

Reaching for the Sun

The narrow single terrace sits neatly between its neighbours. The sound of a train can be heard from a distance behind the house. The quiet demure façade gives no indication of the surprising home behind the front door.



This is the home of Kate and Mike and their two children. The family had lived in the area for a while and loved the location. When the little terrace came up for sale, they grabbed the opportunity to live closer to the creek.

Semi detached and located on the south side of a party wall, the original house was dark and enclosed. Kate and Mike knew they wanted to renovate, they knew the place had potential but they took their time, starting with a restoration renovation to the first three rooms.

This initial 'mini' renovation involved restoring and sealing the windows and floors, and sealing up all the cracks and gaps around skirting boards and architraves. A new skylight was added to the hallway bringing daylight into a previously unlit space. A new heating and cooling system were installed, designed to allow for future expansion, and a solar hot water system was added.

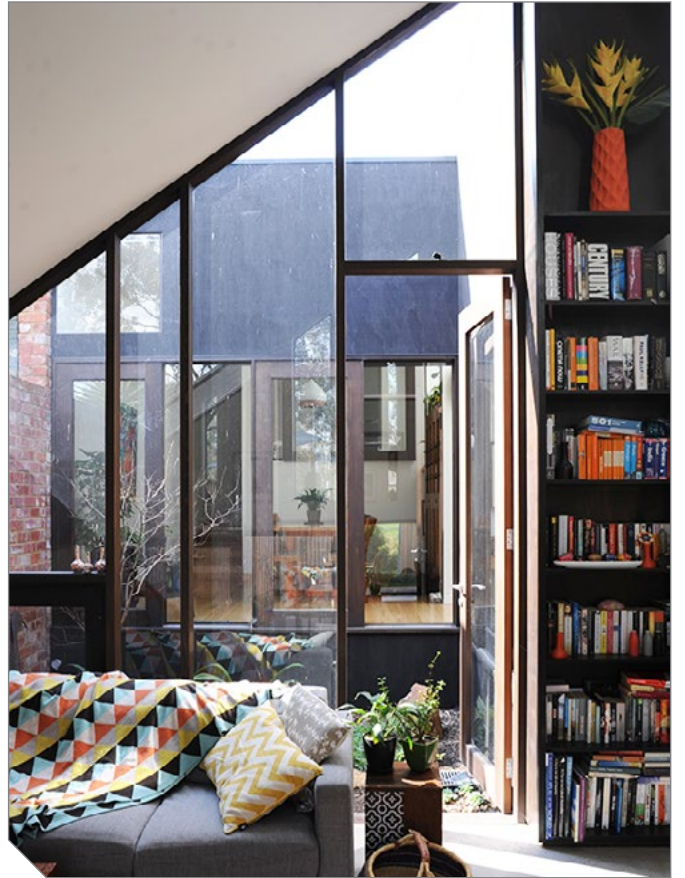


The couple made significant changes to the building envelope to improve its thermal performance.

When it came to the major renovation, their main brief was to bring more light into the home, capture the views, and establish a connection with the creek at the rear of the block. They were after two separate living areas, a dining room, a study, a functional kitchen, and a bedroom and ensuite for Mike and Kate. What they didn't want was the old house at front and one big, loud, overwhelming space at the back.

"We spoke to the architect and he came up with this roof light idea which we never, never imagined, and a central courtyard, and we never looked back," says Kate. A large courtyard located between the dining and living areas brings sunlight deep into the middle of the new living area. "We pushed the house a lot further into the block than we would have gone, but brought the garden into the middle of the house" Kate muses.

Windows have been designed to capture views, provide vistas and a sense of space while not compromising on thermal performance. "The architect came up with the idea of the slot windows in the rear façade – as tall as we could have them to see a whole tree, but not so wide that they would allow too much heat in." A series of clerestory windows above the kitchen and a carefully angled ceiling allow daylight to reflect back into the space. "Some of the most beautiful things about living in this house are the reflections," says Kate. "When it rains you get trickles reflected on the ceiling. I would never have imagined that that would have been one of the outcomes." The windows are low-e and designed to allow cross flow ventilation. External motorized block-out blinds on the clerestory windows control solar gain in summer.



