

# MODERN GREEN HOMES Sanctuary

**INSIDE ISSUE 23** 115+ green products & design tips; Design Workshop – design for cold climates; Renos & retrofits – kitchens & bathrooms profiled; Using recycled materials

## RENOS & RETROFITS

KITCHENS, BATHROOMS  
& SMALL PROJECTS

Eco cubbies  
Good design on a budget  
Greener paints, inside & out

ISSUE 23 • WINTER 2013  
AUD\$11.95 • NZ\$10.95  
SANCTUARYMAGAZINE.ORG.AU

ISSN 1833-1416



9 771833 141000

**WIN**  
A solar power system  
from Delta Energy

\*Offer open to Australian residents only.

**NSW & QLD**  
Sustainable  
Designer  
Directories

# MODERN GREEN HOMES Sanctuary

## Contents

—Issue 23



### HOUSE PROFILES

14

#### Shared living

An extended family enjoy life together in a home built for collective, and private, living.

22

#### A beachside lifestyle

A young family build a durable home in Sydney to better connect to their new beachside environment.

64

#### At home in the sun

An 8 Star house delights in the abundant light of the Sunshine Coast, delivering shelter to a family committed to living sustainably.

30



22



## RENOS & RETROFITS SPECIAL

In this *Sanctuary* special we showcase green home, kitchen and bathroom renos, retrofits and alterations from around Australia. Leading designers share their expert tips and advice. We also look at how to use and choose recycled materials and find the best appliances.

### MINI PROFILES

30

#### Style on a budget

This Melbourne renovation shows that sustainability can be achieved on a budget, with outstanding results.

34

#### Creating space

How do you create a sense of space where there is very little? Blended spaces are used in this Melbourne terrace.

38

#### Beach review

This beachside home's second storey is overhauled to create a more comfortable kitchen and living area.

40

#### Small and striking

By designing rooms that support multiple uses, a family gains the extra space they need without building bigger.

42

#### Sydney infill

This new build is a modern rendering of a traditional terrace house in Glebe, Sydney.

### EAT, DRINK, BATHE

#### KITCHENS AND BATHROOMS

44

#### Contemporary

48

#### Retro

51

#### Rustic

52

#### Compact

### DESIGN MATTERS

53

#### Salvaged & recycled

Old kitchens with new style

49, 50, 56

#### Tips from the experts

Design for longevity, money saving tips & appliances.

# Contents

—Issue 23



## DESIGN WORKSHOP



## FOCUS



## OUTDOORS

### SPECIAL FEATURE

#### 80 Speed Date a Sustainable Designer

Speed Date a Sustainable Designer is back in 2013 with events coming up in Brisbane and Sydney.

#### 58 Tucked away in Tasmania

After moving from Perth to Tasmania, Philip and Glen seek some advice on how to build a cosy home for cooler winters from design expert Mark Dewsbury of Carawah Design.

#### 70 Crafting cubbies

Beth Askham finds a design project that sparks the imagination of young (and older) minds.

#### 86 Growing mushrooms

Growing mushrooms can be as simple or as complicated as you make it.

34



## PRODUCT PROFILE

#### 75 Painting greener, inside and out

In *Sanctuary 16*, we looked at the choices available for those wanting their next paint job to be kinder on their family's health and on the environment; what's changed since then? Anna Cumming discovers that it's cheaper and easier than ever to paint green.

## REGULARS

#### 10 Reviews

#### 12 In the post

#### 63 Subscribe

#### 69 The ATA

#### 89 Products

#### 92 Marketplace

#### 96 Ask our experts

53



70





# Shared living

---

An extended family enjoy life together in a home built for collective, and private, living.

---

WORDS Verity Campbell  
PHOTOGRAPHY Judy Sederof

**THE MORNINGTON PENINSULA,** just outside of Melbourne, is the classic weekend getaway. With its rugged ocean beaches, national parks and undulating hills dotted with wineries and pick-your-own orchards, it's no surprise so many Melburnians decide to relocate there permanently. But for one family of sea-changers, the move to Merricks North in the hills of the Peninsula was no hasty decision.

