

Retro-fit

A minimal-intervention rejuvenation of a 1970s apartment block in inner-city Melbourne provides an appealing alternative to demolition and rebuilding.



APARTMENT PROFILE
Fitzroy, VIC

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PHOTOGRAPHY
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AT A GLANCE

- *Financially sustainable retrofit of entire apartment building*
- *Focus on energy efficiency, comfort and resident amenity*
- *Proof of concept for the upgrade of existing urban housing stock*



When impact-focused investment practice Tripple bought a block of 15 studio apartments in the heart of Fitzroy, it was clear the three-level structure needed work. The apartments were almost unliveable: with no heating or cooling or fixed cooking equipment, the basics were hardly there, and shared facilities were limited to a coin laundry and a car park.

But Tripple director Jake Marabel-Milgrom says the building had a lot going for it. Close to the city and public transport, it had “good bones”, with a compact plan and modest finishes typical of 1970s apartment complexes. Rather than demolish and rebuild, the team saw an opportunity to upgrade what was already there, testing out the proposal that a series of straightforward improvements could deliver better performance and living conditions while still stacking up financially over the long term. “The building represented so much embodied carbon already,” Jake explains. “If we knocked it down, that would be wasted.”

The Tripple team worked with architecture practice Kennedy Nolan, environmental consultants Finding Infinity, and builders Wilderness Building Co. on the project, taking a deliberately light-touch approach. Rather than reworking the existing structure, the focus was on improving performance and amenity for the tenants with minimal intervention.

Each apartment was stripped back and fitted with upgraded insulation, double-glazed windows and draughtproofing for improved airtightness. Gas systems were entirely replaced with efficient electric ones, including efficient heating and cooling, heat pump hot water and induction cooktops, and a rooftop solar PV system allows the building to generate more energy than it consumes. These measures are estimated to reduce residents’ energy bills by around 80 per cent compared to before the retrofit – as well as delivering many benefits that are less easily quantifiable, like thermal

comfort and quiet interiors.

Despite their small footprint of around 30 square metres each, the studios have been carefully reworked to feel flexible and liveable, with bulky elements such as island benches removed and layouts simplified to make better use of the available space. The basic kitchen areas were upgraded to compact but fully equipped kitchenettes. The tones of the clinker brick structure informed the palette of finishes, with dark red laminate joinery bringing warmth to the interiors. “There is an emphasis on creating a sense of domestic comfort, on making places for people that are warm, welcoming and beautiful, in their own modest way,” says architect Patrick Kennedy, principal at Kennedy Nolan.

Led by Wilderness Building Co’s efforts and initiatives, construction was approached with a focus on minimising waste. Materials such as tiles, timber and fixtures were carefully removed, stored in the undercroft and reused throughout

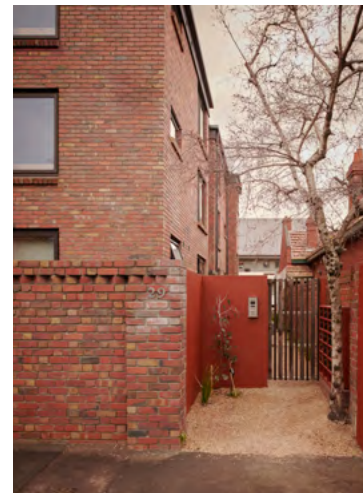
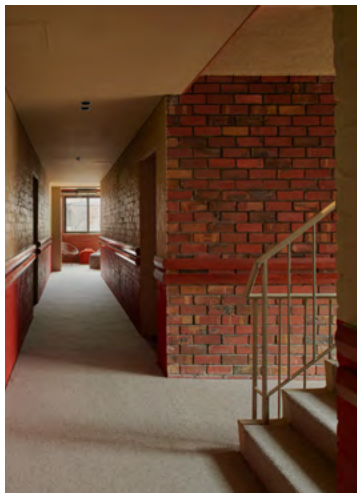


Facing page Each apartment now features a tiny but fully equipped kitchenette, with deep red joinery that picks up the tones of the clinker brick building. **This page** The studios' layouts were simplified to make better use of space. Double-glazed windows, retrofitted insulation and cork flooring all help improve the thermal and acoustic comfort.





Left Kitchen splashback tiles were carefully salvaged and reinstalled in the renovated communal laundry for a pop of cheery colour. **Below** The double-brick structure was retained, as were many of the original details like handrails and stair balustrades. Communal spaces were refreshed, and outside, concrete was replaced with permeable surfaces wherever possible.



the project. Existing door frames were kept and timber reworked into joinery, handles and bathroom cabinetry, while bricks from former window sills were reused to repair the original building fabric. Even the electrical switchboard boxes in each apartment were built with materials from site. Salvaged elements were also reintroduced in shared areas, including the communal laundry, where former kitchen splashback tiles make a checkerboard of orange and yellow.

