Renovators Rachel and Nick planned to sell their Caulfield home after completing a renovation to improve solar orientation, but soon found themselves so attached to the 1930s brick home with art deco features that they decided to move in.

“We thought we were going to buy it and sell it on,” says Rachel a building designer by trade. “We try to incorporate all of the basic passive solar design principles and try to sell them on and prove there’s a market for more sustainable homes, but we ended up staying in this one.”

The standout sustainable feature of the house is the small footprint. “My biggest bugbear with most new house builds and renovations is that people tend to build what they want rather than what they need. If you can keep your building envelope small you’re inherently going to build an energy efficient house that’s sustainable.”

An economical floor space and strategically positioned windows and doors make the most of old and new home design principles in this 1930s house.
Rather than adding a period extension, Rachel says the couple instead chose to incorporate deco elements into a modern renovation. Most notably, a curved wall on the north east side of the house maintains existing deco sensibility.

The couple increased the building envelope of the house by a mere 55 square metres — which included demolishing the garage and adding the floor space to the house — to include a new kitchen, living room, dining room and laundry. The original part of the house contains three bedrooms, a study and two bathrooms.

While the family admits that downsizing has been an adjustment, Rachel says the couple’s teenage sons Noah and Charlie have learned to make better use of space — although they have claimed the attic storage area as their hangout space. “The modest size of the house hasn’t reduced the liveability of it,” says Rachel. “It’s a fine balance but it can be achieved.”
All windows and doors are double glazed with a 10 mm gap between the glass. To prevent draughts, hinged doors have a maximum of 3 mm clearance on each side. The base of inward opening doors are fitted with an RP3 weather strip. The home is fully insulated with R5 batts in the roof and R2.7 batts and house wrap in the external walls. The result? An energy efficient home that boasts a comfortable year round temperature.

As with any renovation, this project created challenges. The house is situated on a long, narrow block so creating access to daylight was tricky. As one of the long sides of the house faces north, Rachel and Nick chose to reduce the width of the property to allow more sunlight into the house.
As an experienced renovator, Rachel says working with builders and other tradespeople who understand the principles of sustainability is key to achieving success. “I have the same bugbear on most jobs and that is that builders are used to building in a certain way and any change creates time issues for builders,” she says. “It’s about encouraging the builder to think differently to perhaps the way they usually build because they may not have the processes in place.”

And Rachel’s advice for wannabe sustainable renovators? “Smaller is better. Maximise north facing glazing. Orientation is really important. Build to your site.” She recommends building what you need rather than what you think you want as expectations of a living in a grand house aren’t often in line with the lived experience.

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Specifications

Ceiling Insulation
R5 insulation.

Wall Insulation
R2.7 and house wrap.

Draught Proofing
RP3 weather strip on door bases and max 3 mm clearance each side.

Windows
Double glazed with 10 mm gap.

Ventilation
Doors positioned for cross ventilation and access to prevailing winds.

Lights
CFLs and LEDs used throughout.