

Wet cast paving

- *the look of stone, the durability of concrete*
- *an affordable new landscaping option*



With the development of new products and approaches, concrete is constantly making inroads into new markets. One new niche is hard landscaping for the top end of the residential housing market where standard concrete has not generally been considered a design option. Sandstones and terracottas, expensive but considered more attractive, have dominated the paving market in this sector.

Now, however, that's all changing thanks to the new development of one Auckland concrete company. JAGAS Concrete has developed a new concrete paver which has the look and appearance of the beautiful, naturally occurring sandstones and terracottas - but with the extra advantage of the strength and durability of concrete.

The pavers are manufactured with wet cast concrete. That process was chosen because of wet cast's ability to achieve different textures - from smooth, glasslike surfaces to rough exposed aggregate finishes to weathered sandstone - and for its capacity to literally take on any form and any colour.

A uniquely designed sandstone topping layer was then developed for the paving. Rather than the conventional method of adding oxide to grey concrete, the company used a chemically reinforced mix of sand cement and oxide as the wearing surface of the paver. Its high strength standard concrete mix is used to back the paver. All this combined, this paving product is basically a reconstituted sandstone - it looks more like sandstone with the elimination of aggregates in with the colour, and it weathers like sandstone - because there is no aggregate, it can never weather through to the surface.

This type of product is chosen by the customer because of the similarities it has to naturally occurring sandstone products. In some cases, it has been chosen over the





*Relax and enjoy
the difference of...
The JAGAS Paving experience!*



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“real thing” not just because of the cost (almost half that of some sandstones) but because of its durability to stand up to harsh coastal conditions and resistance to heavy weathering and erosion. Also being 40mm thick, you do not need to lay a concrete slab first.

With the growing awareness of environmental issues, both manufacturer and customers have peace of mind in knowing that the products are the best possible quality with the raw materials being used in the most effective way, minimising future waste.

In day to day interactions with specifiers, contractors and end users, it is common for issues to arise concerning concrete in general. Education and information are the key tools for addressing issues.

To the uninformed, crazy paving, efflorescence and natural variation can be seen as “potential problems” rather than as the normal traits of concrete. By bringing these “potential problems” to the forefront and by educating the client before any kind of decision is made, an enormous amount of time and money can be saved.

All of these concerns have been addressed by the installation of a display courtyard. JAGAS chose the paving by taking a good cross section of pavers - to give the best illustration of what the client can expect when they receive their order. The display courtyard has been invaluable for the company - by showing the customers all they need to know, unexpected surprises have been avoided.

A major challenge has been the phenomenon of efflorescence. Several different chemicals and procedures were trialed but as JAGAS uses a high strength concrete with a high cement content - there is no “quick fix”.

This “cosmetic problem” has been overcome in the best and most effective way: simply by educating the client and end user to what it is, why it happens and providing clear and simple written information and articles. Additionally, in the display courtyard, clients can see efflorescence and realise it doesn't detract from the overall area.

Another serious issue which has developed during the company's past few years of growth is the lack of qualified, experienced tradespeople to install the products. Even the best paving product in the world will look horrible when laid by an inexperienced tradesperson. The company has overcome this by providing its customers with a contractor list of qualified tradespeople. It has seen their work and spoken with their customers and is satisfied they can lay the products well.

Commonly thought of as a ‘backyarder’ business, JAGAS has borrowed from the large machine manufacturing paving companies to create production systems which ensure consistent high quality.

At the moment though, there is no recognised standard in New Zealand for wet cast pavers. In the interim, JAGAS has developed its own manufacturing specification which outlines the tolerances permitted and the testing undertaken to ensure the standards are met.

In the near future, it is looking to develop, or to assist in the development of, a New Zealand Standard for this type of concrete paving. **C**