For over 20 years Marie and her family had tended the land around their weekender, lovingly revegetating their six and a half hectares with more than 3000 trees. They even co-founded a local Landcare group and won an award for their revegetation work on Merricks Creek, which borders the property.

But the existing house was badly insulated, dark and ill-equipped to accommodate an extended family – Marie, her partner, their child and his grandfather – so they chose to build a new dwelling to meet their need for both

shared and independent living.

The brief to Andreas Sederof and Brent Lamb of Sunpower Design was to keep it simple, make it energy efficient, build to last, and meet the family's need for both communal and private living. And so project architect Brent set to work, ensuring the woodworking passion of the owners was fully incorporated into the design. The superb recycled cabinetry is a credit to this successful client-designer partnership.

The plan of the 21 square (196 square metre) home is linear with east–west orientation to maximise northern light. The two wings pivot either side of the shared entry corridor, laundry and living-kitchen room – a lofty space with Australian quarried sandstone flooring, large island bench, cheery canary-yellow tiled splash back and a corner butt-joint window with views to Western Port. “Real estate agents would make a big deal out of that glimpse of water,” jokes Marie. →

# A beachside lifestyle

---

A young family build a durable home in Sydney to better connect to their new beachside environment.

---

WORDS Ben Giles

PHOTOGRAPHY Simon Whitbread

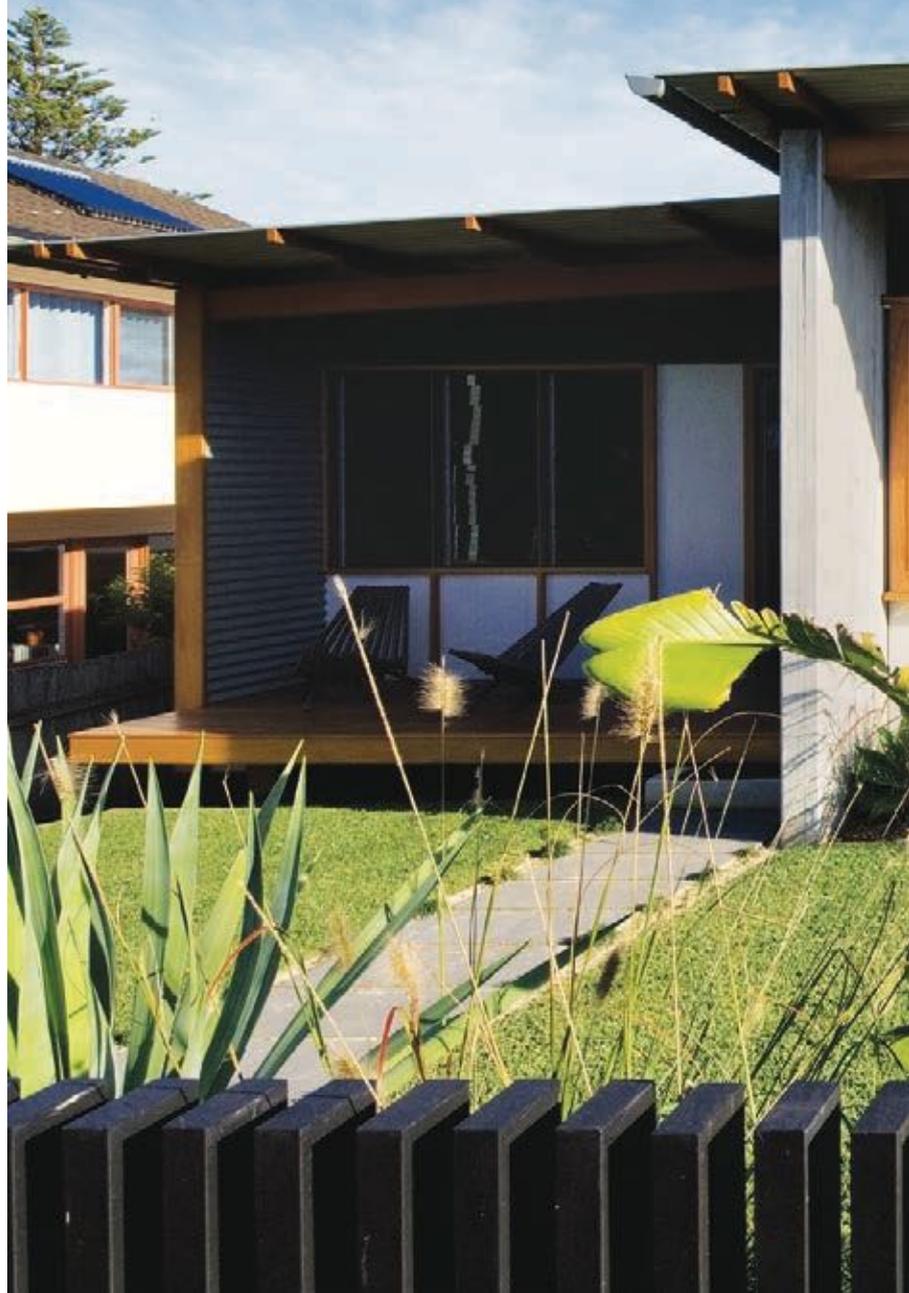
**AFTER LIVING IN PETERSHAM IN SYDNEY'S** inner-west for years, Brooke and Murray Love wanted a change. They were giving up their dark and cramped terrace house that was too hot in summer and too cold in winter. Instead they sought a new lifestyle for their family, one that was better connected to the environment. To achieve this they would build a house in Narrabeen on the city's northern beaches.

