



egán street newtown

architect's statement

As a group of young architects we sought a warehouse building for adaptive reuse into which we could build affordable apartments for ourselves. 23-25 Egan Street, Newtown, constructed in 1922, offered a simple architectural form, utilitarian finishes, original timber trusses, colourful painted signs and artefacts of industrial archaeology worthy of conservation.

The key architectural philosophies guiding the project were to retain a tangible memory of the building's past, venerate the existing significant fabric and insert strong new elements that were functional and contemporary, yet sympathetic. Despite the small dimensions of the site, measuring only 27 by eight metres, we arrived at a design to create three apartments, with a separate studio shopfront. The layout retains a generosity of space and maximises the usable area while appearing a natural evolution of the existing building.

The apartments are accessed via a common corridor to the south. Each apartment has an open plan kitchen, dining and living room on the ground floor arranged around a north-facing courtyard. The courtyard façades are glazed and feature large folding doors and a two-storey north-facing glazed wall. Upstairs a bathroom, bedroom and study are housed between the original trusses, with large skylights providing ample light and ventilation. A steel-framed void connects the stories.

We designed the apartments for ourselves as a collective, pooling skills and resources. The layout and details were common and costs were strictly controlled. Materials were recycled on-site including bricks, original trusses and timbers. New work was built in recycled timber and steel with hoop pine ply joinery.

architects

Architects in Association:

- Julie Mackenzie
- Heidi Pronk
- Neil Mackenzie
- Jason Veale
- Kieran McInerney

photography

Oliver Berlin

text

Peter Tonkin

Energy efficiency is achieved through a layout that optimises solar access to habitable spaces for the winter months. The provision of ample natural daylight to habitable rooms and the inclusion of solar hot water further reduce energy demand. The roof overhang provides shading to glazing during the summer months and the cathedral ceilings are fully insulated. The void over the dining area encourages stack ventilation that is further enhanced by vented skylights. Passive solar design principles and natural ventilation have reduced the dependence on artificial heating and cooling in the apartments.

The project provides a viable model for adaptive reuse of an industrial heritage building to create affordable housing. It advocates sustainable design and retention of heritage significance in preference to demolition, to create a richer urban environment.

Egan Street

Any venture into Sydney's overcooked housing market is a challenge for first home buyers who want both location and quality. The choice between overpriced, drab and often ruinous terrace houses and small, cheaply-built apartments is not inspiring, nor is a move to distant suburbia. The ebb of industry from the inner city to the outer ring has left one kind of opportunity: a jetsam of small, early 20th century sheds, often well-built and possessed of a noble architectural simplicity. Many have become 'loft-style' housing of varying quality, thus the search for vacant buildings can be arduous.

Perhaps inspired by a group of three architects from TZG who, in the 1990s, very successfully bought and sliced up a Newtown factory, three couples and one single: Neil Mackenzie and Heidi Pronk, Julie Mackenzie and Julius Demberger, Jason Veale and Emma Bain, with Kieran McInerney, bought this former mechanic's shop in Egan Street, Newtown and proceeded to fashion homes for themselves.

The process was relaxed – getting the design right was more important than doing the job quickly. On the way, McInerney left the group, making the design a looser fit of three houses and a small studio office in place of four houses. Over a period of more than a year, the remaining four architects and their committed partners wrangled an effective approach to the building's small envelope.

In order to simplify construction and coordination, and in contrast to the earlier Newtown project where each unit was very differently laid out and detailed, the Egan Street occupants agreed that the three units would be identical. Each designer played to their strengths, and the final solution was robust and simple, preserving both the fabric and much of the spirit of the old factory, and fitting in small dwellings of great style and functionality.

A universal problem with industrial conversions is how to obtain enough light and outdoor space – as the base building usually has openings only on one or two of its short sides. Views and a connection to outside are also hard to achieve without compromising privacy. The Egan Street shell was laid out optimally, with its long side facing north and a rear lane for garbage and fire egress. This shape meant that a series of small square courtyards opened up along the north wall would each get good sun, and allow the required repetition to more or less equally benefit the owners. Lowering the brickwork of the old side wall improved solar access and allowed the upper levels to look out to the north. In practice, the glimpse views achieved from each unit differ surprisingly: from one dominated by the mixed urban fabric to one sheltered by a

neighbouring tree.

The three units, each an L shape of about six by seven metres, are a Chinese puzzle of efficient space design producing living spaces that are flexible, light-filled and surprisingly spacious, given the very economical floor area of 70 square metres. One way the space has been enlarged is the generosity of the planning. Voids connect the two levels and the circulation is well-sized, thus a varied and often surprising sequence of long diagonal views is opened up through the spaces. The benefit is not only experiential: all of the spaces become light filled and well-ventilated. The clever interlocking of solid and void also serves to accommodate a variety of storage and service spaces.

