine.

Step into the renovated addition in the back half of the house and the style is contemporary with a nod to period detail. The rear of the house has been connected to the backyard via an open family room and deck extending from the kitchen. In the kitchen, a north-facing period-style stained glass window throws coloured rays across the floor. More light emanates through the rear doors and highlight windows that open onto the deck.

There are external blinds to east-facing windows and a pergola which will provide a frame for a deciduous vine over the deck to protect the eastern doors.

Owner Christine Asmar is thrilled by the renovation, which has allowed her and partner Tom Angelo to "live in the treescape".

The outlook behind the property is very inner-western Sydney, with gum trees, tin roofs, laneways, sandstone walls and windows into other lives providing a rich, living landscape.

"Previously, we could only see this lovely treescape through a narrow opening in the kitchen," says Asmar. "Now, the whole living area has been opened up so that the outlook has come to us."



→ Light cascades down the central stairwell from an overhead double-glazed skylight. Note abundant cupboard space under the stairs.



← The downstairs toilet/laundry, coming in at a mere 3.78m<sup>2</sup>, defies its dimensions with a large mirror and white, light-reflecting surfaces. It has taps for a tight fit: Bastow Georgian basin mixer twinner with an Ostar 9045 wall-mounted basin. Mixers with separate hot and cold taps are more energy-efficient than single levers, which tend to be left in the middle position.



Original fireplace surrounds combine with timber furniture to retain a period aesthetic, while an east-facing operable Breezeway louvred window opening into the central lightwell controls light and ventilation, blending period form with contemporary function.