Originally a quiet retreat of holiday beach cottages on large blocks, time had seen their new neighbourhood evolve and its density increase. Large sites had been split into battle-axe blocks and new zonings meant a proliferation of medium-density housing.

The Love's lot sat at the front, or street end, of the block with an access way along its long northern side to a neighbour's property at the rear. Despite its elevation, the site was hemmed in and overlooked by surrounding developments that created a planning challenge for privacy.

Their brief to architect Matt Elkan was to design a robust home for their family of three young boys and visiting grandparents. It called for tough, durable materials to create a house that would support the family's active lifestyle.

As Brooke explains: "We wanted something that felt like we were on holiday; something that was light and airy and open plan. And it had to be kid-proof, our boys are very active". →





# Style on a budget

WORDS Sarah Robertson

PHOTOGRAPHY Chris Neylon

**KIDS HAVE A WAY OF PUSHING THOSE LINGERING HOME** renovation projects along. For sustainable building designer Sven Maxa and his wife Dawn of Maxa Design, their low budget home renovation is a classic case.

The house was initially intended as a project for Sven; a chance to renovate and test out products and materials. The couple conceptualised the new design about five years ago and renovated the bathroom and laundry before their first child, Abby, was born. The impending arrival of their second child a couple of years later saw them shift ahead to stage two and quite drastically renovate the rest of the old house to better meet the needs of family life.

“We debated lots of ideas but the actual aesthetic was just borne out of a desire to be economical,” explains Sven. “We really wanted to create a whole new façade in a cost-effective manner and that meant leaving the [geometric and rectangular] roof lines of the house as is.” Still, the result is a complete rearrangement of the organisation and function of the old house.

Vegetation, trees and houses to the north meant Sven couldn’t open their home to this aspect in accordance with passive solar design principles and there was little room on the east and west for the kids to play. “We had to insulate well and connect with the southern side of the block,” explains Sven. To mitigate the loss of northern solar exposure, he restricted openings, double glazed and insulated to minimise heat loss. Tightly sealing the home also meant the couple carefully considered the materials and finishes used indoors; “that’s where the long list of no VOC products came into play,” says Sven.