Original fabric is treated reverently: the rich surfaces of the retained brickwork and timber contrasting effectively with the simplicity of the natural and limed timber, white plasterboard and galvanised steel, which are the predominant new materials. The rich patina of the brickwork has been preserved and the new partitions are carefully placed to retain the integrity of the old timber structure. The textural range produced by these simple means again enlarges the living spaces. Remnant original machinery enlivens an entry sequence that is otherwise rather unloved, being of necessity constrained in terms of both space and light, in contrast to the burst of space perceived on opening a unit's front door.

The work has been developed with much of the strictness of a heritage conservation project with a Burra Charter basis. One example of the level of care taken with the original fabric was a long struggle about removing a section of the bottom chord of the heavy Oregon trusses to connect the mezzanine studies with the landing at the head of the stair adjoining the more enclosed bedrooms. In the end, practicality won over strict preservation – justifiably in so small a residence – and the result, with its well-detailed steel structure, is not jarring.

Another aspect where a very strict approach was taken was the environmental design of the units. Ventilation, insulation and sunlight control have all been carefully coordinated to produce excellent winter and summer performance with low energy use.

Egan Street provides an energetic model for effective community and collaboration, producing a small-scale housing co-op of great quality at very low cost. Here the ordinary is transformed by careful design, which not only enhances both scale and size, but also maximises the architectural potential to be drawn out of the constraints of the existing building and the brief.

01.

One of three small private courtyards pulling light and ventilation into the shell of this small converted factory.

02.

This contemporary architectural insertion has carefully preserved much of the visual and material memories of the buildings' past utilitarian life.

03. 04.

The introduction of new materials and structural elements, in particular limed timber and galvanised steel, sympathetically interact with the existing palette of Oregon timber truss and retained brickwork.

05.

Detailing throughout is lean and stripped bare of excess.

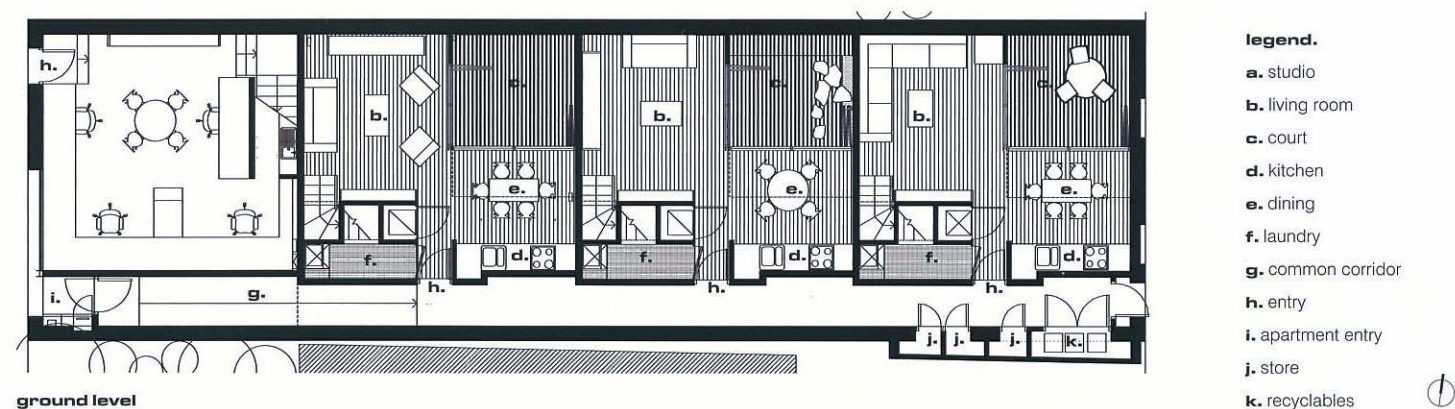
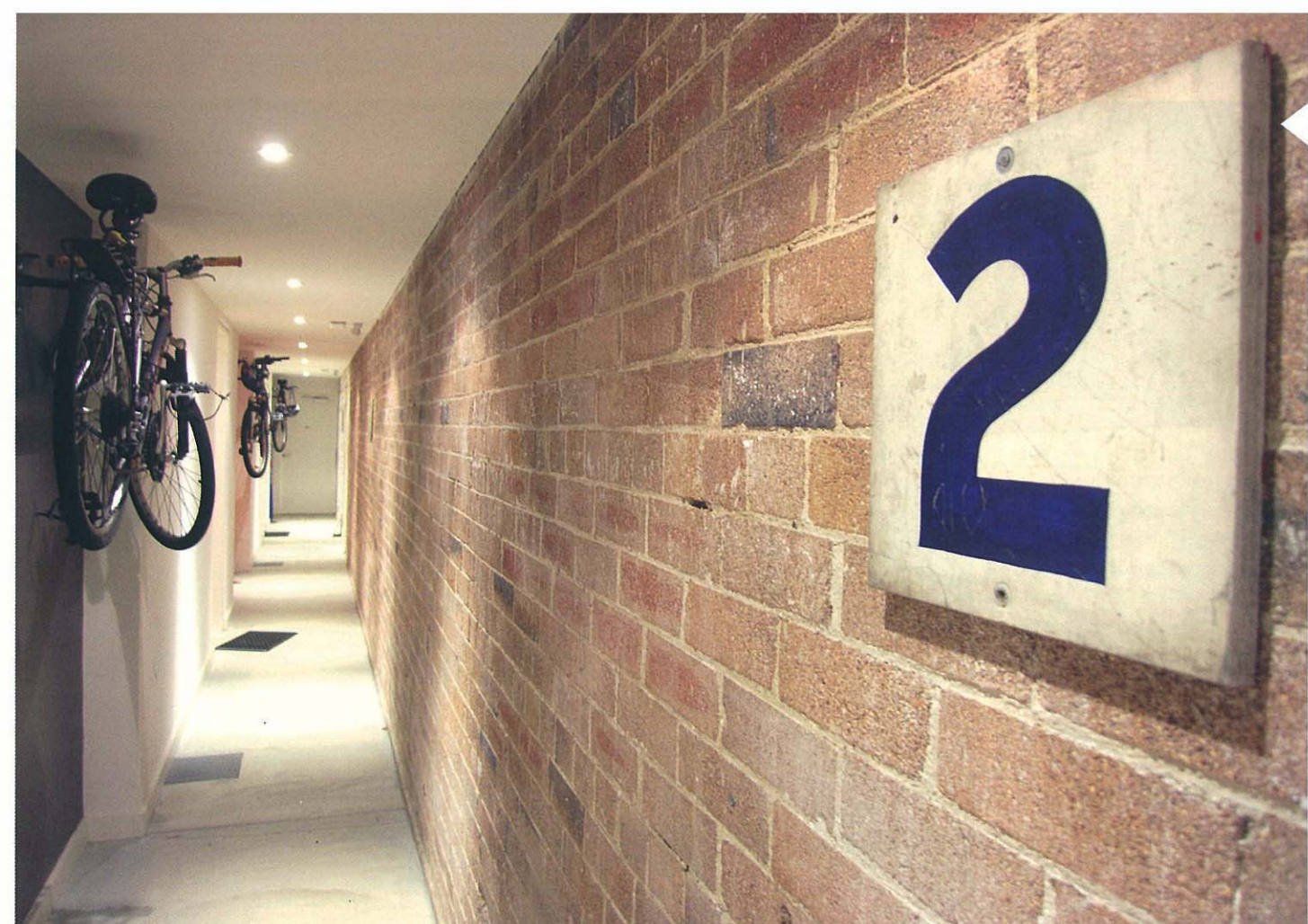
06.

