Family renovation gets a green light

WHEN Mariette and Simon Tuohey renovated their late '50s red brick Ashburton home, they took it one step further and retained the "embodied energy".

"We wanted to reuse existing materials and keep the floor and walls where possible," says Mrs Tuohey, a permaculture designer, energy rater and sustainability consultant with a business, Sense & Sustainability. "It takes energy to make bricks, for example, so if you discard them you make a bigger imprint on the environment."

They also wanted to use a local builder and were recommended to Peter Priftis of Peter Priftis Constructions, Ashburton.

He admits he "wasn't environmental" at that stage but learned so much about five-star design over the two years of the renovation that the house won an HIA Energy Efficiency award. Mr Priftis has since incorporated many sustainable features in his own recently finished home.

The Tuoheys and their sons, Thomas, 16, and Hayden, 14, lived in the three-bedroom house for about six years before they renovated.

It had a skillion sunroom, and was freezing in winter and hot in summer. "You had to walk through the bathroom to get to the toilet and laundry," Mrs Tuohey says.

Architect Thomas van Schilfgaarde redesigned the brick veneer house and included built-in storage, four bedrooms, formal living and a northwest-facing study and north-facing family room.

The family room, angled to make it more interesting, has a concrete slab floor topped with black matt slate-look ceramic tiles for maximum heat gain in winter and floor-to-ceiling, double-glazed doors and windows. The original 900-millimetre wide eaves were replicated in the extension and there's a step down to the new kitchen, laundry, bedroom and study.

The Tuoheys say their house stays considerably cooler on 40 degree-plus days, reaching only about 30 degrees. On very hot nights they use fans in the bedrooms. "Our house is as comfortable as any with air-conditioning but doesn't use as much energy," says Mrs Tuohey.

The design is enhanced by double glazing and insulation. Insulfoam Sealection 500 insulation was sprayed through the roof, down external walls and under the old floor to block draughts. It's so efficient the house is sealed almost tight and needs a Venmar active ventilation system to exchange stale air with fresh air, recovering energy (and winter heat) in the process. A TopHat electric fan lets hot air out of the roof space.

The house also has plantation-grown bamboo cabinetry and new floors in two bedrooms, recycled ironbark in the kitchen bench, cool air from the sub floor vented behind the fridge so it works more efficiently, a cool cupboard, also vented, from the sub floor, non-toxic Treatex finish on the recycled floor boards, recycled bricks to match the originals, compact fluorescent down lights and water-saving fittings.

There are three 9000-litre rainwater tanks for the garden, toilets and washing machine.

The Tuoheys are waiting for the EPA and Boroondara Council to allow them to bring their grey water, recycled from an Econova underground tank system, back into the house to flush the toilets.

"It's class A or almost drinkable quality recycled water and meets all the standards," Mrs Tuohey says "But the EPA doesn't recognise this membrane technology."

LINKS AND CONTACTS

- **Building Commission 1300 360 380**
- **thirdecology.com.au**
- **sustainability.vic.gov.au**
- **Peter Priftis 0402 087 548**
- **Sense & Sustainability 0414 588 821**

Builder Peter Priftis has been converted to sustainable practices.
PICTURE: PAT SCALA