



Angled towards the sun and away from the units to the south, the high roofline allows sunlight into the living spaces in winter, but excludes hot summer sun. The house and landscape were conceived together, allowing the designer to fully integrate deciduous plants as part of the roof and shading system.



Garden house

By 'renovating' the garden at the same time as the house, a Melbourne family has reduced costs over the long term and achieved exactly what they intended – a naturally comfortable home set in a productive landscape.

WORDS Verity Campbell
PHOTOGRAPHY Tatjana Plitt, Peter Bennetts

A DOUBLE-FRONTED WEATHERBOARD in Yarraville, inner Melbourne, had all the classic hallmarks of Victorian-era homes: cold or blisteringly hot, dark, draughty, and a square patch of rear garden locked off from the home's living areas. The family of three with one on the way wanted to take a whole-site approach to ensure their planned high-spec eco home and garden worked as one. They aimed to do it once and do it right.

Architect Penny Guild from Guild Architects was enlisted by Alex and her partner to bring the project to life. The carefully considered landscaping is evident from the footpath. Conceived as both public space and threshold, the front yard is a hive of productivity with pumpkin plants (at the time of writing) wending their way over every available surface and a 20,000-litre trafficable subterranean water tank providing all watering requirements. At weekends, you'll find the family here harvesting or tending. "It's a good way to meet the neighbours," says Alex. Running down the north side of the house is another

productive garden with fruit trees and herbs designed as a dappled arbour-style informal entrance to the home.

The front part of the home is largely unaltered from the original with classic Victorian features accentuated, but only a few steps down the wide hallway the architect's interventions become apparent. To the right a cheerful, boldly tiled bathroom with a bathside slot window creates a room with view. "We always wanted to have a nice bath and look out on a garden," says Alex. Further along is a new sunken living area: the home's 'sanctuary' lined with carpet and deep seat jumpable sofas. This is obviously a great place to unwind of an evening – the doors ensure this room can be closed off from the rest of the house for privacy and warmth. An enclosed leafy courtyard, with pond, encourages evaporative cooling and fresh breezes in the home, and when you're sitting on the lounge the garden is at eye level – exactly as planned.

Through to the extension proper, soaring ceilings are a response to one of the



The new open-plan addition features a kitchen/dining area and a living room. The upstairs mezzanine study takes advantage of both the high-angled ceilings and the natural light from north- and east-facing windows.



The whole house has been renovated and improved from a 1.5 Star energy rating, to a respectable 4.4 Stars. Careful window placements and clever landscaping around the addition do most of the work keeping the home cool, and it now requires very little active heating or cooling. Pendant lights from Mark Douglass Design.



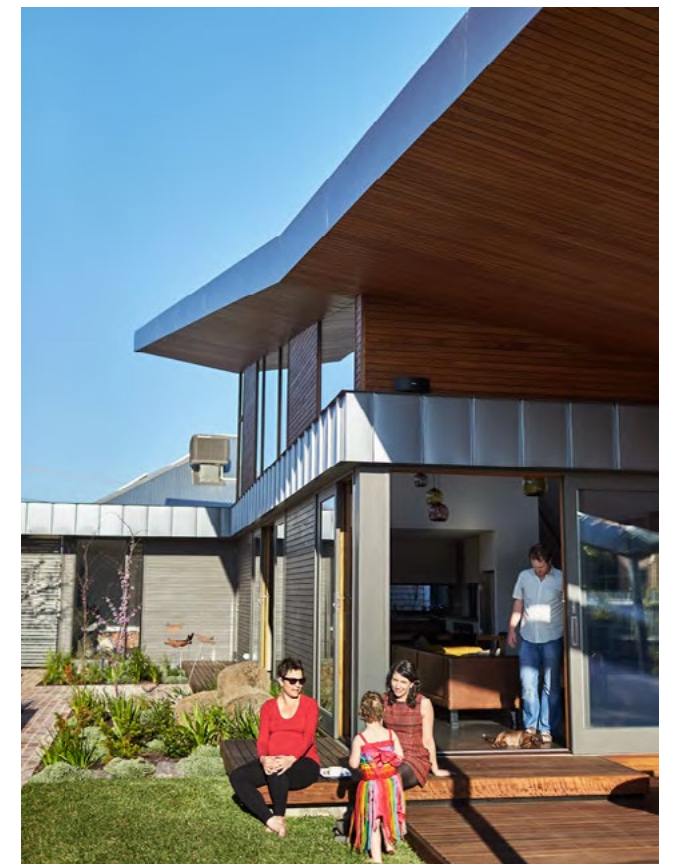
A leafy private courtyard garden has a water feature beside the double-glazed sliding doors to encourage evaporative cooling of the house. The deciduous tree will grow to shade the first floor eastern windows and create a cool microclimate in the courtyard.



