

Farmhouse & Townhouse

Passive Solar Design:

One is a townhouse on a tight inner-suburban block; the other, a farmhouse amid thousands of hectares. Both have one thing in common. They are warm in winter; cool in summer.

Both homes achieve these creature comforts without resorting to those energy-devouring devices - air conditioner and room heater - which most householders take for granted. The homes we are discussing here have dispensed with such appliances simply by using the low cost science of passive solar design. Before we look at its applications, we should state what are its principles and benefits. Briefly, passive solar design means an energy efficient piece of architecture which in winter harnesses solar power and in high summer shields you from the discomfort of scorching temperatures. The benefits are considerable, the primary ones being extremely high savings in the cost of heating or cooling, and a comfortable indoor environment all year. Forward planning when building a house is absolutely essential to obtain these benefits. It may be as simple as employing an architect who is expert at incorporating passive solar design features into attractive homes. Arguably, the extra cost of the architect's fees will be more than recouped on future power bills - in some cases savings can be 60 to 80 per cent. If, however, the budget does not allow for an architect, there's lots you can achieve yourself by studying the available research and consulting with your builder.

Facing page: The narrow, north facing block on which the Mount Claremont townhouse is able to reap the benefits of winter's sun.
Insert: It might appear outwardly a traditional farmhouse but this one benefits enormously from the science of passive solar design.
Top right: A classic example of a solar pergola filtering shafts of sunlight into the house on a cold but sunny day.
Bottom right: Exterior view of the solarium.

