

HOUSING

sustainability and
green design

ethical
interiors

eco pieces inspired by nature

recycling

bricks • plastic decking • concrete

SUSTAINABLE LUXURY

A HOLIDAY HOME PUSHING
THE BOUNDARIES OF DESIGN





Bronte is a charming beachside suburb situated just seven kilometres to the east of Sydney's CBD, its hilly streets dotted with period homes built in the late 1800s and early 1900s.

When Aaron Chow, builder and owner of Prime Form Construction, was contracted to build an extension onto the back of one of the suburb's oldest weatherboard cottages, he knew he was in for a challenging, and rewarding, few months.

'Old timber houses just warp over the years. This one was challenging in its own way – it definitely required a little bit more work than most other projects,' he says.

The project was designed by Sam Crawford Architects for a young family. The brief, while relatively open design-wise, included three imperatives: preserve the picture-perfect, historically significant original home; open up the rear for extra bedrooms and open-plan living; and maximise the energy efficiency of the interiors.

Prime Form Construction, which has been a member of HIA for some 20 years, specialises in building bespoke, architect-designed homes and renovations across Sydney.

Although the Bronte house is the first time Aaron has worked with Sam Crawford Architects, the collaboration bore outstanding results, with immaculate workmanship delivering clarity and polish to the architect's restrained, minimalist vision.

The solar-passive design translates into bright interiors awash with natural light

The extension rises two storeys high from the rear of the cottage. While the team was at pains to preserve certain elements of the 19th-century aesthetic in the interiors of the original structure (the original brickwork around the fireplace being one such design feature), the extension is unapologetically

bridging the centuries

From the outside, the Bronte house is a picture-perfect historic cottage. Inside, it's all about 21st century eco-sensibilities.

Story: Gabrielle Chariton



Photos: Brett Boardman Photography

bright interiors awash with natural light

modern: crisp white walls, set off by the exposed concrete ceilings, black anodised window frames and lights, and American oak flooring.

The upper level comprises three bedrooms and a bathroom; an open-plan kitchen and living space extends across the ground floor, opening via aluminium-framed, floor-to-ceiling glazing onto the back garden.

The first stage of the 18-month construction project involved completely restoring and renovating the existing cottage.

'The original house was very run down, and when we started demolishing it, we discovered that the whole house wasn't level; it was leaning to one side,' Aaron says. 'We literally removed half the back of the house and tried to pull the walls back into place with straps and pulley systems, just to get it closer to plumb.'

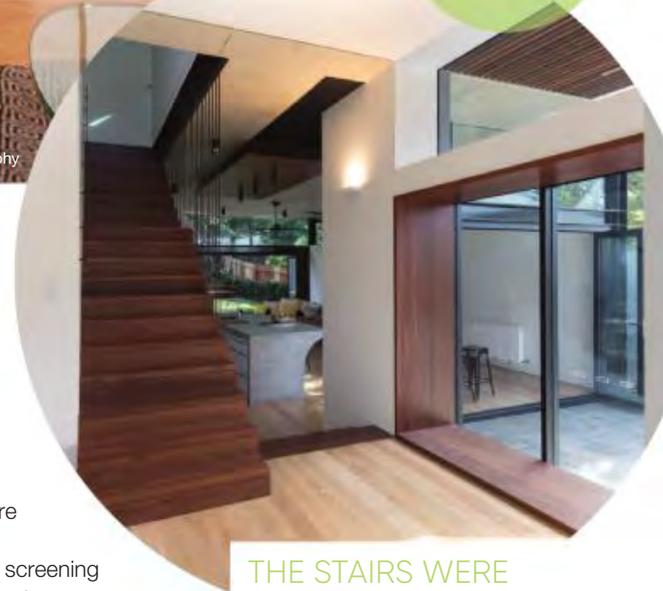
'The floors were also a mess, we had to jack sections up to make it level, and where we couldn't

jack it up any more we had to add floor battens to make it look level.'

The extension was designed and constructed to maximise liveability and thermal comfort. The solar-passive design translates into bright interiors awash with natural light.

A suspended concrete slab and reverse brick veneer construction were employed in tandem to maximise the thermal mass within the home. Mesh screening positioned at the eaves shields the interiors from solar gain in the summer, and the windows are placed to capture the cooling afternoon sea-breezes.

In winter, the home's thermal mass absorbs the sun's warmth during the day and releases it slowly overnight (when Sydney temperatures can edge below 10 degrees celsius). Aaron says a solar-boosted, gas-powered hydronic heating system >



THE STAIRS WERE PIECED TOGETHER LIKE A JIGSAW PUZZLE



THE BROAD, INVITING REVEAL DOUBLES AS A WINDOW-SEAT

provides efficient, gentle heat in the cooler months, without compromising on internal air quality.

A wide, sun-drenched corridor that borders a north-facing courtyard physically links the old and new sections of this home.

Here we see the extensive use of recycled ironbark timber, its age and warmth sensitively bridging the divide between old and new – on the staircase that sweeps up to the second storey, and on the reveals of an oversize window that spans one entire wall of the corridor space.

This broad, inviting reveal doubles as a window-seat; it's the perfect transition point between old and new; outdoors and in.

Working with this recycled timber, which was sourced from Australian Architectural hardwoods in Kempsey, was a challenge in itself, Aaron says.

'It's a really solid timber; it would have been pulled out of an old factory or building. It's incredibly hard and pretty much impossible for us to cut onsite.' Aaron painstakingly took the measurements, then arranged for every component of the staircase to be cut to size in the factory.

'Once the pieces arrived, all cut to their exact sizes, we literally had to piece it together like a jigsaw puzzle.'

The dramatic line of the staircase, rising up and over the kitchen, is a fundamental visual feature of the living space.

In a genius design move, the kitchen – sink, cooktop and cabinetry – is tucked beneath the staircase, Tetris-like. This highly efficient approach maximises floorspace and retains the uncluttered aesthetic of the living room. 'Constructing the kitchen was very complex,' Aaron says.

'The joiner had to make up templates to work from, just to ensure all the components would fit in there together perfectly. It looks very simple, but there was a lot of complicated, highly detailed work.'

THE DRAMATIC LINE OF THE STAIRCASE IS A FUNDAMENTAL VISUAL FEATURE OF THE LIVING SPACE



Photos: Brett Boardman Photography

the kitchen is tucked beneath the staircase, Tetris-like

Bronte House at a glance

Cost: \$1.5 million

Time: 18 months

Completed: Mid-2016

Floor size: 240 square metres

Materials: Recycled ironbark; American oak flooring; black anodised bifold doors, western red cedar windows; Haiku ceiling fan; custom concrete and Silestone benchtops.

A custom-made concrete island is the room's showpiece: its austere splendour and gracefully curved form the perfect counterpoint to the warm timber surfaces. The bench, constructed by specialist contractors Concreative, poured in situ, Aaron explains.

'They used a foam product to create the curves in the formwork. All the measurements had to be very precise, leaving the exact space required for the sinks, and cavities for the under-bench cupboards to be fitted. When they started pouring there was lots they had to be careful with, trying to vibrate it properly and making sure concrete filled all the right spaces. It was quite a high-risk sort of project.'

This uncompromising willingness to test the limits of technical expertise and challenge established ideas has resulted in a highly liveable, innately appealing home. While the owners are yet to enjoy living here, this sensitively executed renovation has ensured that the Bronte house will remain a significant part of the suburb's architectural landscape for decades to come.

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