



# CAPE BRICK

**BUILDING A BETTER ENVIRONMENT**  
WITH RECYCLED MATERIALS



Sustainable Developments



Demolition



Ross Truck



Transport to Site



Demolition Material



Finished Product



Product Manufacture



Crushing



# CAPE BRICK

## BUILDING A BETTER ENVIRONMENT WITH RECYCLED MATERIALS

### HOW DO YOU BUILD A BETTER ENVIRONMENT?

A better environment can only be created through the promotion of *sustainable development*. This means specifying and using building products that are *energy efficient*.

### WHEN IS A MASONRY PRODUCT ENERGY EFFICIENT?

There are two requirements to an *energy efficient* masonry product. The first is that the product should have good thermal insulation properties. Concrete masonry is naturally thermally efficient, and when used in cavity wall construction has the effect of ensuring that buildings stay warm in winter and cool in summer, thereby lessening the need for artificial climate control and wasted energy. The second requirement is that the product should have a low *embodied energy*.

### WHAT IS EMBODIED ENERGY?

This is the energy consumed in the manufacture and transportation of construction materials to site. To manufacture a masonry product with a low *embodied energy* the raw materials should be sourced as close as possible to the manufacturing plant and should contain as much *recycled material* as possible, the manufacturing process should use as little energy as possible, and the manufacturing plant should be as close as possible to the site to reduce the transport energy component.

### WHERE DOES RECYCLING FIT IN?

The use of *recycled materials* is crucial to lowering the *embodied energy* of masonry products.

### WHY CHOOSE CAPE BRICK?

Cape Brick, located in Salt River, now manufactures concrete masonry units with possibly the lowest *embodied energy* of any masonry product available in the Western Cape today. Cape Brick, in conjunction with Ross Demolitions, is one of the first masonry manufacturers to set up a crushing facility to reduce construction and demolition waste (C&DW), consisting of mainly reinforced concrete, to recycled crushed aggregate (RCA). The RCA is then used as the main ingredient in all the company's products. In fact, our 14MPa concrete plaster brick consists of 96.5% *recycled materials* (100% of the non-cementitious materials and 50% of the cementitious materials are recycled). Cape Brick uses approximately 42,000 tons of RCA per year.

### HOW DO WE BUILD A BETTER ENVIRONMENT?

- The C&DW would normally be dumped in landfill sites, thereby impacting on sensitive areas. Thus using RCA in the manufacture of our concrete masonry products eases the pressure on the landfill sites.
- Using RCA means that less virgin materials such as sand and stone have to be quarried, thereby directly lessening the mining impact on the environment.
- Cape Brick is only 5kms from the city center where most demolition takes place, resulting in a transport energy saving, as most sand and stone quarries are between 15kms and 50kms distant and require a large transport component.
- The quality of the RCA is actually superior to that of the quarried materials available at a similar price. This means that a lesser percentage of cement can be utilized in the concrete mix to achieve the same compressive strength, resulting in a further energy saving. (The use of PPC Correx Slagment in the mix has also further reduced the amount of cement required and therefore lowered our product's *embodied energy* considerably).
- Cape Brick's own waste products are processed into RCA, and therefore do not have to be disposed of.

### DOES ANY OF THIS AFFECT THE PRODUCT QUALITY?

The use of RCA has a hugely beneficial effect on product quality. As has already been mentioned the quality of the RCA is actually superior to that of the quarried materials available at a similar price. This results in products that are not only more beneficial to the environment, but have a higher compressive strength in the bargain. The end result is a truly green building material.

Concrete masonry is also cost effective, meaning that by specifying CMA approved masonry units, as manufactured by Cape Brick, you will not only help to promote sustainable building practice, but will realize a saving in the process.

For further information please contact Cape Brick. Tel: (021) 511-2006.



[www.capebrick.com](http://www.capebrick.com)