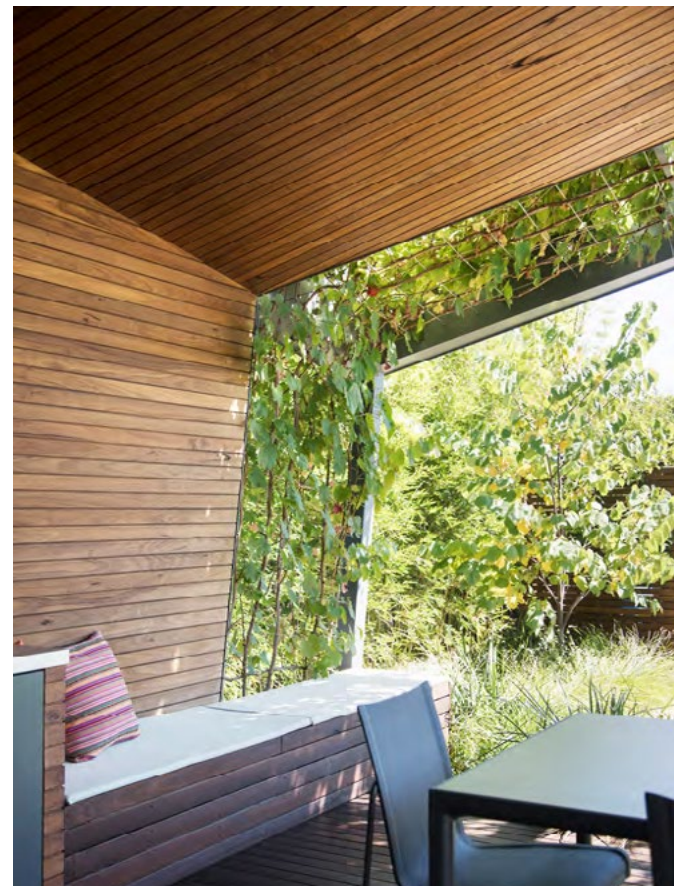
Large, sliding glass doors open the living space to the garden. Sunlight pours in during winter to warm the concrete floors, and heavy duty curtains are used in the evening to keep warmth in. External overhangs exclude unwanted summer sun.



When mature, the deciduous trees on the north side of the building will shade both north and west glazing and outdoor living areas. Recycled brick paving on a sand bed, permeable Turfgrid paving and drought-tolerant native planting all contribute to water conservation on the site.



Integrated deciduous planting to the west, in this case a grapevine, is used in concert with Garden House's roof and walls to make this Melbourne outdoor dining space usable year-round.





➡ Located at the heart of the home, the kitchen is naturally lit from the north and east. Decorative tiles from Australian-owned Southern Cross Ceramics were used in the bathroom and kitchen. "They are really lovely tiles that look like cement tiles without needing to be sealed," says the designer.

greatest design constraints: overlooking. The original home looked straight into the apartments next door, and vice versa. Those same apartments are now completely obscured unless you tiptoe to the rear of the yard and crane your neck southwards.

