



locations and lifestyles of the occupants. Also there is a need to develop a design 'vernacular' in Western Australia that is sensitive to the particular needs of the state, and the climatic regions within the state.

When looking at the various methods of building, issues such as embodied energy, transportation, thermal mass, reliability and maintenance, lifespan, suitability to climate and site conditions as well as interaction with natural dangers, such as termites, humidity or storms, should all be considered. The idea of one size fits all is now no longer acceptable for the long term sustainability of the state, as is outlined within the 'building sustainably' section within the State Sustainability Strategy.

Timber frame and steel frame

Timber, sourced from sustainable plantations, is a lightweight construction method. The positives of this method are that it has lower embodied energy, less energy use for the life cycle, and responds naturally to temperature changes so a building would cool quickly at night. Timber additionally has a low production impact, if it comes from a sustainably managed source. The drawbacks are that it requires more heating and cooling in cooler climates compared to heavier constructions (such as double brick) with the same orientation and insulation.

Steel frame has similar characteristics as timber, but has much higher embodied energy in its manufacturing. It has about as equal a lifespan as a well maintained timber frame.

3. This house shows that attractive housing can be built whilst attention is given to reducing its impact on the environment