

# Drumcondra House



Large windows in the extended living area overlook the courtyard and vine-covered pergola.

Image courtesy of Third Ecology

**Energy and water efficient extension**

## The Project

An energy and water efficient extension to a 1921 Californian bungalow-style house.

## The Site

The building, a roughcast-coated brick Californian bungalow, is a typical style of house in Drumcondra, a suburb of Geelong. The site is protected by an individual local heritage overlay and the 1986 West Geelong heritage study describes it as 'an outstanding example of a bungalow-style house with the usual roughcast wall treatment and an excellent degree of integrity'. The study also identified the intact verandah and early fence, gate and garden layout as significant.

## The Challenge

The six rooms at the front of the house were in excellent condition but the rear skillion housing the laundry was run down, and the living and kitchen areas were dark and cold with no direct access to the large outdoor space at the rear. Third Ecology, an architecture firm specialising in sustainable design, was engaged to design a new kitchen and living area. Preliminary discussions with the local council's heritage advisor confirmed that given the heritage overlay in place, any extensions should not be visible from the street.

## The Solution

A one-storey wing was built at the rear of the site. The new wing has a skillion roof, a form commonly found at the rear of buildings of this era and type. In keeping with the existing building and surrounding houses, the extension was not built to the boundary. This was sensitive in heritage terms, as it maintained the existing space between buildings; and in terms of environmentally sustainable design (ESD) as it allowed for natural ventilation.

A breezeway links the new wing to the original house and signposts a transition from new to old. The form and materials of the new wing contrast subtly with the old - the smooth render of the main house is echoed by the

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extension's fibre-cement cladding with wide timber battens.

Given the heritage significance of the fabric of the place, there was limited scope to include environmentally sustainable design features in the existing building. The addition incorporates the fundamentals of passive thermal design, such as a north-facing aspect, high performance double glazing, concrete slab floor and extensive insulation. Natural cooling is encouraged by cross-ventilation and shrubs were planted on the south side to cool air before it entered the skillion. Other ESD initiatives include:

- zoning of areas;
- hydronic heating;
- energy efficient lighting;
- a water tank and grey water diversion system; and
- a vine covered pergola to shade north facing windows in summer.



## The Lessons

Depending on the significant aspects and resources available, there may be limited scope to introduce ESD into a heritage building. This does not preclude energy or water-saving innovations being included in an addition.

A planning permit was required as the house is in a heritage overlay. Pre-application meetings with the local council's heritage advisor saved considerable time and effort by clarifying what is significant about the place. Knowledge of the significant aspects, along with consideration of the Burra Charter, informed the design. An awareness of and adherence to Burra Charter principles is fundamental to any project at a heritage place. In Third Ecology's opinion it's simple – just a matter of understanding the interests of the heritage advisor and taking this into account in the design.

### For more information visit:

Heritage Victoria Sustainability page - <http://heritage.vic.gov.au/Sustainability.aspx>

Third Ecology - <http://www.thirdecology.com.au>

Australia ICOMOS Burra Charter - <http://australia.icomos.org>

### References:

Honman, L & Huddle, L 1986, *City of Geelong West Urban Conservation Study*

Left: The extension viewed from the rear of the site.

Below: A plan of the house with its rear extension.



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