This new open-plan addition features kitchen with walk-in pantry, dining and second living room with an upstairs mezzanine study taking advantage of the generous volume created by high ceilings. "We wanted something that was a bit dramatic but that also featured northern windows to allow light," explains Penny. Form follows function in this house: large expanses of glass look north over the garden but taper down towards the rear (west) of the block to keep light and heat at bay; during winter the sun heats the concrete slab, keeping the room toasty and making the hydronic heating optional. Instead the family relies on a reverse cycle split system

air-con run by the PV system to take the edge off when necessary. "You can really downgrade your systems in a well-designed thermally efficient house like this, but you might have to argue with your installers to do this," counsels Penny.

A decked area to the north is lined with deciduous saplings which, over time, will grow to shade the internal living areas; external blinds currently keep the sun at bay. To the west, an expansive covered deck area overlooks the lawn and lush grasses which started as tube stock and now reach waist height, forgoing the 'scorched earth' look most new and renovated homes are left with after the build. The garden is fundamental to the performance of the house, and designing the house and landscaping at the same time had a range of benefits, says Alex.

"A lot of the reason it works so well is that we did everything together – including

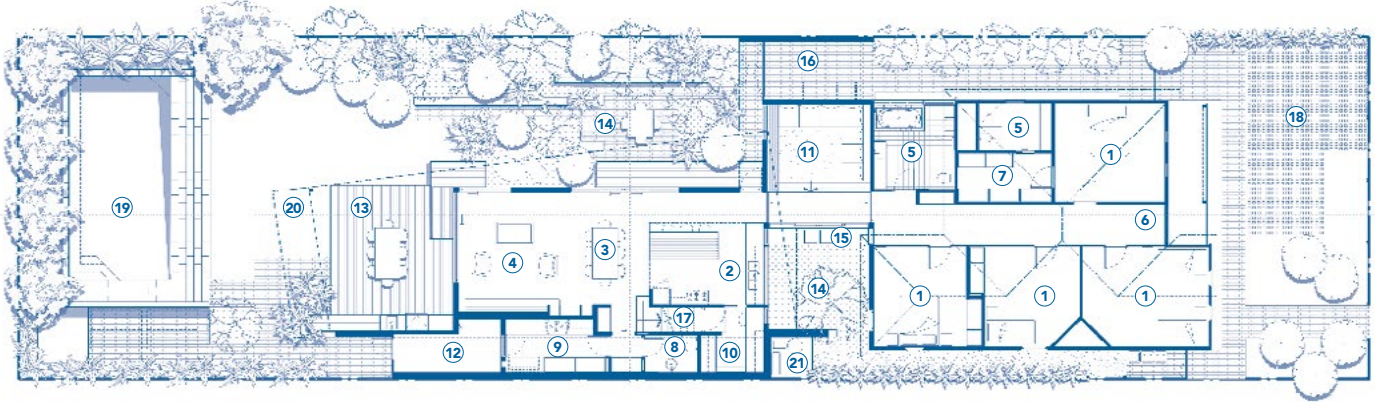
the landscape design – rather than trying to do it later," says Alex. Doing it this way also saved on costs over the long term and made the most of the momentum and skills on site, says Penny. For example, the retaining wall planter boxes that double as bench seating in the garden were also included as part of the build. The builders stored topsoil saved from preliminary site works onsite so that it could be reused in the planter boxes. "The builders knew what they were doing, so we could get them to help us achieve all these things in the project," adds Penny.

Although landscaping is an additional upfront cost, Penny says it's a cost few people later regret. "I've never had a client say in hindsight that they regretted spending a bit more to get exactly what they wanted, but you do often hear the reverse. Sweat the details early." ➡

➡ The house has a strong focus on water conservation: a 20,000L below-ground tank harvests roof water; water-efficient fittings are used throughout; greywater is diverted to fruit trees; and a cold-water recovery system is installed in the bathroom.



