

Family treehouse

A modest timber cottage in Newtown has undergone a gradual, 15-year-long transformation into an urban oasis, a showcase for reuse and a ringing endorsement for small-scale inner-city living.

WORDS Rachael Bernstone

PHOTOGRAPHY Jon Bader

• With the support of the local council and the help of neighbours, including a fellow architect and a gardener, Terry transformed the small park that adjoins the house with landscaped beds and paved areas. They planted native shrubs and edible trees – such as macadamias, limes, lemons, oranges and olives – along permaculture principles for wildlife and community benefit.

WHEN ARCHITECT AND BUILDER

Terry Bail and his wife Mel Griffiths, a local GP, bought this single-storey cottage in Sydney's Newtown in 2000, they carried out a quick renovation to make it livable for their family of three. Now, their daughter is a teenager, and their home has undergone a similarly gradual transformation into a series of indoor and outdoor rooms that make the most of the surrounding landscape.

In stage one, Terry moved the main front door to the side of the house to create a spacious master bedroom overlooking a tranquil courtyard. During stage two the family moved out for six months while the single-storey section at the back was

replaced with a two-storey addition. The result is a compact, layered and characterful home, made successful with a host of clever space-saving solutions.

Upstairs, living and kitchen spaces open to a wraparound deck with district views, while downstairs, a bathroom and bedroom open to a frog-friendly small central courtyard, reminiscent of a Balinese garden.

A cupboard underneath the stairs leads to a small basement excavated below the master bedroom, which holds two rectangular 2000-litre rainwater tanks and remote storage for the gas-boosted solar hot water system. At the bottom of the stairs, along a short hallway, a sitting



On the rear boundary, a studio pavilion houses guest accommodation and a second bathroom. A small spa is filled by storm water from the neighbour's roof and runs on a low-cycle off-peak electric-powered pump.

There is a focus on maximising ventilation and cooling, with louvres positioned for cross ventilation and cooling sea breezes, and high clerestory windows for venting hot air. The upstairs floor is reclaimed tallowwood with Livos Kunos finish, while reclaimed New Zealand kauri from old floorboards was used for the handmade battens around the pantry.



room with a concealed laundry opens to a courtyard with an impressive vertical garden cultivated by Mel. On the rear boundary, a studio pavilion houses guest accommodation and a second bathroom.

Terry, who studied science with a focus on geography and ecology before switching to architecture, carried out most of the building work himself, with help from friends and colleagues in what he calls a “communal effort”. In the four years since the family moved back in following the major rebuild, he has put the finishing touches on a house that is clearly a labour of love.

Terry’s own house, the neighbouring park and his clients are beneficiaries of his bowerbird tendencies, where his treasures are reupholstered, repurposed, recycled and re-imagined. He collects and stockpiles furniture and objects from local hard rubbish piles, and carefully removes unwanted plants, construction materials and hardware from building sites he works on.

“It’s getting harder to find great stuff around here because there are so many people with a designer’s eye now, which I suppose is a good thing,” he laughs.

Terry strives to avoid waste and

consigning materials to landfill, and he maximises space, light and views by borrowing from the surrounding environment.

The public park next door, accessed via a gate off the main courtyard allows the family access to another small patch of nature. Following lobbying by Terry and the community, the local council acquired and demolished a derelict house to enlarge the two pocket parks. He and other locals, including another architect and a gardening enthusiast, collaborated on the design and building process using largely recycled materials to create a “Zen garden” that can

Ⓜ The characterful house is full of bespoke joinery, solid timbers and carefully considered details inside and out, all of which are enriched by the patina of age thanks to the almost exclusive use of recycled materials. The wide openings to the parkside allow the house to capture cooling breezes.

Ⓜ A small courtyard which opens from the downstairs bedroom and bathroom is reminiscent of a Balinese garden and contains a frog-friendly habitat.



be enjoyed by everyone.

"I did a permaculture course that gave me a structure or framework for my design thinking," Terry says. "It means I am always thinking about how things can have two uses, and also about the ecology of a building, which is a structure in a larger ecosystem."

That means each space or architectural intervention has to perform multiple functions; in his own house, the sliding glass doors upstairs open to decks with a

barbecue and kitchen garden, and work with breezeway louvres and a clerestory roof to passively vent out warm air. The kitchen is spacious enough for a dining table and walk-in pantry, which glows like a lantern when lit from within at night. Downstairs, a double-sided joinery wall between hallway and bedroom provides storage for both spaces.

For a family that enjoys bushwalking, getting their hands dirty in the garden, and all the benefits of inner-city living, this

original home is tailor-made. "We certainly squeezed as much as we could out of this site," Terry says. "And we managed to sneak it all in behind the ridge of the old cottage, so you can't see it from the street."

Tucked away in the main living room on a welcoming sofa enjoying the gentle sea breezes and the sounds of birds and frogs, it seems the family really has captured the best of both worlds: an urban oasis in the heart of the city. 5

