

Clay brick at the cutting edge of cutting carbon



With only 450 of the estimated 350 000 buildings able to meet the December 7th deadline to display Energy Performance Certificates, Minerals and Resources Minister Gwede Mantashe was compelled to grant a three-year extension, with the proviso that building owners register the type and size of a building and its energy performance within 12 months with the South African National Energy Development Institute (SANEDI). This collective failure belies the many dynamic initiatives, innovations and adaptations pulsing through our construction industry, as the revitalising benefits of finding creative sustainable solutions are realised by an increasing majority.

A FRESH LOOK AT AN ANCIENT ALLY

Clay brick is proving to many sceptics in our built environment that sustainable construction is far from the rejection of the materials, methods and systems that have contributed so much to the world. Far from it: sustainability has driven the research, studies, testing and innovation that reveals the many benefits of this ancient building material, and drives its use in increasingly diverse and new ways.

Revitalised with a fresh perspective, clay brick is surprising both committed environmentalists and builders alike with new demand for its products coming from highly diverse markets. From off-grid living enthusiasts to commercial property developers, clay brick is hot property.

CLAY BRICK AT THE CUTTING EDGE

Johannesburg's Sandton metropole concentrates the energy, wealth, power and diversity of Africa into a mighty, tight space. Forever transforming, its current developments are especially compelling – less for its new buildings as for the significance of what's happening to its older structures.

BlackBrick Sandton is a recently completed conversion that embodies the ethos of sustainability on a scale that integrates sustainability in just about every aspect of modern living. Its façade screams 'visibility',

achieving far more than this aesthetic demand by bringing its unique mix of thermal properties, adaptive manufacturing advantages and reliable, low-carbon proximity of supply to this ambitious project – and clay brick was the sustainable solution.

Transforming the older office block into a blend of comfortable living spaces, workspaces and community fostering facilities leads the growing trend for sustainable, mixed-use lifestyle developments. Designed on the 'vertical village' concept, the building's façade posed serious challenges, both in terms of structural demands as well as the demands of a future-centric sustainable vision.

The manufacturer and supplier of the clay brick product meeting these demands, Federale Stene, has embedded the principles of sustainable energy efficiency in their manufacturing processes, as well their sourcing of natural, raw materials. The company was acquired by the Lutzkie Group of Companies in 2006, and still proudly operates under the group. Adhering to ISO standards, their SABS-approved clay bricks are truly low-carbon at every stage, from fabrication through building lifespan.

As Mariana Lamont from the Clay Brick Association explains, "Sustainably designed buildings are energy efficient, resource efficient and serve the long-term economic, social and environmental needs of communities. Clay brick masonry demonstrates all these qualities during construction, throughout its long operational life."

Not only are these bricks made from a highly durable natural material that offers an exceptional lifespan but the clay from which it is made is also naturally insulating. "Clay bricks are thermal batteries, using energy from the sun to provide natural thermal efficiency, reducing the need for electricity-guzzling air-conditioners, heaters and humidifiers," explains the company. www.claybrick.org

BENEFITS OF BUILDING WITH CLAY BRICKS:

- Durable building material
- Protection against major weather conditions
- Aesthetically pleasing
- Manages insulation well
- Sustainable green building material
- Low maintenance
- Made from natural raw materials
- Energy-efficient
- Low carbon footprint.

Maxi Brick Specialisations

The clay bricks specified for high profile BlackBrick Sandton building conversion are the Federale Stene Maxi Brick.

- Product Type: Semiface
- Product Texture: Satin
- Product Classification: FBA
- Compressive Strength: 25 – 35 MPa

Technical info

- Standard Brick Size: 285 x 142 x 88mm
- Brick Weight: 4,28 kg
- Pallet Weight: 1.072 kg
- Clay Bricks per m²: 35
- Bricks per Pallet: 250

Applications

- Retaining walling
- Structural wall in single- and double-storey building
- General unplastered building work
- General building work below dampproof course
- General building in industrial areas where high acid/alkaline discharge occur
- General building in damp conditions
- Work below ground level where durability is the criterion for selection.



Conradie Park, Cape Town. Photo courtesy of Concor.

FOR GOOD FOREVER

Clay masonry is a natural insulator against summer heat, winter cold, humidity and noise. With timeless appeal, impressive strength and maximum fire resistance, clay brick looks beautiful for a lifetime.

CBASA represents clay brick & paver manufacturers across Southern Africa. We drive inclusive, sustainable practices in the industry while supporting our local producers, builders and architects.

Download free technical & construction guides at www.claybrick.org



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