

EXTREME GREEN BUILDINGS

Built



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CASE STUDY: ETERNITY LIFE APARTMENTS

Address: Eternity Life Apartments, West Footscray, Melbourne

Building type: 12,500 square metre multi storey low-rise residential

Certifications: 7.3 Star NatHERS Rating, Platinum level Livable Housing Australia

Architect: k20 Architecture

Developer: Longboat Development Group

Builder: Longboat

Completed: 2021

Situated next to Stoney Creek, an active waterway leading to the Maribyrnong River, this ecologically sustainable development integrated residential building and draws inspiration from local pitch-roof buildings at Melbourne's Docklands, and the industrial warehouse heritage of the Footscray region.

The building, containing 61 apartments, is a mass timber superstructure built entirely from upcycled timber, rather than using traditional concrete and steel. The facade has been locally sourced from recycled black butt timber.

The laminated timber building aims to be socially inclusive and is 71 per cent carbon neutral.

Of the 61 apartments, 15 have been designed under the National Disability Insurance Scheme requirements to be universally accessible to accommodate people with disabilities, including for wheelchair access and to accommodate hospital-grade care devices.

These units are Platinum level certified under Livable Housing Australia's (LHA) Livable Housing Guidelines.

The building is clad in sustainably sourced hardwood timber and achieved a 7.3 Star NatHERS rating.

An independent life cycle assessment found that up-front carbon emissions were reduced by 52 per cent and embodied carbon reduced by 71 per cent.

The project has many smart solutions including individual smart metering, solar shading, cross flow ventilation, natural and low toxicity materials, increased insulation, LED lighting throughout, double glazing and thermally isolated frames, all of which contribute to lower heating and cooling costs for residents. The light-coloured roof reduces heat load.

Designed to minimise its environmental footprint and subsequent impact on site, it occupies 50 per cent of the land.

Landscaping on the south side has been granted to council as a community reserve. In addition the council has been gifted \$50,000 to complete the landscaping scheme approved. On completion the site is to be recognised under Landcare NSW's Land for Wildlife voluntary property registration scheme.

The adoption of ESD principles contribute to lower operating costs for residents and the achievement of a 7.3 Star NatHERS rating. These include:

- solar power and solar boosted hot water
- individual smart metering
- energy saving windows
- rainwater harvesting
- master electricity shutdown switches
- solar shading
- cross flow ventilation
- natural and low toxicity materials
- minimal building envelope, allowing for more green space and flora within a highly urbanised environment
- access to natural light for internal spaces, reduced reliance on artificial lighting and cooling
- recycled and locally sourced building materials including laminated timber construction technique for superstructure, and recycled black butt timber for facade
- Land for Wildlife registered, attracting native wildlife by reintroducing Indigenous landscaping
- passive design – natural ventilation through operable louvered glass in corridors
- enhanced thermal performance through double glazed windows and highly effective insulation between single laminated timber walls.



Eternity Life Apartments

Photo: Peter Bennetts