

MOUNT CLAREMONT

If correctly orientating the house to fulfil the positioning requirements of passive solar design was no problem on the Dandaragan farm, it was a major challenge on a tight block in Mount Claremont with a narrow street frontage facing north.

Despite this, it was possible with skillful design to tap the benefits of managing the sun to suit the home dweller.

The brief for architects Baverstock, Murphy and Associates was to build a townhouse on the block with a special requirement. While there would be a kitchen, meals and living areas and bedrooms on the ground floor, there would also be a master bedroom and separate sitting room on the upper level. This was a thoughtful idea. When the owners' grown-up children or guests come to stay, both parties have their own isolated areas in which to relax.

Apart from installing windows to bring sunlight to upper and lower rooms, the feature that best illustrates how skillful design meets such challenges is a large panel of glass in the roof above the entry and staircase. As it's covered with angled wooden slats like those in the solar pergola, the sun in winter streams down the hallway to the formal dining room and adjacent area. But summer sun is effectively blocked by the slats presenting a flat surface.

Problem solving at its best added the final element of passive solar design to a charming townhouse that achieves all we most seek in a comfortable home environment - coolness in summer, warmth in winter, at a big saving.

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Above Right: Typical characteristics of passive solar design in the kitchen and meals area - ample light to enhance colours and provide cheery interiors. **Left:** View looking north from the formal dining room along hallway. The same principle as the solar pergola is utilised in the roof panels to bring in the winter sun. In summer, the slats present a flat surface to the sun blocking its entry. Note the hallway tiles providing thermal mass to be warmed or cooled.

Top: Another view, looking south, illustrates the sun's penetration from the north far into the house.



Principal Suppliers

Mount Claremont

Baverstock Murphy & Associates - Architect/Draftsperson
Baverstock Murphy & Associates - Interior Designer
Rokich Building Company - Builder
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Midland Brick - Bricks
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Jason Windows - Windows
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Dandaragan

Garry Baverstock - Architect/Draftsperson

Did You Know?

In 11 AD the Anasazi Indians built homes in the sides of cliffs. These dwellings used the low altitude of the winter sun for solar heating while the cliff overhang shielded them from the summer rays.

The ancient Romans and Greeks used eaves, shutters, central courtyards and centrally planted deciduous trees to ensure their houses were energy efficient. They also took into account the local winds. The first recorded analysis of solar house design was written about 4000BC.

Remarkably, the temperature within the tombs of Egyptian pyramids remains constant throughout the year due to the large thermal mass of the surrounding structure. The principle can be put to work when planning your energy efficient home.

By careful orientation and control of airflow through their nests, WA's compass termites can keep the interior temperature to within one degree of 31C while external temperatures can vary throughout the year between 3C and 42C.