Sven and Dawn’s desire to be economical saw them watch their budget closely, particularly at the beginning of the build when they were paying tradies and for big ticket items such as the windows. Sven employed a carpenter to do the framing, cladding, plasterwork and windows. He then did a lot of the fit-out and finishing work himself.

In the final stages of the build he put extra time into reducing costs. He found recycled boards from a building wrecker for



Winter sun peaks through high north-facing windows to warm an insulated concrete thermal mass wall suspended above glass in this inner-Melbourne home.

# Creating space

WORDS Sarah Robertson  
PHOTOGRAPHY Andrew Wuttke



Sliding doors remove most of the corners in this home to help create a sense of space on a small urban Melbourne block. Michelle can work in her study without disconnecting from the rest of the house or the backyard.

The dining room looks out onto a south-facing courtyard that acts as a third living space.

**HOW DO YOU CREATE A SENSE OF SPACE WHERE THERE IS VERY little?** When approached with a brief to transform Michelle’s Victorian inner-Melbourne terrace, Breathe Architecture’s response was to create functional yet flexible spaces by removing its corners.

“We took the design position that if we took all of the corners out of the project then we could bleed the spaces together and give her the sense of space she was after – without making the house bigger,” explains architect Jeremy McLeod. The result is an open plan living and kitchen area at the rear of a heritage home that connects seamlessly to the adjacent rooms through sliding doors and to the fourth living space, the south-facing deck.

“My aims for the house were to maintain its historical character around an updated ‘zen’ interior with as many feasible resource-saving features as possible,” explains Michelle.

For Jeremy, whose baseline for new builds is 8-Star-rated homes, renovating Michelle’s lightweight south-facing house to meet stringent energy reduction standards was a challenge. Taking it from about 2 Stars

to 6 Stars, Breathe insulated the floors, walls and roof and added solar hot water and double-glazing. But the design’s standout feature is a 200mm-thick in situ concrete thermal mass wall suspended above 450mm of glass.

Designing the roof at the rear of the house to peak over the existing roof to the north, high-level automated awning windows let winter sun onto the insulated thermal mass. The wall also acts as what Jeremy calls an “old-school, low-tech pre-heater”, heating the water in the hydronic heating coils before they work their way through to the boiler. In summer, the awning windows create a thermal stack effect, allowing Michelle to vent hot air if necessary.

Michelle is please with the result. “It gives me great joy to come home at the end of a long day and enter my idea of a beautiful space. It has an effortless flow through the different living areas, each with its own distinctive feature. And as ridiculous as it sounds, I never get tired of looking at it.”



Passive solar design principles are at the heart of the planning and design of this renovation. The house has been orientated for maximum solar gain. The pergola and screens provide protection in summer and let winter sun in. Cross ventilation has also been carefully considered.

# Small & striking

WORDS Fiona Negrin

PHOTOGRAPHY Peter Bennetts

## **FLEXIBILITY AND ADAPTABILITY ARE KEY TO MAKE**

Architecture's clever extension of an inner-city house on a tight block. By designing rooms that support multiple uses, the clients (a small family) gained the extra space they needed without building bigger.

An outdoor deck doubles as an extension to the dining room when entertaining guests, simply by removing retractable doors that divides the space. In summer the family pivot the TV in the lounge room to face the deck, and sit outside to watch the cricket. A desk in the kitchen allows the kids to complete homework while dinner is prepared, and built-in daybeds, seats and furniture save space and provide genial places to relax and storage space.

"By designing smaller spaces that work smarter,

the homeowners saved on building costs and reduced their carbon footprint," explains architect Melissa Bright.

