



# Family hub

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Located on a tight site and a busy cycleway, this classic weatherboard has been artfully renovated to meet the needs of an active and creative family, and to provide every room with a garden view.

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WORDS Verity Campbell  
PHOTOGRAPHY David Johns

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This single-fronted weatherboard extends to a second floor at the back. The renewed north-facing garden has been transformed by landscape architect Fiona Harrison into curved terraces of densely planted vegetable gardens and vine-draped fences. "Tight urban sites don't need to be restrictive in terms of how much garden or access to outdoor space a family can enjoy."

**BOASTING IDEAL PASSIVE SOLAR** possibilities through its north-facing backyard, this single-fronted weatherboard in Brunswick, inner Melbourne, was far from reaching its potential. "Almost unliveable" describe the owners of their family home. "The thermal performance was appalling – you almost couldn't enter the home when it was over 33 degrees!"

The family of four enlisted Sarah and Paul from Baker Drofenik, architects specialising in challenging inner city sites and thermal insubordination. The team set to work righting the many wrongs of the existing home and 'DIY' extension. They used high-spec products – including a 4.9kW solar power system and 6500 litres of rainwater storage – and passive design principles. "A house renovation like this comes out of a combination of the owners'

vision and willingness to open up, close down, respond to breezes and sun, be thermally efficient, and also be a reflection of the owners' personal beliefs," explain the architects.

From the street a custom-made weatherproof 'box' houses the family's cargo bike so that it can be wheeled in the side gate and stored securely. Corten steel drops the structure out of sight behind foliage. Entry to the home for those arriving on two wheels, rather than three, is up the side path, with plentiful undercover bike storage through a grapevine-draped 'green tunnel'. "Tight urban sites don't need to be restrictive in terms of how much garden or access to outdoor space a family can enjoy," explains Sarah. "In fact the under-utilised in-between spaces can add to the vitality of the internal spaces, offering solar access,

possibilities for ventilation and alternative garden views. The east boundary green tunnel could be a banal side access way and bike storage area, but with the owners' use of plants the side access is transformed into a beautiful transition space."

For foot arrivals, the front door reveals a long hallway through the old part of the home – barely touched in the renovation – past a bedroom, then a bathroom and concealed laundry where the new works begin. The glimpse through the bathroom to the leafy greenery of the bike lane is a favourite feature of the home for its owners, as is the fully tiled walk-in shower, doing away with "step and rickety plastic base".

Past the bathroom, the hallway opens to a "central pivot space" to the first-floor staircase and new living/dining room. "This

space, which would essentially be just a corridor," says Sarah, "is redefined as a central hub to the house providing a lively space for family activities and expression and a dense amount of storage for books, games, display of photos and family memorabilia.

Over the staircase, a small operable skylight admits light and vents heat. The two upstairs bedrooms have horizontal windows to the east for ventilation and morning light and slot grills to reduce glare. A series of casement windows to the north and south fine-tune cross ventilation. "The windows open individually so they can be adjusted," says Paul. During summer evenings the windows, with flyscreens, remain open; during winter a single window remains open for fresh air.

Downstairs, the open plan kitchen, dining, and living room expands to the north and south with bi-fold doors and full width flyscreens. Overhead lights were passed over for floor lamps, sourced by the architects, that can be moved around the space with floor-mounted power points. A custom-made Mark Tuckey table, large wall-hung circular shelves, a room length inbuilt storage bench, and particularly the dark timber-panelled ceiling and walls, make this room a welcome departure from 'white and bright'. The room is cool, moody and nuanced. "It feels like a ship has landed on the back of an old house," laughs the owner. "We love the timber. It's just beautiful to look at."

Initial concerns about the concrete slab in the room being cold and "kind of



The open plan kitchen, dining, and living room expand to the north and south with bi-fold doors and full width flyscreens. With large wall-hung circular shelves from Clock-It Cabinets, a room-length inbuilt storage bench and dark timber-panelling, the room is cool, moody and nuanced. "It feels like a ship has landed on the back of an old house," laugh the owners. "We love the timber. It's just beautiful to look at."





④ The back steel screen was purpose designed by the architect and built by steel fabricator Peter Drofenik. Over time, summer shade will be provided by grapevines.

⑤ The under-utilised inbetween spaces can add to the vitality of the internal spaces, offering solar access, possibilities for ventilation and alternative garden views. The external timber sliding shutters shade the kitchen from west sun and are operated manually from inside.



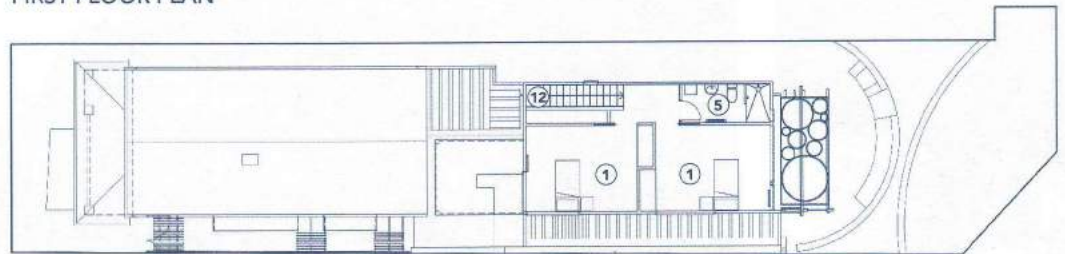


industrial” were alleviated through the architects’ specification of a stippled inlay, the hydronic heating and solar gain through that ideal northern aspect.