A mechanical ventilation system with heat recovery (MVHR) in each apartment helps maintain fresh air and stable internal temperatures, reducing reliance on active heating and cooling. Residents are supported with a user guide that outlines how to get the best from their homes, encouraging new habits. “You don’t need to open a window for fresh air,” it explains, detailing how the MVHR and other systems work.


Beyond the apartments, shared spaces are designed for everyday interactions. The underused car park and undercroft have been turned into a communal laundry and gathering area, the latter centred around a long bench that functions as workspace, dining table and social hub. Smaller

leftover spaces have been repurposed into a reading nook on one floor and a co-working area on another. “The shared spaces were designed to build fellowship among the predominantly single-person households,” explains Patrick. “The aim was to support a sense of community within the building.” Landscaping also plays a role, with a shared vegetable garden and composting.

The apartments, now known as Wilam Ngarrang, meaning ‘place to reflect’, were named in consultation with the Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation. A mural by Wurundjeri artist Alex Kerr draws residents into the shared spaces, embedding a visible cultural presence. “While working with the Indigenous council, they told us they wanted their community to feel welcomed,” says Jake. “They said seeing and hearing their culture was the best expression of that.”

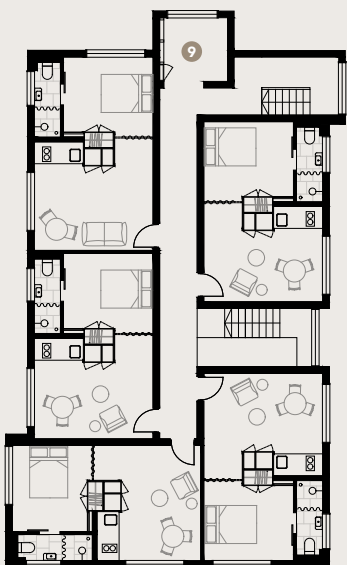
Wholly owned by Tripple, the apartments are leased through ethical real estate agency HomeGround, with two offered at below-market rates to support low-income households. The remainder are typically rented to professionals, both singles and couples, drawn to the inner-city location and compact studio layout.

Achieving the retrofit and still keeping rents affordable required close collaboration across the project team, with the cost of every decision weighed up carefully. “If we had spent more, the rents would have needed to go up, and nobody wanted that,” says Jake. This discipline shaped everything from material reuse to the streamlined detailing. Early on in the project, the team drew up a ‘shopping list’ of the initiatives they wanted to include, categorising them into environmental, social and ‘have to do’ (like concrete repair and a new back fence), and prioritising them to inform the budget process. Happily, Jake reports that in the end, just about all of it was able to be included.

Wilam Ngarrang stands as an important proof of concept: a financially and environmentally sustainable, replicable retrofit of an existing apartment building to extend its lifespan and achieve increased amenity for tenants – importantly, without increasing rents to a point where the community would need to move to a new area. “The project demonstrates how we can build on what’s already there in our cities, to make liveable and affordable housing,” Jake sums up. 



SECOND FLOOR PLAN



FIRST FLOOR PLAN



LEGEND

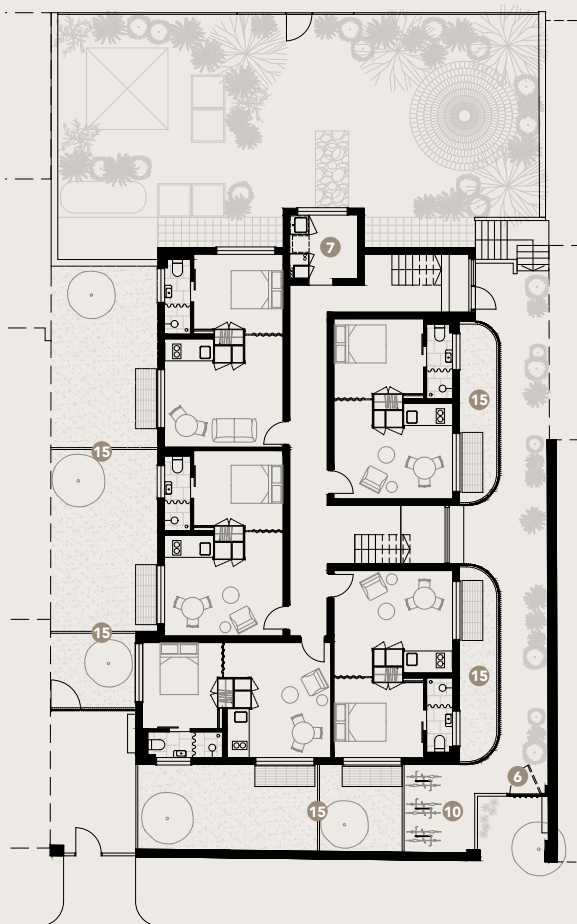
Each apartment:

