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## Low-impact development gets a test in Renton

By REBECCA CUSHMAN

Triad Associates



**Cushman**

One of the first-ever Built Green communities to use low-impact development opened its doors this month. Shamrock Heights in Renton Highlands was designed to go beyond eco-friendly housing to encompass an entire community.

A special set of circumstances produced Shamrock Heights - circumstances worth examining to understand how our region can sustain environmentally sound development. It took the combined leadership of King County, CamWest Development and its design team to bring Shamrock Heights into existence.

King County created its low-impact development/Built Green ordinance in 2003, authorizing three projects to use innovative stormwater-management approaches in combination with environmentally friendly housing.

When the county's Department of Development and Environmental Services invited CamWest to participate in the demonstration ordinance, the company had already begun development on property potentially suited to low-impact development, or LID. The ordinance allowed code adjustments for creating an entirely green community.

Not all sites are suitable for LID. Factors such as topography, surface drainage, soils, location of sensitive areas, views and solar orientation all combine to determine whether a site will work.

### **A good test case**

Shamrock Heights afforded the chance to combine some of the best LID practices in one place. The sheer size and number of LID components promises to yield additional knowledge about stormwater handling and sustained value for residents.

The community comprises 129 lots on 34.5 acres. Homes range from the high \$400,000s to the high \$500,000s. Around 60 percent of the community uses LID techniques for stormwater management, while approximately 40 percent uses conventional approaches. The ratio was determined by the location and topography of the drainage basins.

A large community park centers the neighborhood like a commons. Protected wetlands and greenbelt border two sides, while landscaped stormwater channels provide additional open space and buffering between homes.

The site plan balances community with privacy. Clustering homes allowed site planners to achieve greater density and make space for conveying stormwater, which is typically buried in pipes.

### **Collaboration**

It took a lot more than an ordinance to get Shamrock Heights off the ground. The project couldn't have happened without collaboration from the start. It continued through all phases between the developer, the jurisdictions and the design team of architects, engineers and planners.

Shamrock Heights evolved over five years with every party's input at every stage - not the typical development process.

Such collaboration arose in response to the leadership and vision of King County Executive Ron Sims and CamWest President Eric Campbell. Both men used their positions to commit to expanding eco-friendly development.

Even with the county ordinance, each element of the stormwater design had to be approved under current code. Engineers sought solutions that could be approved without extensive variances to existing code. They collaborated with county staff to ensure understanding of the project's intent and to reduce liability for the developer.

### **Jury still out**

Some proponents have suggested that integrating LID into land development should reduce development costs through smaller treatment facilities and less underground pipe.

These savings may be offset by the cost of unconventional construction and delays in permit processing. With higher acceptance by the public, governing jurisdictions and engineers, future projects incorporating LID may provide the data needed to prove its cost-effectiveness.

### **Green building trends**

Besides the demand for green homes, is there a bona fide trend toward green communities?

"We know that there is a portion of our population in the Northwest who will do the right thing if it doesn't cost much more," said CamWest's Campbell.



Photos courtesy of CamWest  
**Natural stormwater channels cross through Shamrock Heights, a low-impact neighborhood in Renton developed by CamWest. Wetlands and a greenbelt border two sides. The landscaped channels provide additional open space and buffering between homes.**

"For an additional \$4,000 to \$5,000 we have four-star Built Green homes in Shamrock Heights. Four stars will save a homeowner operating costs, but we don't know how soon that balances the cost difference.

"Time and again our market research shows buyers are looking for more privacy and larger lots. A consequence of LID is that it uses more land. We do see a benefit in that (natural stormwater channels) behind the homes actually enhance privacy and create open space.

"LID and green building add to the pride of place for the home owner, so Built Green becomes a benefit."

Many developments and master-planned communities are incorporating open spaces, greenbelts, bioswales, rain gardens and other LID elements. Even though there are many individual uses of LID in subdivisions, Jeff Cox of Triad Associates said he believes there haven't been enough certified green communities built to define a trend.

### **Future green communities**

Campbell said he thinks more green communities "probably won't happen without top-down leadership from mayors, city managers and county executives that results in something that is embraced by their planners.

"Jurisdictions don't need to reinvent the wheel. They can look at who is succeeding with LID and sustainable building techniques, and so learn from the best practices of others."

The codes and the land itself play a big role in determining where LID can succeed.

Shamrock Heights - driven by leadership, innovation, collaboration and a willingness to assume risk - can provide our region with a model for large-scale, eco-friendly development in an urban setting.



**This rain garden is among a number of strategies Shamrock Heights employs to manage stormwater runoff. Homes are clustered to allow space for ponds, swales and natural conveyance.**

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***Rebecca Cushman was the project engineer for Shamrock Heights. Triad Associates is a land development consulting firm.***