

Trunk House

PAUL MORGAN ARCHITECTS

Background and contact information about your business, organization, or company

Paul Morgan Architects specialises in University and public projects, master planning, residential projects and urban design. The interests of the practice includes the demystification of sustainable design, the identity and 'branding' of educational institutions and the hybridisation of technical and university buildings.

In 2007 Paul Morgan Architects was awarded the Robin Boyd Award for Residential Buildings by the Australian Institute of Architects for the Cape Schanck House. The house won a 2009 Green Good Design Award from the European Centre for Architecture Art and Urban Design /Chicago Athenaeum and was nominated for the Zumtobel Award (Berlin) honoring outstanding sustainable contributions to architecture and humanity. The practice has exhibited at the 2012 and 2008 Architecture Biennales in Venice, the World Architecture Festival in 2008, the Architecture Biennial Beijing in 2004 and the 2012 Istanbul Biennial.

Paul has completed a Master of Urban Design at RMIT and coordinated the University's Master of Architecture Program. He was the editor of Transition Magazine, a seminal Melbourne-based architecture publication.

PMA has appeared in, amongst other publications: the Phaidon Atlas of 21st Century Architecture; Architecture of Change: Sustainability and Humanity in the Built Environment; Domus; Mark; The New Mathematics of Architecture, and 10 x 10 x 3: 100 Architects, 10 Critics.

Detailed explanation of the entry

Sustainable Materials:

FSC Spotted gum floor and ceiling linings, found eucalypt timber, Stringybark timber from site, plywood wall lining. The tree forks, or bifurcations, were sourced from forest floors and farmland, and, due to their age, were pre-seasoned and therefore very strong. They were joined to straight columns with internal metal plates by a sculptor. A system of forks and columns, creating an external truss, was developed. An internal column with radiating beams completed the structure, the complete triangulated truss system attaining great inherent strength.

Stringybark trees were removed from the site to make way for the new house. A mobile milling machine was delivered to site, and the lining boards were milled, cured on site, and then fixed internally. The figuration of the boards in the living room has great character, and relates to the experience of being in the forest.

- **Energy/Water Efficiency:**

All water used on the house is harvested rainwater. Power is via mains power. Solar panels were assessed, but because the house is in a forest insufficient daylight was available. All heating is via a highly efficient wood-fired oven. The mobile milling machine used to mill the lining boards on site near where the trees were felled resulted in a minimal carbon footprint.

- **Community Impact**

The project is a small cabin in Victoria's Central Highlands. The site contains a beautiful forest of extant Stringybark woodland. The clients are medical practitioners/ academics with a daughter attending university. The brief included a living area, small kitchen, bathroom and two bedrooms. They asked for a small forest cabin in which they could practice choral signing. They loved the isolation of the forest, and the closeness of the birdlife.

- **DESIGN:**

The clients had visited Gaudi's Sagrada Familia. Their fondness for the organic structures of Gaudi's great cathedral and the interest of our office in the forms of bleached bones of kangaroos and sheep formed the brief which structural engineer responded to. He discussed several precedents including the timber structures of the architect Imre Makovecz and the geometries of branching patterns of trees. Aside from the geometries of animal bones, we were intrigued by Laugier's discussion of the primitive hut, the local modernist tradition of the small house utilising triangulated steel and timber structures and the structural forms of indigenous aboriginal shelters.

Several options for the structure were produced. When examining these animal bones the discussion centred on the capacity of the thickened joints to carry loads, upon which Felicetti proposed utilising the timber forks, or bifurcations as the basis for the structure.

The design sought to achieve an almost transparent relationship with the surrounding forest, achieved through an eco-morphological transformation of ground fuel into structure.

- **Land Use:**

This project has attempted to evolve the building type, the small weekender, by answering a simple question—how does one go into a forest and use the forms of the ecology to build a house? The house has an almost transparent relationship with the forest, and minimal impact on the neighbours.

There is something of a *mise en scène* about the interior—the creation of an environment around which the events of everyday life unfold. For the road on the site, dry stone walls, designed by the landscape architect Cath Stutterheim of SAALA, act as built contours, relating the scale of the house to the scale of the landscape.