

Solar Passive Design Information Sheet

What is solar passive design?

In the South West we enjoy the best climate in Australia. Our climate is defined as a temperate climate, meaning that we have four distinct seasons, with mild to cool winters with low humidity and hot to very hot summers with moderate humidity. Passive design simply makes the most of these conditions to make your home more comfortable while reducing your bills. Passive design should cost no more when included at the planning stage when careful attention should be paid to orientation, shade, ventilation, materials, insulation and which rooms should go where to maximise the passive design efficiency.

How does it work?

Good passive design uses natural heat from the sun and natural night-time cooling to keep your home at a comfortable temperature year round. It can eliminate or reduce the need for expensive mechanical heating or cooling. Most of the passive heating and cooling occurs through your windows. Northerly orientation, eaves and simple shading features can keep out summer sun and allow in winter sun.

Key design principles

- Use passive solar principles
- Use thermal mass solutions
- Use high insulation levels, especially to thermal mass
- Maximise north facing walls and glazing, especially in living areas with passive solar access
- Minimise all east and west glazing. Use adjustable shading
- Use heavy drapes with sealed pelmets to insulate windows
- Minimise external wall areas (especially E&W)
- Use cross ventilation and passive cooling in summer
- Encourage convective ventilation in heat circulation
- Site new homes for solar access, exposure to cooling breezes and protection from cold winds
- Draught seal thoroughly and use entry airlocks
- Use reflective insulation to keep out summer heat
- Use bulk insulation to keep heat in during winter. Bulk insulate walls, ceilings and exposed floors



For further information on solar passive design, visit www.solardwellings.com.au

Source: *Your Home – Design for Lifestyle and the Future technical manual* (a joint initiative of the Australian Government and the building and design industries)