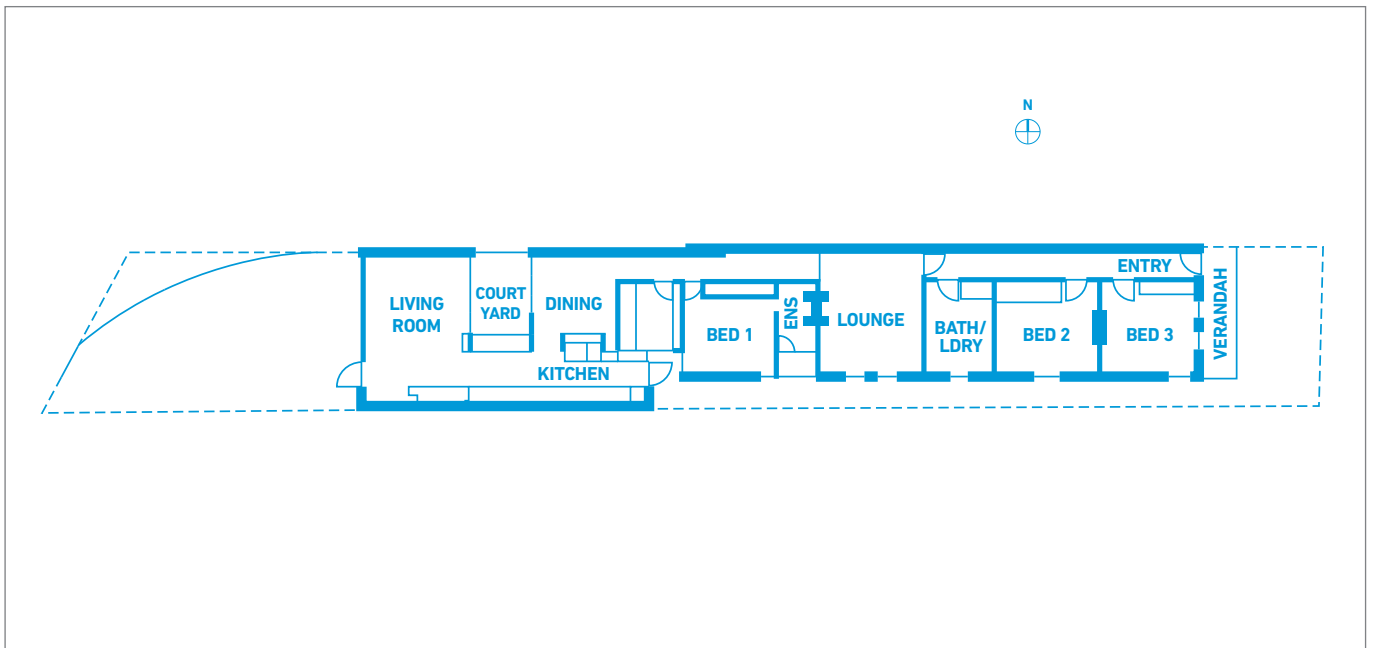
The site is deceptive – narrow at only 6.8m wide, but extremely long. “One of the main challenges of the project was the sloping site,” says Kate. The design responds to this by stepping the spaces down. The original house, now a bedroom wing, steps down to the office, and then to the dining. The kitchen and rear living area are on lower levels again, wrapping around the courtyard. The courtyard itself is glazed, allowing a visual connection between the front door and the backyard. “The rear spaces work well,” says Kate. “They are not completely open spaces. Not completely closed.”

The main renovation included work on the original fabric. The design retained as much of the original house as possible. Plaster was removed from the walls so that they could be insulated. R 4.0 insulation was also added to the roof.

The gas ducted heating system and the evaporative cooling system were extended into the new section at the rear, working with the openable windows to draw the air through. The stepped exposed concrete slab in the new section provides well placed thermal mass to moderate the internal temperatures. A 3kW Photovoltaic array generates electricity on site.

The renovation has very obviously turned a narrow dark site into a well lit, uplifting house that has unexpected views around each corner. “I look a lot at the house,” says Kate. “I like looking at our things, but I look a lot at the house – just at the walls and reflections and shadows. It’s very peaceful. Very calming. It feels like a real retreat because you are down a slope but can still see the front door .. and reflections of the trees and the view of the creek ... and the occasional train going past.”

*Text: Natasha Palich
Photography: Roma Samuel
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Specifications

Ceiling Insulation

R 4.0 'Green' batts laid on ceilings plus foil directly under the metal roof sheet.

Wall Insulation

R 2.5 'Green' batts to external walls.

Windows and Glazing

Double glazing to the 'light cannon' over the kitchen which also allows north sun into the house. Low E windows and doors + timber frames. Central light court to allow sun into the heart of the extension from the north.

Photovoltaics

3kW.

Materials

EcoPLY external cladding + recycled timber battens.