

## GREEN

► *Continued from Page 14*

roof. This one was a more extensive model consisting of 12 inches of soil and thick blades of grass.

There are other green roof options, some of which will be on display at adjacent Sheldon Crossing homes. These versions are not as upgraded, meaning not as much grass and lush greenery.

Lehmann said green roofs are great from a lifestyle perspective. For those living in the city, a backyard with space to garden and lawns to water is often unattainable. The sheer lack of space in many neighborhoods makes it nearly impossible.

But some new homeowners are able to enjoy that same quality of life – except theirs is not behind their houses, but on top.

“They like the fact that it feels like real outdoor space,” Plessett said.

Green roofs are also beneficial from an environmental perspective. The technology captures storm water, lessening the amount of runoff that flows into our rivers and streams. Rainwater runoff often carries pollutants into local waterways, adding other factors that hurt wildlife and drinking water quality.

Green roofs, however, work to absorb much of that water, thus eliminating the amount that is streaming down city streets.

At the same time, green roofs provide an insulating factor for homes, which is beneficial from an energy use standpoint. Think of green roofs working in tandem with solar electricity, another alternative energy source helping homeowners keep down their utility costs.

Green roofs are still a relatively new sight in the United States, and Philadelphia in particular. But the technology is in no way new. Lehmann said it has been employed in Europe for decades, and sod roofs are about as old as homes themselves.

But just like it takes time for any newer technology to take hold, green roofs are no exception. That doesn't mean things aren't moving in a forward direction.

“Philadelphia has not been a hotbed of green building,” said Scott Kelly, a principal with Re:Vision Architecture, during a visit to his office last week. “[But] I've seen a change in the last five years because people are starting to pay attention.”

Kelly helped to start the Manayunk-based architecture firm that primarily deals in green and sustainable building. Today, the business has offices nationwide. Kelly said he'll often travel to various cities across the country and hear people talk about sustainable building designs that



Large sections of the rooftops at Sheldon Crossing are covered with lush grass.

MATT GODFREY / STAR PHOTO

are being done right here in Philly.

“People have become a lot more aware,” he said.

Kelly credits his firm and a couple other area businesses, not to mention Philadelphia University's Sustainable Design Master's program, with helping to change the discourse and raise awareness. The Northwest in particular has benefited a great deal from this knowledge.

“Manayunk is starting to get a reputation of having green leadership here,” he said.

Kelly agreed with Lehmann and Plessett that green roofs offer a certain quality of life not found in other parts of the city.

“Because we live in urban infrastructure, we don't have a lot of green space,” he said.

Homeowners recognize this, he said, something that leads one to either purchase a home with a green roof, such as those at Sheldon Crossing, or retrofit an existing home with the technology.

The latter is not too difficult, Kelly said, although it can require a decent amount of work, since roofs have to be insulated with a waterproofing membrane, pea gravel, a planting medium like clay, soil and other materials.

At the same time, older houses are often built well, meaning the structural

integrity could make an aftermarket addition like this easier than one might think.

The roofs are also virtually maintenance-free. Lehmann said the ones at Sheldon Crossing will require minimum upkeep. The grass will only grow a few inches a year, making mowing somewhat unnecessary. However, they'll still need to be watered, meaning some work is needed.

Really, the amount of attention depends on the type of green roof.

“It can be as little or as much as you want it to be on many levels,” Lehmann said.

The green roofs at Sheldon Crossing have an underground watering system that waters the roots of the grass. It differs from a sprinkler system, which would water from above.

Kelly, whose firm outfitted the PECO headquarters in Center City with a green roof on their building that measures the length of a city block, said the technology on commercial structures helps with workforce morale.

“Amenities like that maintain employees,” he said. “It's lifestyle.”

The green roof on the PECO building increases energy efficiency, he said, and helps to keep “millions” of gallons of storm water out of the nearby Schuylkill River.

Kelly's firm has traditionally done more commercial jobs, but is starting to expand their residential jobs as of late. He's seeing more interest lately on the part of homeowners, especially in light of the new storm water regulations by the city, which will involve charging homeowners for water usage depending on the square footage of their roofs, not their meter readings.

Residents, Kelly said, are seeing these benefits and others as reasons to invest in the technology.

“And they're doing something that's decent for the environment,” he said. “They're happy about that.”

Annie Scott, a landscape architect who lives in Manayunk, said she definitely sees the benefit in having a green roof installed.

“I want one,” she said. “They're beautiful, but I think it's more for heating, cooling and storm water management.”

Kelly said green roofs even offer a space for creatures like butterflies, which he once observed congregating on a job his company worked on.

“You actually get some habitat creation,” he said with a smile.

Reporter Jon Campisi can be reached at 215-354-3038 or [jcampisi@phillynews.com](mailto:jcampisi@phillynews.com).