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Opportunity road: Flexi-Pave created with water conservation in mind

by Janet Leiser Staff Writer

CLEARWATER — Kevin Bagnall has spent eight years developing a product he says enables rainwater to replenish Florida's aquifers in urban areas while also diverting millions of tires from ending up as hazardous material in landfills.

Like any entrepreneur who has exerted untold energy and personal financial resources bringing an invention to market, the native Englander and founder of KB Industries Inc. hopes his product will bring financial rewards.

Flexi-Pave is a permeable material made from shredded old tires that's used for sidewalks, parking lots and bike trails. It allows rainwater to flow downward, through it and into aquifers.

Liberty Property Trust uses Flexi-Pave to ensure the survival of oak trees in the parking lot of its newest office building at Woodland Corporate Center. The building is Tampa's first multi-level office building gold certified by the U.S. Green Building Council for the use of environmentally sustainable building practices.

Flexi-Pave surrounds the property's oak trees, allowing rainwater to reach the roots, saving the foliage from an untimely death, said Jody Johnston, city manager and VP for Liberty in Tampa.

The product isn't expected to replace asphalt or concrete in the construction industry, Bagnall said. Instead it should be used where there's a problem with stormwater runoff or erosion control or to save trees.

Tests show that Flexi-Pave allows water to pass through it at a rate of 2,000 gallons an hour, Bagnall said. That means the roots of trees located near the material will grow downward instead of upward, eliminating costly repairs from broken pavement.

Growing acceptance

One of Bagnall's challenges is convincing engineers and developers that the product is worth its additional cost and that it will hold up over time. Flexi-Pave is about \$1 more a square foot than concrete and twice the cost of asphalt.

The University of Central Florida's Stormwater Management Academy has been studying Flexi-Pave's porosity and strength for about six months, said Marty Wanielista, director of the academy.



"We aren't the solution. We're part of it," said Kevin Bagnall, founder of KB Industries Inc. and inventor of Flexi-Pave. Kathaleen Cabbie

“It’s an excellent product,” Wanielista said. “It’s extremely promising.”

Wanielista expects Flexi-Pave to gain Florida’s official seal of approval for use in sustainable building within the next couple months.

In addition to its role in saving rainwater, Flexi-pave serves another important environmental purpose. It diverts tires from landfills.

Floridians alone dispose of 19 million tires annually, Wanielista said.

Going global

Bagnall isn’t limiting his marketing to the Bay area. He has also started a company in the United Kingdom, and he says the product is being considered for the Olympics in London.

Several months ago, KB Industries installed about 8,000 feet of sidewalks in Lansbrook, one of Pinellas County’s upscale neighborhoods. In July, the company installed a trail and parking lot at the University of Florida in Gainesville.

KB Industries’ revenue is projected to hit \$5.2 million this year, Bagnall said. Densely populated urban areas are the company’s prime target.

“Wherever there’s a dense population and waste, that’s where we can be at,” he said. “The only thing that changes is language and currency.”

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