

## CONSTRUCTION

# Imminent lack of coarse ash will change cement brick industry

NADINE JAMES | CREAMER MEDIA REPORTER

Cement stock brick manufacturer Brick-It director **Sean Cameron** predicts that the upcoming shortage of coarse ash – which is combined with cement and other aggregates before being moulded into cement bricks – will force the industry to change the bricks' composition, subsequently affecting many facets of production.

Cameron expects that this shortage will manifest in the next three years, owing to increased demand for cement bricks. "Clay bricks cost more to manufacture. They have to dry for a few days, bake in a kiln and cool before they can be packaged. That entire process can take up to two weeks. Aside from the excessive power costs, it's also less environment-friendly. Cement bricks are far more viable and cost-effective to produce."

Producers use coarse ash in

the brickmaking process, owing to its low weight, which cuts production and transportation costs. "The alternative is to use crusher run as an ash substitute, but this is a lot more expensive. Crusher run is also heavier. Thus, instead of loading 12 000 bricks on a truck, we might be able to load only 10 000, which also has a cost implication."

If Brick-It were to run a mix using crusher run in its block machine, it would probably produce 13 pallets, owing to the low weight of the ash, whereas virgin crusher run would reduce this to only nine pallets. "We would be forced to use more virgin raw material to produce the same number of bricks, pushing production costs through the roof."

In addition to coarse ash, the company also uses slag cement from steel manufacturer Scaw Metals, as well as pozzolanic ash, or fly ash, from various power sta-

tions. Cameron reiterates that "the coarse ash is where the problem lies. Eventually, it is going to run out".

Although fly-ash products supplier Ash Resources also has a coarse ash stockpile, he believes that "there is probably two to three years' worth of ash left, based on the rate that it is selling".

Brick-It has its own coarse ash stockpile in Gauteng. Cameron notes that there is about a year's supply of coarse ash left here.

He adds that when producers are forced to use crusher run, "it is going to change the whole market. This is partly why we want to try to diversify into pavers".

Therefore, Brick-It is procuring a large-capacity RE1400 block machine from concrete equipment supplier Pan Mixers South Africa (PMSA) to use material from a nearby quarry to make pavers. The company has also ordered another PMSA VB4X block machine to replace the original machine, acquired in 2006.

Cameron says this and other upgrades are meant to increase Brick-It's on-site capacity and to aid automation. The company introduced a new curing chamber at its main plant last year and plans to refurbish the original VB4X and move its second production site in Benoni to Kempton Park to boost its overall production capacity.

"We started on the civil works for the new RE1400 at the end of last month, which will also feature a curing system. The RE1400 will produce pavers exclusively."

Cameron notes that, depend-

ing on the market and raw material availability, the company might move the other VB4X onto pavers as well. "Of course, we are getting into a new market, so it is going to take time to create momentum."

Brick-It will focus on residential pavers initially, starting with existing customers, before moving onto other prospects, Cameron says.

The VB4X has a pallet size of 1 400 mm × 840 mm × 42 mm. It can produce up to 120 000 standard-sized bricks or 75 600 interlocking pavers in a nine-hour shift. The RE1400 has a pallet size of 1 400 mm × 950 mm × 50 mm, and can produce up to 165 000 standard-sized bricks or 105 600 interlocking pavers in a nine-hour shift.

Cameron says about 150 000 bricks a day are produced on the new VB4X, using about 200 000 t of raw materials. He adds that the PMSA equipment has enabled the company to increase production, specifically as it has reduced downtime. "PMSA is very good; the availability of its technicians is largely why we chose them, just from the service point of view."

Brick-It was established in 2006 and has four processing plants – three at its main site, in Kempton Park, and one in Benoni. The Kempton Park site comprises about 5 ha, and will eventually include the new RE1400 and curing system.

The company mainly supplies residential housing developers and large-scale construction retailers, such as Cashbuild and BuildIt, as well as other developers and one-off buyers.

The company produces about 12-million bricks a month.

"We are quite lucky. We hear that the market is down in terms of the current economic climate. However, we are fortunate that our sales are strong. We are probably pushing out about 55 truckloads of bricks a day," comments Cameron. ■

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**VB4X BLOCK MACHINE**

It can produce 120 000 standard-sized bricks or 75 600 interlocking pavers in a nine-hour shift

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