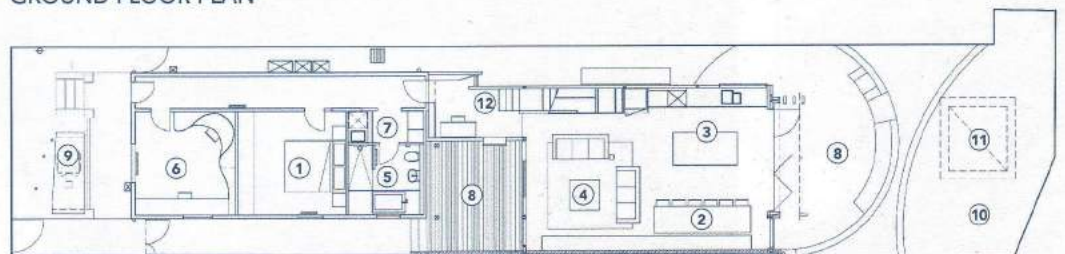
Outside, the renewed north-facing garden has been transformed by landscape architect Fiona Harrison into curved terraces of densely planted vegetable gardens and vine-draped fences. Fiona’s intervention here adds another layer of complexity to the site, say the architects, building on the clients’ vision. “We found the collaborative approach invigorating and helped us push our design along directions we may not otherwise have investigated. This resulted in a house that we believe not only represents our core philosophies but also the owners’.” 5

④ A Corten steel bike storage box sits behind foliage out of sight of the road. And although a relatively small site, there is enough roof space for a 4.9kW solar energy system and solar water heater. The east boundary could be a banal side access way and bike storage area, but with the owners’ use of plants it is transformed into a beautiful transition space.

FIRST FLOOR PLAN



GROUND FLOOR PLAN



LEGEND

- ① Bedroom
- ② Dining
- ③ Kitchen
- ④ Lounge
- ⑤ Bathroom
- ⑥ Study
- ⑦ Laundry
- ⑧ Outdoor living
- ⑨ Bike storage
- ⑩ Garden
- ⑪ Rainwater (in ground)
- ⑫ Staircase

# Brunswick house

—Specifications

## Credits

### DESIGN

Baker Drofenik Architects

### BUILDER

Gande Constructions

### PROJECT TYPE

Alteration and addition

### PROJECT LOCATION

Brunswick, VIC

### COST

\$450,000

### SIZE

Land: 306 sqm

Ground floor: 127 sqm

First floor: 46 sqm

Courtyard: 16 sqm

## Sustainable Features

### HOT WATER

- 315L gas-boosted Rinnai Sunmaster solar hot water system.

### RENEWABLE ENERGY

- 4.9kW grid-interactive solar photovoltaic system, SMA 5000TL Sunny Boy inverter, installed by Going Solar.

### WATER SAVING

- Hoss Boss on demand hot water recirculation pump
- Nylex Greywater Diverta, to reuse water from first floor shower into the back garden via sub soil irrigation
- 6500L Graf Carat underground rainwater tank for garden, toilets, washing machine and garden taps; Onga Dominator pump with mains water switch function.

### PASSIVE DESIGN

- North-facing concrete slab for thermal mass
- Solid brick wall to east for thermal mass
- The timber batten screen to the north provides some shading, the steel circular structure is for a deciduous vine to grow over in the warmer months.

### ACTIVE HEATING & COOLING

- In-slab hydronic heating with gas boiler and hydronic panel heaters to areas with timber floors; Zenitherm hydronic panels and heated towel rails.

### BUILDING MATERIALS

- Insulation: Kingspan Air-Cell blanket to roof and walls, polyester bulk insulation in ceiling R3.5, min R1.5 to floor space and R1.5 to walls; fixed 20mm battens over insulation for cladding and to provide an additional air gap
- External cladding: pre-primed and painted timber weatherboards; Woodform Architectural spotted gum cladding (Australian Forestry Standards)
- Pergolas and rear shade structure: Durapost and Durabeam white cypress (FSC Certified) from Laminated Timber Supplies
- Internal timber lining boards: Recycled Reds from Delta Timber
- Cabinets: spotted gum solid and veneer (kitchen area); silver wattle (bedrooms); kitchen laminate Abet Laminati – from Concept Cabinets.

### WINDOWS & GLAZING

- All windows and external

- glazed doors are solid timber, double glazed by Miris Windows
- Casement opening windows from Truth Hardware
- Large Centor track concertina door with integrated concealed sliding flyscreen
- Stained glass window repaired by Dr Leadlight
- External timber sliding screens (operated manually from inside) for shading, designed by the architect and constructed by the builder
- Luxaflex Duette thermally efficient window furnishing fabrics.

### LIGHTING

- LED wall, ceiling and outdoor lights
- Warm-white fluorescent tube in the kitchen.

### PAINTS, FINISHES & FLOOR COVERINGS

- All paints and finishes recommended by the Green Painters Association, including low-VOC Watty1 ID
- Internal concrete floor HiperFloor finish (no applied finish – polished until sheen level is achieved).

### OTHER ESD FEATURES

- As much material as possible was salvaged from the original house and reused
- Purpose-built Corten steel lockable cargo bike storage box
- Extensive food garden including fruit trees
- The rear fences were made out of a reclaimed feature worm wood from Yarra Timber purpose designed by the architect and built by the builder.



① Positioned above the striking recycled timber staircase, a small operable skylight brings in light and vents heat.