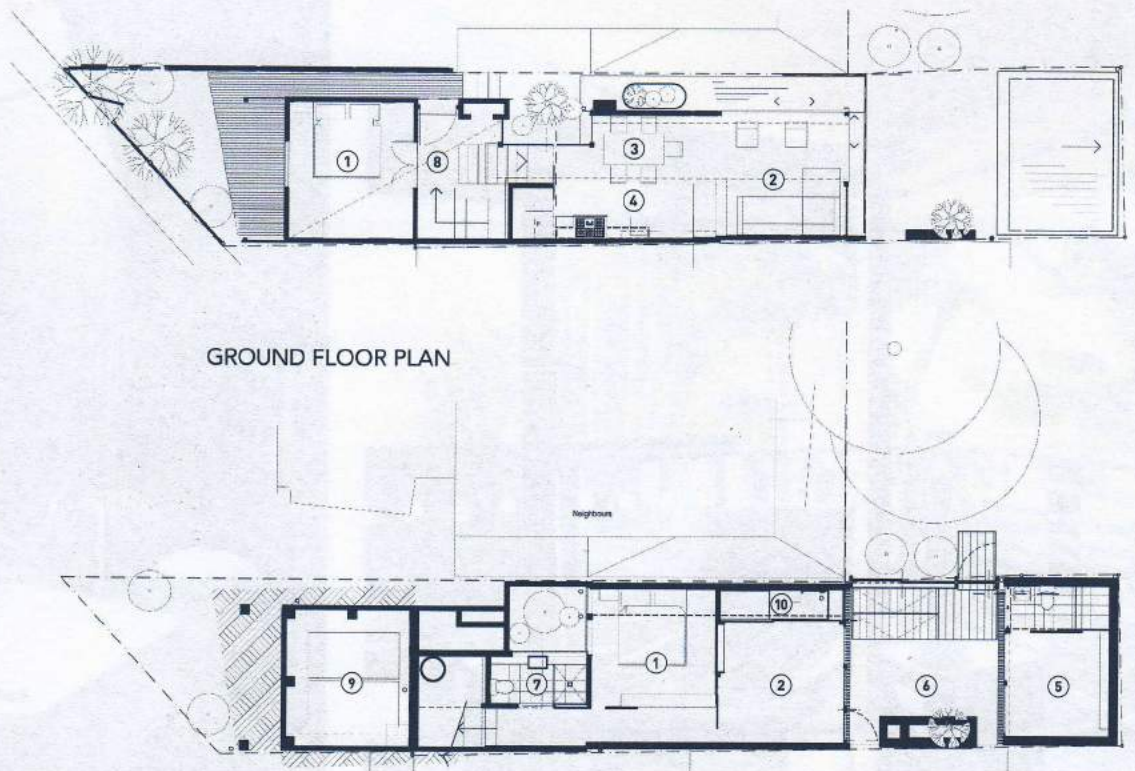
FIRST FLOOR PLAN



LEGEND

- ① Bedrooms
- ② Living room
- ③ Dining room
- ④ Kitchen
- ⑤ Study
- ⑥ Courtyard
- ⑦ Bathroom
- ⑧ Entrance lobby
- ⑨ Basement/water tanks
- ⑩ Laundry/storage

GROUND FLOOR PLAN



Archology

—Specifications

Credits

DESIGN

Archology: Sustainable Architecture and Design

BUILDER

Owner-builder, Terry Bail

PROJECT TYPE

Renovation

PROJECT LOCATION

Newtown, NSW

COST

\$200,000. However, Terry notes that if it was built by a professional builder and independent architect, it could have cost double.

SIZE

Land 120 sqm

House 130 sqm

Sustainable Features

HOT WATER

– Beasley solar hot water system with Rinnai S26 gas booster, remote storage in basement.

RENEWABLE ENERGY

– Overshadowing from trees so was not considered viable, but the house is wired for solar installation at later date if cost effective.

WATER SAVING

– 2 x 2000L rectangular poly tanks from Irrigation Warehouse are built in underneath the front floor of house, connected to toilets, garden taps and laundry

– Above ground 300L Rainwater HOG – a charged tank that allows roof runoff to flow to the tanks at the front

– Davey RainBank pump system, an automatic controller for rainwater harvesting to switch from stored to mains supply as required.

PASSIVE DESIGN

– Summer sea breezes captured through louvres, clerestory windows used for cross ventilation and heat purging

– Thermal chimney effect provided by high ceilings and raked roof space created between new and old parts of house

– Passive solar heating with north-facing windows with wide overhangs for shaded spaces in summer

– Wide openings to the park side allow the capture of cooling breezes

– Zoned spaces to retain heat in winter.

ACTIVE HEATING & COOLING

– Small freestanding gas heater used to top up passive solar gain in winter as required

– Fans in bedrooms.

BUILDING MATERIALS

Examples of reuse of materials include:

– Discarded packing crates used for bathroom cabinet; disused gas piping from original house used to create door handles; brick reused from old house

– Timber salvaged from various other projects: turpentine from Fraser Island for lower staircase; New Zealand kauri for pantry battens; hoop pine for double-sided bookcase; blackbutt for foyer space floorboards and tallowwood for upper level floors; reused windows and doors from materials that would have gone to landfill

– Other recycled hardwoods from Ironwood Australia

– Insulation: Aerofoil reflective blanket insulation, Foilboard rigid insulated panels

– Hoop pine plywood for ceilings

– Cypress pine for external cladding selected for termite resistance from Dainias Timber, Marrickville.

WINDOWS & GLAZING

– Breezway louvres in timber frames

– Recycled hardwood clerestory windows from Macquarie Joinery

– Aneeta laminated sliding sash windows.

LIGHTING

– Philips LED globes.

PAINTS, FINISHES & FLOOR COVERINGS

– Resene steel-trowelled concrete on ground floor

– Upper floor tallowwood timber finished with Livos Kunos and wax.

OTHER ESD FEATURES

– Energy-efficient appliances

– Drip irrigation to edible wicking bed and vertical garden

– Permaculture-designed outdoor spaces and neighbouring public park, planted with fruit trees and housing compost bins and worm farm for community use

– Green walls to courtyard reduces heat build-up of brick boundary wall and helps cool breezes between house and studio.

