

MACEDON COURTYARD HOUSE

MACEDON, VICTORIA, AUSTRALIA

ZEN ARCHITECTS

The Macedon house was designed to be an environmentally sensitive building that would endure the passing of time. A minimum 100-year life span was envisaged for the house in a climate that includes frosts, snow, extreme heat and bushfires.

Local limestone is used externally for its ability to withstand the elements and internally for its thermal mass. The limestone was carved and laid by an experienced team of stonemasons. Unconstrained by the tight timelines governing most projects, the house evolved slowly, allowing the architecture to express the quality of the workmanship.

The courtyard plan allows for passive solar gain and enhances passive cooling through cross ventilation as the water feature and the courtyard landscape cool the breezes.

Rooms are placed specifically according to the contours of the land, views and orientation to the sun. The living wing is located on the south of the courtyard and enjoys panoramic views to the south while gaining sunlight via the courtyard to the north. A writer's studio is on the west side of the courtyard while the bedroom wing projects towards the east.

Technology is used to allow the house to actively harness elements. Heating is provided by a solar powered hydronic system within the floor. Windows open automatically when required to catch prevailing breezes and close automatically in the case of bushfires.

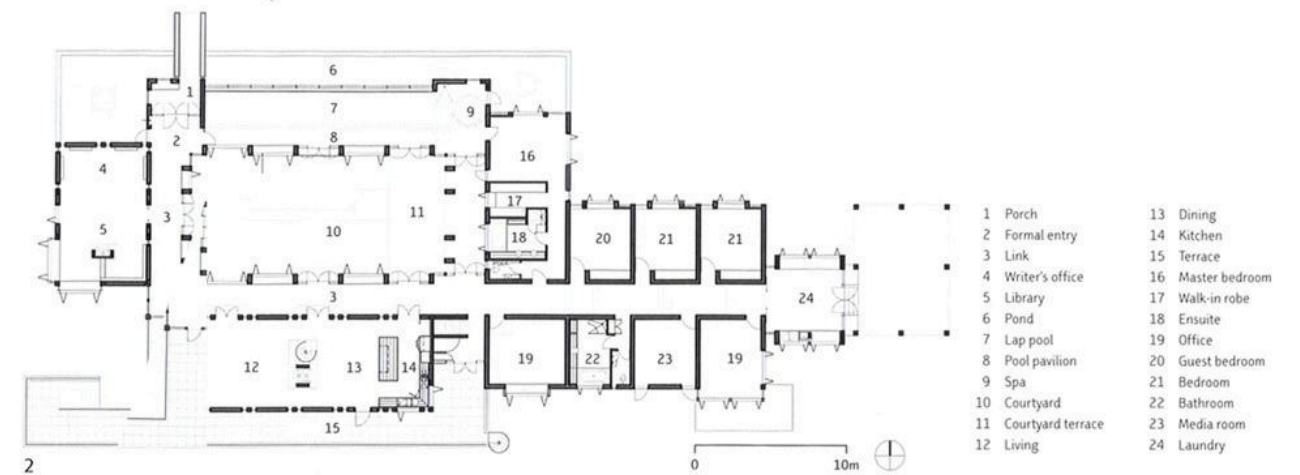
The house offers many ecologically sustainable design features including a courtyard designed to maximise passive solar gain for natural heating in winter and promote natural cooling through cross ventilation in summer, solar hot water integrated with a hydronic heating system in the insulated ground floor concrete slab and a worm farm sewerage treatment system. Additionally, the pool is used as a 'heat sink' to dump excess heat generated by the solar system, rainwater is harvested and stored in tanks, stormwater from the site is collected and retained in dams, and summer heat is naturally removed by a two-storey stair void acting as a thermal chimney.

- 1 Courtyard looking west to the writing studio and library
- 2 Floor plans
- 3 Western view over small dam
- 4 Kitchen, dining and living room
- 5 Writing studio and library

Photography: Emma Cross



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