Judicious placement of screens, movable walls and retractable doors allow the family to define spaces according to their requirements. The house is oriented to receive sun in winter and exclude it in summer, but like all truly passive houses this house requires active management. The family close the external screens in summer to shelter the house on a hot day, but leave the screens open in winter to let in the low sun. High-level louvred windows can be opened on summer nights, helping to vent warm air from the house and keep the ambient temperature comfortable. Reverse-direction fans help circulate cool air in summer and warm air in winter. **5**



1 A modern interpretation on infill in Sydney. This terrace's footprint is just 69 square metres.

# Sydney infill

WORDS Fiona Negrin  
PHOTOGRAPHY Aimee Crouch

**ARCHITECTURE@ALTITUDE HAVE MADE THE MOST OF** limited space to build a light-filled and compact two-storey inner-urban home in Glebe, Sydney.

A modern rendering of a traditional terrace house, it emphasises durability through the primary use of brick, concrete and steel. The home is designed for passive solar energy with eaves and perforated aluminium shading controlling the seasonal entry of sunshine. Ventilation is a key element of the design to mitigate Sydney's warm and humid climate: windows are positioned for effective cross-ventilation, rotary (whirlybird) roof ventilators and slotted soffit eaves help keep the home cool in summer. A ventilation tower also draws cool air up through the building to create internal air movement.

Clever design elements include a stair balustrade beside the kitchen that doubles as storage and provides a warming contrast to the concrete floor and painted brick walls, and an

upper-level narrow deck that gives ample room for clothes drying and privacy.

The house addresses a number of sustainability issues the firm has been working on for some time, explains architect Hamish Holley. Sustainable design should be about pragmatic responses that are cost effective and within everybody's reach, he adds.

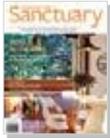
With this approach in mind, the walls of the two-bedroom plus study home are insulated with R2.0 batts and foil-backed sarking. The ceiling is also insulated with R2.0 batts and an air gap. Rainwater tanks collect roof water to be reused to flush toilets, wash clothes and water the garden. Surface water is directed towards the garden. Other environmental features include the insulation of the concrete slab with recycled polystyrene, recycled brick courtyard paving and joinery made from E0 (low formaldehyde emissions) plywood finished with natural plant oils. 2

# Green ideas and advice year-round Subscribe to Sanctuary

www.sanctuarymagazine.org.au

VISIT OUR WEBSITE  
TO SIGN UP FOR  
THE SANCTUARY  
E-NEWSLETTER FOR  
NEWS, EVENT INFO  
AND GIVEAWAYS.

## BECOME AN ATA 2-STAR MEMBER



2-star membership supports the ATA & includes:

- \* Four issues of *Sanctuary* to your door
- \* Four issues of *ReNew* to your door
- \* Access to free pdfs of all back issues of *Sanctuary* & *ReNew*

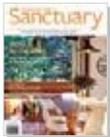


\* Access to the ATA's advisory services, member discounts & more!

- Individual (\$100/year)
- Concession (\$80/year)
- Household (\$120/year)
- Schools, Universities & Not-for-Profit (\$175/year)



## BECOME AN ATA 1-STAR MEMBER



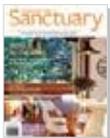
1-star membership supports the ATA & includes:

- \* Four issues of *Sanctuary* to your door
- \* Access to free pdfs of all back issues of *Sanctuary*
- \* Access to the ATA's advisory services, member discounts & more!



- Individual (\$75/year)
- Concession (\$50/year)
- Household (\$90/year)
- Schools, Universities & Not-for-Profit (\$150/year)

## SANCTUARY SUBSCRIPTION ONLY



- 1 year (4 issues, \$36)  
– save 25% off the newsagency price
- 2 years (8 issues, \$70)  
– save 27% off the newsagency price

## SUPPORT THE ATA WITH THESE OPTIONS

- Supporting** membership (Individual \$250/year) includes:
  - \* 2-star ATA membership
  - \* \$150 tax-deductible donation to the ATA
- Sustaining** membership (Individual \$500/year) includes:
  - \* 2-star ATA membership
  - \* \$400 tax-deductible donation to the ATA
- Patron** membership (Individual \$1000/year) includes:
  - \* 2-star ATA membership
  - \* \$900 tax-deductible donation to the ATA

## ATA BUSINESS MEMBERSHIPS



Small and large business memberships are now available. Please visit [www.ata.org.au/join-us](http://www.ata.org.au/join-us) for more information.



