



Repressing the Paver

In business we're told that the customer is always right. Well in the paver market, the customer is saying bigger is better and the ability of the concrete paver to meet this need in terms of size and colour range has seen their sales grow to double the clay paver market in 10 years despite the natural advantages of clay over concrete. Good news if you're making concrete pavers, not so good if, like Claypave, you manufacture clay pavers.

Fortunately, Dr Leon Burgess-Dean, R&D Manager at Claypave is no stranger to market driven innovation and in 2000 Claypave were the first to introduce a range of large format (300mm² and 400mm²) clay pavers manufactured using a soft extrusion method. However, at this size soft extrusion pavers had a few problems including high cost, sharp edges and dimensional inaccuracy.

Not happy with the status quo, Claypave has embarked on an ambitious project to manufacture high quality large format pavers through the stiff extrusion and repressed method – which will be a world first and provide a dimensionally accurate, colourfast, frost and salt resistant large format paver that can be cleaned with acid and doesn't have to be sealed. Such is the advantage of clay over concrete. The batch operation will also reduce the costs.

Being a world first means there is no precedent and Claypave has had to go back to basics. "We've found it invaluable to collaborate with the University of Queensland through Future Materials", said Dr Burgess-Dean, "They've provided in-depth analysis of the chemical and mineral composition of our clays and shales plus strength, plasticity and colour tests for various mixes while also mapping mix behaviour during extrusion, drying and firing".

Not only has this work resulted in the development of optimum mix compositions for the stiff-extrusion process but new colours have been formulated that have never been produced at Claypave, allowing for a greater product range and increased market differentiation.

The competitive advantage of making a low cost high volume product in the marketplace provides Claypave with a long-term advantage over concrete paver manufacturers. It also provides a long-term competitive advantage over other clay brick and paver manufacturers that do not have similar product differentiation or the technological advantages that Claypave has.

The export potential of large format pavers to Asia and the United States of America is enormous because the product is unique. Claypave has positioned itself at the top of the Clay industry as a leader in innovation, technology and quality.



Regal Gold 400x400x50mm Clay Paver

The Scanning Electron Microscope (SEM) is a microscope that uses electrons rather than light to form an image. The SEM has a large depth of field, which allows a large amount of the sample to be in focus at one time. It produces images of high resolution, which means that closely spaced features can be examined at high magnification. Preparation of the sample is relatively easy since most SEMs only require the sample to be conductive. The combination of higher magnification, larger depth of focus, greater resolution, and ease of sample observation makes the SEM one of the most heavily used instruments in research areas today.