Double height glazing of the courtyard and a slight alteration of wall heights allow great solar access and a surprisingly varied series of views from each of the three small houses.

07.

Robust unadorned surfaces, such as in this connecting corridor, clearly resonant with the history of this light industrial building.





23-25 Egan Street, Newtown

principal architects Mackenzie Pronk Architects, Julie Mackenzie, Shack Design and Kieran McInerney Architects in Association **project team** Julie Mackenzie, Neil Mackenzie, Heidi Pronk, Jason Veale, Kieran McInerney **project managers** project team **consultants: engineer** Richard Green, Taylor Thomson Whitting **builder** John Pullan, WF Pullan and Sons **acoustic consultant** Jason Cameron, Acoustic Studio **fire engineer** Jason Jeffres, Defire **hydraulic engineer** Andreas Heintze, Warren Smith & Partners **photographer** Oliver Berlin **subcontractors** various **size** 220sqm site area, three x 70sqm apartments, one 50sqm studio office **time to complete** 2.5 years design and approval, 1 year construction **council** South Sydney Council **client** as per project team **design software used** ArchiCAD **materials: walls** existing brickwork **wall linings** Gyprock (CSR) **cladding** fibre cement **roof** corrugated zincalume Colorbond (Lysaghts) **guttering** zincalume half round **paint** Murowash (Murabond) **windows** steel framed windows (Skyrange) **doors** solid core doors **skylights** double-glazed timber-framed Skydome **glazing** Pilkington **hardware** Madinoz **heating/cooling systems** underfloor heating bathroom (Devireg 540) **interior materials: ceiling** plasterboard, Gyprock (CSR) **internal walls** fire rated plasterboard, Fyrecheck (CSR) **paint** interior paint, Wash 'n' wear (Dulux) **glass** kitchen splashback, colourback glass (Divine Splashbacks) **lighting/light fittings** F2YK and Special Light Fittings **flooring** timber, recycled grey ironbark surfaces vanities, desert green marble (Melocco Stone), courtyard wall tops, Verde Laguna Granite (Gosford Quarries) **joinery** kitchen and bathroom, hoop pine ply, stair bookshelf, hoop pine ply (Hugh 'n' James Group) **furniture** mixed Courtown **kitchen appliances** oven and cook top (Bosch), fridge and dishwasher (Fisher & Paykel) **fittings and fixtures** taps and mixers (Borma) **hardware** door and joinery hardware, Madinoz (Metropolis)