- 1 Entry
- 2 Bedroom
- 3 Living/dining
- 4 Kitchenette
- 5 Bathroom

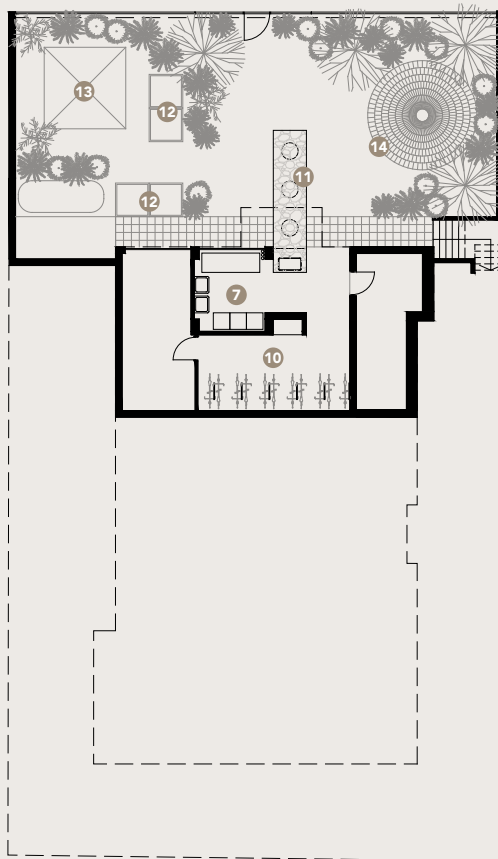
Communal:

- 6 Complex entry
- 7 Laundry
- 8 Co-working space
- 9 Reading nook
- 10 Bike parking
- 11 Communal table
- 12 Vegetable beds
- 13 Hills hoist
- 14 Garden
- 15 Private courtyards to ground floor flats

GROUND FLOOR PLAN



LOWER GROUND FLOOR PLAN



SPECIFICATIONS

OWNER

Tripple

DESIGNER

Kennedy Nolan

BUILDER

Wilderness Building Co.

ESD CONSULTANT

Finding Infinity

PROJECT TYPE

Apartment building retrofit

LOCATION

Fitzroy, VIC
(Wurundjeri Country)

COST

\$2.2 million
(just under \$150,000 per
apartment, including
renovating communal areas)
Completed 2023

SIZE

15 apartments, each 30m²
Land 700m²

HOT WATER

– Centralised CO₂ heat pump

RENEWABLE ENERGY

– 33kW solar PV system

WATER SAVING

– Rainwater tanks (7,000L total)
plumbed to communal laundries and
for garden watering
– Water-efficient fittings and fixtures

PASSIVE DESIGN, HEATING & COOLING

– Building envelope improved with gap
sealing, airtight paint layer, insulation
upgrade and high-performance
windows
– Interior blinds with pelmets
– Exterior canvas blinds for shading
– Passive ventilation to communal
spaces with louvred screens

ACTIVE HEATING, COOLING & VENTILATION

– Fantech mechanical ventilation
with heat recovery (MVHR) to each
apartment
– Variable refrigerant flow (VRF)
building-wide heat recovery system
heats and cools each apartment as
needed

BUILDING MATERIALS

– Existing double-brick structure
retained and repaired
– New corrugated steel roof (old roof
sheeting repurposed as fencing)
– Insulation: Pink Batts glasswool batts
to roof space (R4), Supafil CarbonPlus
blow-in insulation to brick wall cavities
(approx R1)
– Joinery: Laminex laminate on a
chipboard substrate (no MDF)
– CERES Fair Wood Tasmanian oak and
reclaimed timber for window reveals,
joinery handles, pelmets and other
details
– Kitchen splashback tiles reused in
communal laundry area
– Salvaged marble used for communal
dining table
– Reclaimed bricks and pavers for
landscaping

WINDOWS & GLAZING

– Double-glazed windows and doors
with uPVC frames (U-value 1.4)

LIGHTING

– Efficient LED lighting throughout

COOKING

– Fisher & Paykel induction cooktops
with recirculating rangehoods

PAINTS, FINISHES & FLOOR COVERINGS

– Dulux Professional EnvirO2 paints (very
low VOC), including as an airtight layer
to interior walls
– SuperTuft wool carpet to hallways and
stairs
– ReadyCork cork flooring to apartments

OTHER ESD FEATURES

– Building is net-positive for energy, with
approx 80% reduction in energy bills
for residents compared to before the
retrofit
– Approx 80% reduction in embodied
carbon emissions compared to
constructing an equivalent new
apartment block
– Gas connection abolished
– Focus on material reuse to minimise
construction waste
– Two communal laundries and a
community hangout space
– Shared reading nook and co-working
space
– Bike parking with e-bike charging
– 80% of the site's concrete paving was
removed and recycled to make way
for permeable surfaces for stormwater
management
– Communal composting and
vegetable beds
– Native plantings