



Brick veneer and reversed brick veneer

Brick veneer has construction advantages, such as being able to be installed whilst the roof is on enabling construction to continue in wet weather, but it is inefficient at heating and cooling, with a low thermal mass. It has high embodied energy and costs more than other lightweight cladding, with

the same embodied energy. This is the most widely used construction method in Australia, although only seen along the southern coast in WA.

Reverse brick veneer is a recently introduced method of construction, with internal brick walls within a framed building, and lightweight cladding on the outside, providing a weatherproof seal. It has arguably more thermal efficiency than double brick, with less embodied energy due to a halving of the requirement for bricks. The external lightweight cladding is normally more environmentally friendly than brick, and can be just as durable. There is a drawback as it will need more maintenance than brick over a 50 or 100 year lifespan.

Both these methods assume environmentally sound wall and roof insulation.

Rammed earth

Rammed earth is a fashionable and sought after method of construction with homeowners that want to have a 'natural' look to their homes. Although rammed earth has a low to medium embodied energy, depending on the cement

content of the individual product, it has poor insulation properties and additional insulation can be difficult to fit. It does have a high thermal mass and can be manufactured on site. This makes rammed earth good for remote areas, as it reduces transport needs, thus reducing costs and reducing embodied energy. It is durable, with low maintenance, but is a financially costly option for the home builder.

Mud brick

This is less mainstream and thus not an easy option. It does have one of the lowest embodied energy ratings and high thermal mass, with no manufacturing impact and low site impact, but does require a high degree of labour input.

A veneer of change in a steel framework?

Are all these different ways of building actually just tinkering around the edges of the real issue? Are there structural problems within the industry and government that make it almost impossible to move forward from the status quo? Can real improvements in the built environment be accomplished within the framework that currently exists?

Towards sustainable communities, excellence in building and imagining the future were all major themes of the Year of the Built Environment last year. The initiative endeavoured to highlight the need for different mechanisms to shift focus from functionality to design. The year was conceived in Western Australia, and spread to the rest of the country, and was a great success, except for here in WA. Why is it that we are so immune to implementing and demanding good design (and good design means incorporating the principles of sustainable development)? Why is WA so resistant to change for the better?

This is a quote from the website of the national YBE2004. *"Sustainable design, planning and construction will be the underlying basis for future development in Australia. Development that improves, rather than degrades the environment is essential. This requires a whole of community*

4. Solar passive building techniques are even used on the outside of the building, with a louvred pergola covering an entertainment area, which lets winter sun in and provides shade from the summer sun