FLOOR PLAN



LEGEND

- ① bedroom

② kitchen

③ dining

④ living

⑤ bathroom

⑥ entry

⑦ walk-in robe

⑧ toilet
- ⑨ laundry

⑩ pantry

⑪ sunken lounge

⑫ storage

⑬ deck

⑭ courtyard

⑮ pond

⑯ bike shed
- ⑰ stairs to mezzanine study

⑱ carpark with water tank below

⑲ pool

⑳ pergola above

㉑ services

Yarraville Garden House

—Specifications

Credits

DESIGNER

Penny Guild, Guild Architects

BUILDER

Weiss Builders

PROJECT TYPE

Renovation

PROJECT LOCATION

Yarraville, VIC

COST

\$3600 per m² (includes landscaping)

SIZE

Land 710 m²

House 257 m²

Decks and storage 67 m²

BUILDING STAR RATING

4.4 Stars whole house (improved from existing house rated at 1.5 Stars)

Sustainable Features

HOT WATER

- Apricus gas-boosted solar hot water system.

RENEWABLE ENERGY

- 5kW solar energy system, 20 x 250W with ReneSola Virtus II panels
- Micro Replus inverters by ReneSola.

WATER SAVING

- Redwater cold-water recovery to bathroom
- 20,000L below-ground water tank harvests all roof water. Matrix modular tank system from Atlantis used to maximise storage capacity with minimal excavation
- Onsite stormwater retention: brick paving on sand bed and slopes to gardens or lawn; permeable Turfgrid paving used for driveway
- Greywater diversion from bathroom and ensuite to fruit trees
- Water efficient fixtures: Caroma Leda wall-faced Invisi series II toilet suite (4.5/3L smart flush); fixtures from Rogerseller and Reece.

PASSIVE DESIGN / HEATING & COOLING

- Thermal mass provided by the internal north-facing recycled brick wall and concrete slab floor
- Landscaping is integral to the passive cooling of this house, including shade plants and water features
- Window coverings/position: Integrated pelmets internally for double layered curtains to retain heat in winter; integrated

adjustable blinds externally to lower north and west windows; tapered eave provides summer shading to clerestory windows; south-facing louvre windows capture southerlies; new rooms have cross ventilation.

LANDSCAPING

- Retained and reused topsoil and basalt boulders from excavation of pool in landscaping
- Recycled bricks from existing house reused in new garden paving and planters; bricks laid on crushed rock and sand to retain a porous surface
- Drought-tolerant predominantly native garden design, except for deciduous trees required for house shading system
- Productive garden: fruit trees and herbs down north side, vegetable garden and herbs in front garden.

ACTIVE HEATING & COOLING

- Ceiling fans to all bedrooms and living areas: including Haiku from Big Ass and Universal Fans
- Hydronic heating panels throughout with high efficiency Immergas condenser boiler
- Daikin split systems to new areas for heating and cooling.

BUILDING MATERIALS

- Bricks recycled from demolished chimney used in internal wall for exposed thermal mass
- All external timber and internal lining boards radially sawn Australian hardwood from Radial Timber Sales
- Timber joinery either re-milled blackbutt or Victorian ash
- Colorbond steel in nail-strip profile from Metal Cladding Systems.

WINDOWS & GLAZING

- Low-e louvre windows
- Victorian ash timber-framed and double-glazed windows, Dara Windows.

LIGHTING

- Locally designed and manufactured glass pendants with LED globes from Mark Douglass Design
- LED lighting throughout from Light Project.

PAINTS, FINISHES & FLOOR COVERINGS

- Paints: Dulux low-VOC waterborne paints
- Timber finishes: Bona traffic to existing timber floors (waterborne and non-toxic); Cutek CD50 to lining boards, deck and some cladding; Grimes & Sons oil acrylic low-VOC waterborne timber stains; Tung oil to joinery; Comcork low-VOC cork floor over concrete slab (GECA and green star certified, 100% of the cork used is recycled).

OTHER ESD FEATURES

- Internal clothes lines in laundry and large area of accessible external clothes lines means an electric clothes dryer is not required
- Undercover, secure bike storage easily accessible from street
- Pool: ionising pool filter minimises chemical use, power consumption and maintenance; high efficiency heat pump for heating in shoulder seasons uses solar power; a thermal pool cover from Sunbather reduces evaporation and energy use.