

Yeronga House

TIM
BENNETTON
ARCHITECTS



A modest Yeronga Queenslander supports life's ebbs and flows with a new multipurpose studio, thoughtfully crafted design elements, and a flood-prone garden transformed into a responsive, seasonal stream.

When Steve, a water engineer, and Fiona, a social scientist interested in fabrics, first approached Tim Bennetton Architects (TBA) about renovating their two-bedroom, post-war Queenslander, they were constrained by its odd layout. The couple wished to enhance light, ventilation and spatial flow. They wanted a sewing room for Fiona, an office for Steve, and a guest room.

The house's site, surrounded by Poinciana trees, also had an overland flow at the rear during heavy rain and storm events – this meant the backyard effectively became a creek. It was important to Steve and Fiona, both interested in native plants and sustainability, that their home renovation embraced the landscape and resolved waterflow issues with sensitivity. They were uncertain how these broad challenges would be best approached.

1. the edge of the new studio opens to the garden
2. L-R: Ryan & Tim (architects) with Fiona & Steve (clients)
3. view from creek bed across back garden

The value of good design – a tailored process

Feasibility study

TBA suggested a **design feasibility study** would be useful to explore different options and create a clear renovation project plan. The study resulted in three options for Fiona and Steve: a first involved lifting and shifting the house (the “maximum” option); a second, extending to solve the most pressing issues (the “minimum” option); and a third involved connecting the original house to a new multifunctional studio (an entirely new option).

The design process of generating options, which integrated budget and scope considerations, enabled the couple to understand the possibilities and see what resonated. The existing flood issues called for an engineering hydrology study to determine where the dwelling could potentially extend and the required height of the floor level. This study preceded a conversation regarding opportunities to integrate [Water Sensitive Urban Design \(WSUD\)](#) principles into the property’s renewal (more on this later).

Ultimately, Steve and Fiona selected the third option, which was not part of their original brief, but presented an innovative pathway to resolve the property’s various issues.

Master plan

Drawing from the results of the feasibility and engineering hydrology studies, TBA designed a renovation master plan with Fiona and Steve that detailed a staged course of action to transform their property over time. Importantly, this included how the future garden would contribute to the home’s design and solve the water issues.



4

A renovation master plan detailed a staged course of action, including how the future garden could solve the water issues.

Stage 1 – Create a climate-responsive house & back garden

The first stage of the renovation aimed to create a beautiful climate-responsive garden and house; the house needed to “breathe through the daytime.” To achieve this, Fiona and Steve combined a reorganisation of their existing floorplan with the addition of a new multipurpose studio. The studio would function as a combined office and sewing room, and guest room when needed. The overall space could be generous while maintaining a modest footprint and budget.

Updates to the original dwelling

Key walls were removed from the original house to create a breezeway across the living and kitchen area. A newly crafted adjustable outdoor awning made of aluminium battens functions as a Western shade to this space; hung vertically it allows light in (best for winter) and hung horizontally it shades the house (best for summer).

Powdercoated aluminium louvre boxes were placed to existing casement windows on the west, enabling the house to breathe through the daytime while providing shade from the sun. These also offer security – the louvres can remain open while preventing access. They are a cost-effective solution, ensuring minimal disruption to the home’s original structure.

A new laundry was created in the original house, with a clever fold-down board design to make daily ironing easy, even joyful! In this space a window remains within the joinery to “borrow” light and air into the existing bathroom.

5. new breezeway through living area; adjustable outdoor awning outside; walkway through laundry to studio
6. native garden to the west is also a dry creek bed; outdoor awning hung horizontally
7. view to the backyard including absorbent rain garden





The new, multipurpose studio

The multipurpose studio was added to the property's rear, separated from the original house by a walkway and series of decks. Guided by Fiona's interest in fabrics and sewing, its dramatically pitched form was based on the idea of a light fabric draped over a structure that was open at both ends. A custom-designed, adjustable-height table and roll around storage provide Fiona and Steve with flexible work and craft space. The studio's large, casement shutters can be adjusted to direct airflow, and to encourage light in or out – useful for reducing heat from the eastern sun. Guests enjoy the novelty of a fold-down bed, from which a skylight offers views to the stars. A floor to ceiling slot window with a view of the magnificent poinciana outside heightens the sense of connection with nature.