Join the ATA for a sustainable future

## SANCTUARY IS PUBLISHED BY THE NOT-FOR-PROFIT ALTERNATIVE TECHNOLOGY ASSOCIATION.

The ATA:

- Installs household solar lighting systems in East Timor
- Publishes Australia's leading DIY sustainability magazine, *ReNew*
- Advocates for a more efficient & consumer-friendly electricity market.

- I would like to receive my subscription(s) electronically
- Autorenew:** Please renew my membership/subscription by automatically charging my credit card each year. I understand that I can cancel the request at any time.

My details (please print):

NAME .....

ADDRESS .....

STATE POSTCODE PHONE .....

EMAIL .....

Is this a gift subscription? If so, who to? (Include your details above too please):

NAME .....

ADDRESS .....

STATE POSTCODE PHONE .....

EMAIL .....

Payment details:

CARD TYPE  VISA  MASTERCARD OR ATTACHED IS MY  CHEQUE  MONEY ORDER .....

CARD No: .....

EXPIRY DATE NAME ON CARD .....

SIGNATURE .....

SEND MY RECEIPT BY EMAIL

Post to: *Sanctuary Magazine*, Level 1, 39 Little Collins St, Melbourne VIC 3000

\* International subscribers can subscribe at [www.sanctuarymagazine.org.au](http://www.sanctuarymagazine.org.au)

DON'T LIKE SNAIL MAIL? SUBSCRIBE ONLINE AT  
[WWW.SANCTUARYMAGAZINE.ORG.AU](http://WWW.SANCTUARYMAGAZINE.ORG.AU)



New 2-star individual, concession and household members receive a \$10 gift voucher from Enviroshop. Join today!



# At home in the sun

---

An 8 Star house delights in the abundant light of the Sunshine Coast, delivering shelter to a family committed to living sustainably.

---

WORDS Sasha Shtargot  
PHOTOGRAPHY Yanni van Zijl

**NOT MANY HOMEOWNERS CAN SAY THEIR HOUSE** exports to the grid six times the amount of electricity it consumes. But then, few homes are fitted with a 10-kilowatt solar photovoltaic system and achieve an 8 Star energy rating like that of Joe and Karen Shlegeris.

The solar array on the roof of the house in Noosaville, Queensland, has allowed the couple to earn more than \$2000 every quarter since the home was built in June 2012. Taking advantage of their electricity retailer's generous 52 cent per kilowatt-hour feed-in tariff (8 cents above the old Queensland tariff)\*, they and their 14-year-old son James have been using an average 8 kilowatt-hours a day while exporting over 48 kilowatt-hours to the grid. They paid \$25,000 for the solar system but it and their high-performing home will eventually allow them to go off-grid or power an electric car should they buy one in the future.

The roof is perhaps the home's most prominent feature. Architect Andrew Webb of WD Architects explains that it is oriented to true north, for maximum

efficiency of the solar array, even though the block is 28 degrees from true north.

The design also ensured that all appliances and other sources of residual power could be turned off at the wall to eliminate sources of standby power. Joe, a retired stockbroker, has measured in great detail the performance of the house. "I've always treated the house and garden as a machine which delivers a bundle of services: shelter, heat, light, electricity, hot water, storage space and waste disposal," says Joe.

Entering through the front verandah, the home opens to an expansive kitchen, dining and living area. There is a central stairway and a study, while a hallway with a timber feature wall on one side leads past a deck prominently framed by eye-level and clerestory windows. A bedroom and bathroom are at the end of the hall. Upstairs there are two more bedrooms, a second study, bathroom and a large rumpus room that Karen, a yoga teacher specialising in pregnancy yoga, uses to hold her classes. →



# Crafting cubbies

---

Beth Askham finds a design project that sparks the imagination of young (and older) minds.

---