

## Local firms ready to test green roofs

By [MARC STILES](#)

Journal Staff Reporter

A \$100,000 experiment to test green roofs on downtown Seattle commercial buildings begins today.

Until now, green roofs have been the province of a handful of homeowners outside the urban core and municipal officials downtown, where there are only two green roofs. One is on City Hall and the other is atop the Justice Center.

Now three development companies — Gregory Broderick Smith Real Estate, Unico Properties and Vulcan Inc. — are teaming up with Sellen Construction, structural and civil engineering firm Magnusson Klemencic Associates and other companies to install green-roof test plots on four buildings.



Photo by Ben Minnick

**Drew Gangnes of Magnusson Klemencic Associates shows the site of a green roof test plot at Rainier Square. The experiment is the first to test the viability on commercial structures in Seattle.**

The brainchild of Magnusson Klemencic partner Drew Gangnes, the experiment is aimed at showing building owners and others how green roofs work.

Participants also want to convince city officials to offer incentives to developers who put green roofs on their projects. Portland already does so for downtown projects, according to Gangnes, Magnusson Klemencic's director of Civil Engineering.

City Councilman Peter Steinbrueck already is on board. He plans to include the incentive in land-use legislation. "I keep hearing from developers and architects this is something they want," he says. "I just think there's so much common sense on this it's time to move forward."

The problem is Mayor Greg Nickels and his staff have not been cooperating, Steinbrueck said. Earlier this month, The Stranger reported that Steinbrueck spent all of last year waiting for the Department of Planning and Development to move on his green-building agenda. "DPD has not gone down that path in any way," he told the weekly newspaper.

Steinbrueck thinks this is changing. Officials in the Mayor's Office are "starting to listen to me more," he says, adding that no matter what happens between him and Nickels, he will introduce his legislation. "I will find outside experts if necessary."

Marianne Bichsel, Nickels' spokeswoman, said Seattle already offers energy and water conservation incentives. Next week, for instance, she said the city will give the University of Washington \$190,000 for saving 1 million gallons of water.

She added Nickels is considering including incentives for green roofs and other sustainable building features as part of his City Center legislation. It's aimed at limiting sprawl by encouraging denser residential development in the urban core by allowing developers to build taller buildings.

### **Numerous benefits**

If Magnusson Klemencic officials have their way, those taller buildings could have green roofs.

Green roofs are a light-weight, low-maintenance veneer of living plants and soil, according to Gangnes. The soil and plants rest on top of conventional roofing materials.

While they're initially more expensive, the benefits are numerous. There is less runoff flowing into municipal storm water treatment systems. The water that does run off is filtered on the roof so it's less polluted and requires less treatment.

Green roofs protect materials from ultraviolet light and minimize roofing expansion and contraction. Gangnes says this can double or even triple the life of a roof.

And green roofs help insulate buildings, reducing heating and cooling costs.

Despite these and other benefits, some people are skeptical about green roofs. What if they leak? Removing all those plants and all that soil would be a real chore.

Overcoming the apprehension is at the root of an ongoing residential experiment by the Northwest EcoBuilding Guild's Central Puget Sound Chapter. It has installed green roofs on 20 residences and other buildings around Seattle and the Eastside. The group plans to install another 10 test panels, according to Hadj Design's Patrick Carey, who is heading up the project.

So far one roof has leaked, though it caused no damage and was not the result of the roof having plants on it. "It was due to a little corner detail that wasn't done right," Carey said. "It would have leaked if there was not a green roof."

The Magnusson Klemencic-led experiment has been in the works for about a year. Gangnes and some of the participating developers were in Scandinavia to tour sustainable building projects. One stop was the International Green Roof Institute in Sweden.

"So here I am with a bunch of developers and we said, 'We could do this. This is not so tricky,'" Gangnes said. "This is when the seeds got planted in my mind."

Initially, they thought it would be a volunteer project with employees of the participating companies providing the labor. A chance conversation with Sellen officials changed that when the contractor agreed to take the lead on installation.

"What we've turned this into is a big green construction project," Gangnes said.

### **Project details**

The test plots will be spread across downtown and measure 8 feet by 12 feet. The 18-month experiment will measure if prevailing winds, building shadows and other site factors affect the roofs' performance. Each plot will be of different depths and have different soils and plants.

Test sites are:

- Sellen's headquarters, 227 Westlake Ave. N. It can be viewed by making an appointment with the company.
- Vulcan's property at 2201 Ninth Ave. It will be visible from Denny Way and Ninth Avenue.
- Unico's Rainier Square, 1301 Fifth Ave. It will be open during working hours. Enter off Fifth Avenue, go up the stairs toward Rock Bottom Brewery, follow the path along the north side of the tower and ascend the stairs to the deck.
- Smith's site for the company's proposed Stadium Center project, 810 First Ave. S. It will be visible from the viaduct and Qwest field.

Along side the plots will be a weather station with a data logger and radio modem to transmit data to a computer in Magnusson Klemencic's office.

Teufel Landscaping is donating the soils and plants. Other firms donating supplies and services are Weston Solutions, Cedar Grove, Ness Cranes, Sunbelt and McKinstry.

---

*Marc Stiles can be reached by [email](#) or by phone at (206) 622-8272.*