The back garden & seasonal stream

A series of timber decks and steps were designed to connect the new studio to the existing house, and both structures to the back garden. The fall between each deck and step level was kept to less than one metre making transitions easier and avoiding the need for balustrades. The closely related steps and decks can also be casually inhabited, or used as seats. The back garden has been actively lifted and retained either side to reduce the height between the lawn and the existing house.



To manage the overland flow during storm season, TBA worked closely with Steve to create a 'seasonal stream' and rain gardens using dry creek beds and permeable paving, reused from the site. The creek bed guides and absorbs the water flow during heavy rain. A water tank was also added to catch and reuse rainwater.



8. the new studio is filled with light
 9. breezes flow through the studio
 10. studio shutters direct light and breezes; a series of decks & steps connect the studio to the existing house

A holistic water management approach combining storage tanks, permeable surfaces, rain gardens and dry creek beds, offers wonderful benefits for both Fiona and Steve, and the wider catchment.

Stage 2 – Create a sustainable & activated front garden

The renovation's second stage incorporated a new front courtyard with improved entry. The court faces northeast and gets good light and breezes. A raised food garden draws attention on the daily path of travel from the gate to the front door, which supports a healthy harvest. A generous outdoor daybed, strung with cable for growing vines, presents opportunities to engage with the street and neighbours passing by.

An integrated water sensitive urban design strategy

A 6000L concrete tank was installed underneath the front courtyard as a stormwater management strategy. The roof rainwater flows into this underground tank before being used on the garden, in the laundry or toilets, or overflowing to the rear creek garden beds. Permeable paving in the courtyard also helps absorb excess water when it rains. In practice, Steve and Fiona can empty the tank partially or fully before a big rain event. A storm then fills the tank before it overflows through the various creek beds, garden soaks and weirs (semi-permeable barriers set across the width of water flow areas to regulate the flow).

These water management strategies result in far less run-off to the river, and the water moves at a slower rate, helping to reduce a potential flood peak. Spread across a catchment, these strategies offer significant benefits to the river and the houses located within the flood plain. Specific plants have been used in the gardens to remove nutrients from the water, so the run-off is cleaner.



- 11. front courtyard – raised planter beds
- 12. the courtyard's permeable paving absorbs stormwater; a 6000L water tank is installed underground
- 13. water soaks into the back garden beds

Yeronga House

Status completed 2017

New floor area 55m²

Total floor area 193m²

Construction team - stage 1

Greg Thornton Constructions

Construction team - stage 2

Charles Warren Constructions

Structural Engineer

AD Structure

Steel Fabricator

Studio Steel

Cabinetmaker

Des Shield Cabinets

Stormwater Landscape Design

Steve Clark

Landscaping

Stewart Anderson

Photography

Shantanu Starick

Text

Joanna Hoban

Press

- Green Magazine
- Habitus Living
- Sanctuary Magazine
- Sunday Mail
- Brisbane News

Awards

- 2018 Australian Institute of Architects
QLD state design award

Results and future stages

Outside, Steve and Fiona's seasonal stream, rain gardens and water tanks have proved elegant solutions to the property's stormwater issues, soaking up and capturing excess water, and reducing flooding for themselves and their neighbours. This contributes to the good health of the wider catchment.

Inside the house, the enhanced spatial arrangement is more legible and better ventilated. Steve and Fiona no longer require air conditioning. The multipurpose studio works well, effectively fulfilling its three functions of a guest room, sewing room and study. Flow from inside to out has been thoughtfully resolved with the series of decks and steps – which also create opportunities to pause and hang out.

Fiona and Steve are enjoying the cleverly integrated, crafted design elements of their home and are excited to soon start their kitchen and bathroom renovations. Working through a staged master plan has helped them to realise their vision over time, as they become ready.

“When we had a moving in party, there was a band playing on the deck and the design of it all allowed a lovely flow between the inside and out.” Fiona & Steve

