

Actions speak louder . . .

## Fact Sheet no.4: Low energy construction

### Description and analysis

The combination of environmental concerns and the rising cost of fossil fuels is causing planners to look for ways of reducing the amount of energy 'sunk' into the fabric of buildings, usually during the manufacture of the elements of construction. Paradoxically traditional forms of construction predating 'western' influence were often very frugal in the use of non-renewable energy. However changing lifestyles and irresistible rising aspirations have caused technologies to be set aside in favour of concrete, plastic, glass and other energy intensive materials.

### Design response

Without putting the clock back and refusing to accept current aspirations, the challenge is to achieve ways of ensuring durability, modernity and high surface finish in construction products but using as high as possible a proportion of local resources.

### Parry Associates technical input possibilities

Parry building materials technologies include a range of high performance, manually operated presses which can make compressed bricks and blocks for walls above damp course or for the base of floors. Training and technical support services are available to as-

sist the introduction of the manufacturing activities and the design and construction of low energy buildings.

### Local resources required

The greatest mass of a building is usually contained in its walls which need to have the impermeable properties sufficient to be resistant to the softening effect of water, and load-bearing ability to support upper floors and the roof. Walls that meet these specifications can be built from pressed unbaked clay or laterite provided that the upper parts are protected from water penetration and the bases protected from rising groundwater. Also, compacted clay floors covered by concrete 'quarry' tiles can also provide a low energy construction method.

### Potential local business response

It is unusual for unbaked clay bricks to be supplied as a sale commodity due to the risk of damage while in stock or during transport. The most suitable business format may be for the building contractor to produce their own blocks.

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